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The Smartphone in the Life of Israeli Youth.

From “Virtual Friend” to Addiction.

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"DOCTOR OF SOCIOLOGY"

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Introduction - Theoretical and Methodological Basis of the Dissertation

Technology influences our life in every respect: in society, in our decisions, in our behavior, our relationships, our sleep quality, popularity, self-esteem, satisfaction from life, and so on. Smartphones constitute the most powerful and important innovation of the last two decades. Much research has been done on the influence of smartphones in our life in biological, psychological, and social aspects. The present research study is related to this very important and current issue in the world at large and in Israel in particular.

I am a high school teacher, teaching psychology, sociology, citizenship, road safety, and science. I teach students in grades 10-12. In almost all of my classes, I encounter discipline problems stemming from the use of smartphones. I see and feel the students' dependence on smartphones and their inability to disconnect from the device and what it has to offer. This being the case, during my work I have seen a lot of social processes and psychological changes in my students which may reflect the transformation processes that this generation is undergoing. In today's classroom, while I'm physically standing in front of my students talking to them and teaching them, they can be, simultaneously, virtually somewhere else. They can open a parallel interaction, they can decide who is in and who is out, make jokes (also on me), make decisions, and engage in all kinds of private activities and group interactions. All this happens right in front of me, while I'm physically present, in the same room, and it's not because I'm a bad teacher or because of issues with authority.

In my research study, I intend to identify the changes caused by the technology, to review the history of the smartphone, to point out the differences between two generations (some have called them Generations Y and Z), and to survey the role of the smartphone in the life of Israeli youth, from "virtual friend" to addiction.

In order to do so, I must review some basic points in the history of society. I will relate this to technology, which has impact on society and plays many important roles in shaping culture, society, and the individual. To understand today's technology and its effects, one must be familiar with the history of the present era - the postmodern era. Western culture and society must be recognized as a society undergoing globalization and individualization. In a consumer society, consumption sometimes progresses to the point of behavioral addiction. The technology of this postmodern era

is a technology of knowledge. Today's technologies are satellite-based and Internet technologies. Smartphones were invented and developed in the Western world against this background, as will be shown.

Peculiarities of contemporary times

In order to understand today's society, it is necessary to understand social processes and the concept of social progression over time. Today, the Western world is in what has been called the postmodern era, an era with many characteristics that define everyday culture and society. In order to understand contemporary processes, these characteristics need to be recognized.

Postmodernism is a periodic concept constituting a new frame of reference in the history of culture (Gurevitz, 1997). When to date the beginning of the postmodern era is controversial. There is evidence that certain ideas associated with postmodernism were heard at the end of the nineteenth century when science was questioned. Later, postmodern ideas were seen in the early twentieth century, and these ideas gained much popularity later, in the 1970s and 1980s. In fact, postmodernism appears in culture as a response to modernism. Modernity emphasizes the wisdom and values of progress, adores seemingly objective science, and aims to improve the human condition by drawing on accumulated knowledge and constantly updating. The concept of knowledge is primarily empirical and positivist, with the assumption that nature is open to an objective investigation that focuses on persistence, and that phenomena can be studied and clarified in terms of cause and effect and confirmation or refutation. Human history is described as a continuum of effort to evolve, to be sophisticated, and to renew. Research, measurement, testing, and clarification are considered to be contributing factors. Ambiguity, relativity, and uncertainty, on the other hand, are perceived as problematic, temporary failures that must be eliminated. Moreover, whatever cannot be considered rational is considered inferior, suspicious, dubious, and unfounded (Katz, 2012).

Postmodernism, on the other hand, is characterized by a lack of depth and loss of essentiality, loss of coherence of appearances, dampening of external expression and emotion, and so a general questioning of assumptions. This age is characterized by the loss of scale; the "truth" is controversial; there is no permanence of meaning. Interpretation is more like a game than an analysis of facts, and there may always be

alternative interpretations. Everything is temporary and controversial (Katz, 2012). In addition, the postmodern period is critical of modern history as a system of symbolic representations of the world. The modern world is based on logical order and science that seek to describe reality and nature as they are. On the other hand, postmodernism exhibits a lack of trust in the institution of theory and in the scientific system as a whole. According to postmodernism, culture is not merely a collection of eternal “truths” that cannot be challenged.

Postmodern culture seeks to be the interlocutor of different disciplines. It assumes that its field of reference is heterogeneous and varied in the first place. In the postmodern era, there is no agreement regarding the choice of a new approach after its predecessor is rejected, and it asks society to strive to overcome the existing intellectual conservatism. Postmodern discourse does not agree with and even negates the method of accumulating knowledge as a gradual process to solve a riddle told by nature. The new knowledge, the postmodern knowledge, is not perceived as another interpretation of one homogeneous worldview. It is not presented as a theory that seeks to mediate between old truths and new experiences, but rather as a work with a paradoxical paradigm that is not founded in the integration of its elements, yet seeks to “explain” various phenomena in the world (Gurevitz, 1997).

In addition, postmodernism deals with several key areas, such as society, the economy, and cultural issues in Western society in the second half of the twentieth century and at the beginning of the twenty-first century. In the Western world, modern-day frameworks such as courts, universities, the UN, and even many schools exist and influence one of the outstanding characteristics of postmodern society, which loses faith in the absolute rule of intellect and science (Gusacov, 2016). Old certainties are undermined. There is no single theory of society, there is no one big picture that describes everything; at most there are several perspectives on the same concept. Postmodernists recognize that the science of the modern era and the knowledge that it provides about how things work have not been proven (McRobbie, 2005). Furthermore, meta-narratives such as communism, socialism, liberalism, Zionism, belief in universal justice, and universalism in general, are becoming weaker in the postmodern era and almost disappear from philosophical discourse as well as from the public consciousness. In fact, mistrust arose because these great ideas did not stand up to the great expectations they had planted. The modernist idea of establishing a single,

confident, solid, and authoritative principle on the basis of which reality can be understood as structured and organized has failed.

In the modern era, the truth was perceived as one and only; in the postmodern era it is legitimate to hold different opinions, even those that are conflicting and contradictory, so that in fact there is no one truth. The relationship to truth has become subjective, as if it were a personal or private matter. Knowledge is no longer considered to be the only valid form of knowing; today there are many possibilities. For example, throughout history, medicine was accepted by most people; but today, alternative medicine is considered a good option by many. In this day and age, science is perceived as an imperfect method that tries to clarify what the essence of the world is. Today, additional and different ideas are accepted, even marginal and mystical ones. Religion, the religious faith that existed throughout history and seemed in the modern era to lose its power in favor of scientific rationality, now occupies a new place, and there is renewed interest in spirituality and a personal “journey” (Gusacov, 2016).

Over the years, postmodernism has become a highly influential and popular approach in a variety of fields such as art, architecture, social sciences, and management theory and organization. Postmodern theories try to undermine obvious assumptions. In this sense, postmodernism can be considered a theory that shows that the truth is not something objective waiting to be discovered, but rather is created from the language that people use and the interactions they engage in on a daily basis. Therefore, according to postmodernism there is no single reality, but a variety of purposes, none of which should receive advantage or preference over the others. So, since a person is constantly exposed to various opinions, ideas, experiences, and images without much thought, he must always intend to criticize his assumptions and conclusions, not out of a desire to find one absolute truth but in the desire to find a new and different truth that has not yet been known.

In the context of dealing with the absence of one single reality and of undermining the obvious assumptions, postmodernism deals with the ignorance of experts, or in other words, it casts great doubt on experts. Postmodernism actually undermines the concept of any expert, counselor, or teacher, people with insight and with “correct” answers. In postmodernist thought, experts are not thought to have the right knowledge or the right answers in the field in which they claim to have expertise, but instead they seem to be experts in a particular reality when their knowledge and

experience has given them an advantage within a particular field. This advantage is given to them by the environment and by those around them. Another criticism directed at the experts is that they have become remote. In fact, the asymmetry between expert and client or patient creates a sense of superiority that is, of course, influenced by the social acceptance of scientific methods. Experts also build their careers based on norms, rules, policies, language, and procedures. As a result, their solutions are influenced and shaped by the discourse and customs that they have established in the first place, although the experts are not necessarily aware that postmodernists claim that experts offer solutions that are already at hand (Hardy & Palmer, 1999).

In accordance with the postmodern conception of multiplicity of opinion, and the lack of a single truth, there are several authors who have presented additional ways of looking at postmodern reality, including some of the most significant and important sociologists of our time, Anthony Giddens, Ulrich Beck, and Zygmunt Bauman.

Giddens and Beck deal in reflexive modernization. Giddens argues that society was in an era of high modernity, and talks about differences between traditional and modern societies. When in traditional societies, the past is respected and symbols are valued as they contain and perpetuate the experience of the generations, in contrast, modernity gives less value and meaning to tradition and brings with it a reflexive observation, in which the actions of society are refracted back upon one another (Giddens, 1990).

According to Beck, modernity did not disappear or end; it only became more complex as a result of a reflexive observation that examines itself and the social changes within it. While significant social crises and changes have always been part of modernity, the transition to a second, reflexive modernity not only changes social structures but also changes the criteria for examining change and the perception of change itself.

According to the reflexive approach, processes such as globalization, economic processes such as the release of markets for competition, political and social processes, technological developments such as electronic communications, and more, play a significant part in the social and political changes that have taken place (Beck, Bonss & Lau, 2003). For example, in the first modernity, societies are identified with nation-states, with physical boundaries considered to be the most important and desirable property (Giddens, 1990), and not only do they not undermine the very existence of

boundaries; they endorse them and exhibit deviations or exceptions. So, following those broad processes, in reflexive modernity there is a multitude of boundaries that have led to the blurring, undermining, and breaking of the boundaries themselves, rendering them optional. In addition, looking inwards increases human awareness that control is impossible, and therefore, as time goes by, the discrepancy increases between the national past and the global future perceived in many areas as an unpredictable, accidental, and uncontrolled future (Beck et al., 2003).

Reflexive modernity is not characterized by the adoption of new elements but by looking in and re-examining things (Giddens, 1990). The transformation and developments of this contemplation lead to negotiations that undermine, question, and challenge many basic assumptions and aspects of society and modernity itself, such as rationalization and science, the institution of the family, career, history, and more (Beck et al., 2003).

As with the postmodernist perspective, even for reflexive modernity, the certainty that existed in the past no longer exists. Rationalization and scientific thinking are tested through rationality and are therefore considered reflexive. This re-examination leads to questioning and doubt, and indeed, the foundations of the rationalization and scientific thinking are undermined, have been proven to be unreliable, are no longer as secure as before (Giddens, 1990), and they have no ability to supply proof that puts an end to disputes. And once there is the erosion and loosening of certainty that is familiar to everyone, space opens for the creation of alternative forms of knowledge and/or the extension and elaboration of existing knowledge. Like postmodernism here too, the result is that there is no longer just one way to solve a problem; there are several ways; there are other perspectives that may not have previously been considered legitimate, and in the second modernity these are taken into account and challenge society (Beck et al., 2003).

The reflexivity of modern social life is directly involved in the constant production of systematic self-knowledge. At the same time, it does not stabilize the relationship between expert knowledge and practical knowledge, which is applied in social operations. What may happen is that the knowledge accumulated by experts will affect and change the subject itself, and subsequently the behavior and social reality. In other words, the reflexive perspective is not merely observing and watching from the sidelines; by its very existence it influences, interferes with and can change the reality

of itself, of society. A good example is the collection of statistics on the family, such as the rates of marriage, divorce, and birth in the family setting, which give a reflexive view of society and enable analysis, learning, and drawing of conclusions as part of social science. The data does not control the fate of people in society but does broaden the understanding of the social world and its components, which may influence and lead to practical and perceptual changes in society and its components (Giddens, 1990).

Any reflexive data collected from a wide range of sources of information eliminates certainty in advance but allows for a variety of possibilities and choices that can advance toward decision-making and action. Reflexive modernity does not see the multiplicity of opinions, uncertainty, and doubt. Therefore, reflexive knowledge is constantly changing. Especially when a person has to make decisions and solve problems, he reflexively examines the situation and, if necessary, changes rules, procedures, and boundaries, all in order to find the best possible solutions. For example, in the context of scientific thinking, its purpose is not to determine what is right and wrong, but to allow democracy and deliberation, and whoever decides, in the end, is the person himself. In other words, science provides the tools and possibilities, and it is the public who make the decision at the end (Beck et al., 2003).

Another way to look at postmodern reality is presented by Bauman, who divided history differently. Bauman does not refer to these periods as modern and postmodern but looks at two different physical features that characterized these periods: “solid modernity” and “liquid modernity.” The idea of “liquid modernity” is based on a metaphorical distinction between solid and liquid. The liquid, unlike solid, does not retain its shape easily. The solid has a spatial, physical dimension and is maintained over time. In contrast, the liquid changes its shape all the time, and therefore time is a formative factor of its properties. Another characteristic of the liquid is that it has the ability to dissolve the solid, changing its shape when they meet. The encounter between the modern period and the period after, the solid and the liquid, creates change in the first period and, looking ahead, the encounter is supposed to supplant and replace the old and defective solidities with new and perfect ones. Modernity, solid modernity, heavy modernity (another term of Bauman’s) was dealing with the big, in mass; it was the era of hardware, an age with clumsy and heavy machines, massive factories, trains, ships, and so on. The main goal was to conquer as many physical areas as possible and to mark ownership. On the other hand, postmodernism or, as Bauman calls it, “liquid

modernity,” is characterized by the dismissal and easy release of things in order to clear the ground for new things - there is no need for grounding. Liquid modernity does not believe in “long-term”; on the contrary, it believes in short-term, short range. Momentality became an ideal (Bauman, 1998).

To summarize, in the postmodern era, randomness takes over from order, challenges the idea of free will and the deliberate value of judgment, and draws attention to the great power of arbitrariness. The feeling that “everything is possible” creates a sensation of fantasia and euphoria and an experience of non-reality. But it also stimulates a feeling for the ordinary and mechanical. This is a parallel to the changes and processes that occur when new technologies appear, especially in the context of communications and mass media (Katz, 2012).

Technology changes everything - Online technology times

In the present study, the main topic and purpose is to deal with the immediately relevant smartphone, one of the most influential technologies of our time. Understanding the smartphone’s influence requires understanding and knowledge of some of its technological characteristics, its impact on society, and the background processes of technological progress.

Every technology is both a burden and a blessing; it is not this or that but both this and that. When technology enters culture, it will make changes and develop to its logical conclusion. According to Neil Postman (1992), the role of people in society is to understand what the purpose of technology is and what it is intended to do. That is, a person receives new technology and needs to meet it with eyes wide open. New technology creates new definitions for old concepts when this happens without full awareness, and technology also adds new terms and concepts. For example, computer technology has changed the concept of “information,” and altered, over time, our conception of “true” and “false.” Technology redefines the concepts of “liberty,” “fact,” “memory,” “history,” and more. These changes occur quickly and in large quantities. The changes that a given technology creates are difficult to predict, especially the ideological changes. There is a change in entrenched thinking habits that give the culture a sense of the way of the world, a sense of the natural order of things, of the plausible, of the necessary, of the inevitable, of the real.

For example, the mechanical clock is a technology developed in the Benedictine monasteries of the twelfth-to-thirteenth centuries to coordinate their prayers to God. In the fourteenth century, this technology flowed into the outside world beyond the monastery and changed ideologies and perceptions of time in a way that influenced and still affects the world today. The history of clock technology demonstrates the lack of control over the purpose of technology that the surrounding culture must understand. At the beginning of the clock's history, it was meant for prayers to God and for keeping to prayer times, while later on, when it had spread to other cultures, it came to be used to devote time to the accumulation of money and capital. New technologies compete with older technologies for time, attention, money, prestige, and especially for the control they exert on their users' worldview, and when the new technology meets the older technology, there is an encounter between two worldviews and ideologies (Postman, 1992).

Thinking habits, ideology, and technology are subjects that have preoccupied many sociologists throughout the history of the discipline. In the history of sociology, there has always been the question of which has more impact on society: ideology or technology. Theorists have argued about it since the eighteenth century, from Giambattista Vico and Auguste Comte to Max Weber and Talcott Parsons and more, who believed in the importance and dominance of ideology, and John Millar, Lewis Henry Morgan, Karl Marx, Vere Gordon Childe, and Gerhard Lenski, who clued in to the importance of technology. Patrick Nolan and Gerhard Lenski (1996) decided to examine and assess the effects of ideology and technology by using the Ethnographic Atlas created by George Peter Murdock. The Ethnographic Atlas includes societal size, complexity, and institutional patterns, categories that can help measure the impact of ideology and technology on societies. In fact, the Atlas provides valuable data on a variety of societies, including essential data on their ideologies and technologies. For example, societies are classified in terms of fundamental religious beliefs and in terms of basic subsistence technology. The results of Nolan and Lenski's research suggest that in all societies, from the smallest and simplest to the biggest and most complex, technology has the greater impact and influence on their development and overall (Nolan & Lenski, 1996).

Further, much has also been written about technology and society. Consequently, many studies have examined the impact of technology on the shaping of

society and its impact on its future. Macionis (1999) writes about a prominent and well-known study by Gerhard and Jean Lenski. According to the Lenskis, society depends on technology, and in the global environment, it is necessary to fit in with the updated technology. Gerhard and Jean Lenski call the subject of their research “sociocultural evolution,” that is, the process of change that occurs when society is enriched with new information, especially in technology. According to the Lenskis, societies with lagging technology are able to support a limited number of people and offer them limited choices of life ways. Technologically advanced societies are not necessarily “better” by any absolute standard, but they foster larger and more diverse populations that excel in higher professional specializations. The Lenskis also explain that the more technological knowledge a society has, the faster it changes. Societies with simple technology change, therefore, at a rather slow pace. Industrialized societies with high technology, on the other hand, change rapidly, and people see dramatic upheavals taking place right in front of them (Macionis, 1999).

For example, a very old technology that changed the face of history is the printing press. This is the technology that brought a huge change in the field of information. From the moment that the printing press was invented, mass volumes of books began to be published on a variety of subjects and in huge quantities for large populations. Thus, there was a flood of information and knowledge available to everyone in Europe, not just the religious elites in the churches. As a result, there was an acceleration in the emergence of schools, which were seen as an institution that could provide great amounts of information and close social gaps so that there would be universal knowledge and no one would be left behind (Postman, 1992).

The postmodern era is dominated by the media, led by television and the Internet. In the past, in the modern era, there were only a few media channels that dominated and became a kind of monopoly. Today, a large number of communication channels operate, and the culture that dominates the life of the viewer, now a surfer of the multiple channels, is a culture that evaluates content according to its popularity, the so-called ratings. Western societies are connected to many Internet-based sources of information and entertainment, which are often uncensored and unregulated. These sources are uneven with respect to level of knowledge and do not present the same opinions or facts; sometimes the information is skewed by personal or company interests, and at times the level of credibility of the information is questionable.

In the postmodern reality, control over determining what is right, what is real, what is good, and what is beautiful is no longer in the hands of a person or institution, as it was in the past. Technology changes knowledge; it enables almost endless connections between people, organizations, and economic, social, and political interests. Knowledge is no longer examined in terms of truth or falsity, but in a functional manner according to the degree of benefit it brings (Gusacov, 2016).

Another significant change that society is undergoing is a spatial change. In the past, the conception of the world was based on space - territory, physical and human boundaries. Social structures were architectural, structural, and clear, and above all, the state was central to authority and supervised everything. In the postmodern era, the same territorial, physical, architectural, and transgenic space has been compounded by another human space: cyberspace (the notional environment in which communication over computer networks occurs). Although this space lacks physical spatial properties, it nevertheless has a special material characteristic of instantaneous expansion, which blurs the distinction between “here” and “there.” The abolition of distances of time and space, thanks to technology, exacerbates the polarization in humanity. It frees certain people from territorial constraints and turns some of the characteristics of the community extraterritorial while denying the territory that continues to limit other people who do not participate in the technology. It provides some people with unprecedented freedom from physical obstacles and with incredible ability to move and operate from a distance. For others, this situation threatens the inability to improve and make decisions, and their chances of freeing themselves from their burdens are small.

Thanks to the lack of need for physical space, the elites, who have power, have become extraterritorial, even if their bodies remain in place. Their strength and power are not in the physical world in which they are situated, where their homes or offices are located. Cyberspace has no meaning for the physical bodies, but cyberspace has meaning in the lives of the bodies. In order to be strong, elite, dominant, or rich in cyberspace there is no need for physical power, weapons, or any other material. Moreover, there is no need for a national environment in order to establish power, to anchor or to dissolve it (Bauman, 1998). Neil Postman (1992) uses the term “skill” to characterize the cause of these social gaps and argues that due to the constant development of technology, gaps are created between those who possess the technological skills to adopt technology and thus become the elite group and acquire

authority and prestige and those who do not have the skills to adopt technologies who are, so to speak, left behind. This will always be the case, since there will always be those who know and acquire more technological skills and those who are less advantaged (Postman, 1992). Technology, whether the person controls it or not, has a decisive influence, and since the means of transportation and communication have developed, contacts have been created with remote peoples and tribes, thus bringing about encounters and connections between cultures, a process known as globalization. Today, it is enough to sit in the living room and watch foreign films and then adopt fashions and customs from the places that produced the films (Roham, 2013).

As mentioned, in the postmodern era there is almost no dependence on physical place, and distance is almost unimportant. When the speed of information and interaction is reduced to a minimal time interval, space and its boundaries no longer have any effect. The world is transformed into a networked site, which equates it to a “global village,” at least in terms of the speed of information transmission (Gusacov, 2016). Zygmunt Bauman (1998) distinguishes between close and distant, where “close” is the place where one feels safe, knows, understands, and can predict what will happen next. Meanwhile, “distant” is a place where not everyone will be in their lifetime, the unknown, the space we do not know much about, space without preparation or predicting the future, and getting there is a nerve-wracking experience. Parallel to this distinction and contrast, there is another contradiction, which is certainty in the face of uncertainty. According to Bauman, distancing means being in trouble, so there is another difference and another gap between self-confidence and hesitation. On the other hand, Bauman’s “close” means absence of problems, habits that are easily learned, habits that do not require effort, and all without fear and hesitation (Bauman, 1998). Given this closeness, today people from all over the world are much more connected than ever before. Information and money flow rapidly, services and products are supplied from one side of the world to the other, tourism and international communications have intensified.

All this is called “globalization,” a phenomenon that describes the political, economic, and cultural atmosphere of the world today (Ursah, 2009). The profound meaning of the idea of globalization is that the world is wild, fickle, and self-driven. Amid all the technological modalities and means of transport such as trains, cars, and airplanes, a particularly important aspect has to do with the transfer of information. The

transmission of information is a type of communication that does not involve physical movement. Here, too, the technology developed, became more efficient, and intensified. Eventually, the development of technology and the appearance of the Internet eliminated, at least in terms of information, the very concept of the “transition,” that is, the distance undergone to obtain details and facts and to successfully communicate, and made information instantly available everywhere in the world. In the past, the state governments claimed to control how this was organized, operating a monopoly on the laws, when they had the appropriate and legitimate means to determine laws and norms in their territories. The hope was that the laws and norms would turn randomness into destiny, the ambiguous into unambiguity, chaos into regularity, and, in fact, that the general mess would become perfect order.

Worldwide, in order to create a new order and reorganization, clear borders were required for each country as listed on the maps, and all countries were required to assist one another in protecting their policing rights. Gradually, political power struggles developed, and the global arena became a field of coexistence and competition between groups of countries. Surprisingly, small countries sought to give up their sovereignty in order to obtain a stronger sovereign and thus join the United Nations. At this point, there is a flood of small nations in the UN. This move by the small countries actually serves the idea of globalization, meaning that when countries are many and small, they are more easily subjected to external economic pressures and need to align themselves to the free market at the global level. In this way, when many small countries align themselves with the global market, a new world order is created, the opposite of a mess. Therefore, the political split (small and weak powers and states versus larger entities) and globalization do not work against each other; on the contrary, they move in the same direction. The power concentrated in a few countries and dispersed in many small countries creates a “supra-national” economic unity that sanctifies and implements the idea of globalization (Bauman, 1998).

As already mentioned, technology, sometimes including the smartphone, affects many cultures in the world. These significant effects accelerate and intensify the process of globalization. Globalization is a tremendous process in which boundaries are breached and broken, markets become more sophisticated, new wealth is created through free trade, communication flows freely in all directions, and people are free to choose their identity and lifestyle from an expanding range of possibilities. On the other

hand, global social gaps are created. Those who control technology become mobile and fast, and those who do not become grounded and slow. In other words, the mobile and the fast become global, and the grounded and slow become local. These are in fact new classes or social groups with an economic position: global versus local. According to Bauman, globalization is the irrevocable fate of the world, and an irreversible process that affects everyone equally and in the same way (Bauman, 1998). The postmodern economy is a global economy. It does not focus within the borders of one state and is not fully controlled by arrangements that determine the borders of a state or its authorities and market forces. For example, national coins such as the German mark, the French franc, and the Italian lira were eliminated and replaced by a single European currency.

In the postmodern period, the labor market is changing; workers are changing jobs frequently, and there is less loyalty to the workplace. “Knowledge is power” is the claim of the British philosopher Francis Bacon, a sentence that illustrates today’s reality: that the product is knowledge and the one who has knowledge is a trader. Today, thanks to the technologies of personal computers (PCs) and especially smartphones, work habits have changed: you can work anytime, anywhere — from home, at night. This contrasts with the modern period, when one worked during defined hours and in a specific place (Gusacov, 2016).

States in today’s era, unlike in the past, are no longer required to maintain a balance between the growth rate of consumption and the increase in output, a task sometimes imposed on countries by temporary import or export prohibitions, customs barriers, or by political encouragement of domestic consumption. In today’s postmodern era, with a globalized world, such control is beyond the reach of most governments. And such control in some cases is no longer part of their policy and aspirations. Today, the distinction between a political and a diplomatic market is particularly difficult to define, and it is difficult to impose order on the government and on the population. Because of the massive development of free trade laws in the capitalist economy, and the free movement of capital and money, the economy is being released from political control. Today, a government that tries to intervene within its own country in the global market, the macroeconomic market, will be reprimanded and met with hostility by the global markets. The only task of a state is to maintain a budgetary balance through submission and restraint of local pressures. The state must

protect its population from the dangerous consequences of market anarchy (Bauman, 1998).

To better understand capitalist culture, it is worth looking back to the beginning. Capitalism began to emerge about two hundred years ago. Its aspiration is to change everything that resembles what happened in the days before it. Competition is at the heart of the capitalist regime and serves as justification for all its activities. When competitors breathe down the neck of incumbents to take their place, this leads to initiatives, creativity, and agility in action. On the other hand, under the capitalist regime the good positions are limited, the capital is not evenly distributed, and everyone tries to attain the highest possible status. Thus, capitalism also creates gaps and strata delimiting the wealthy, the rich, and the rest of the population, the middle class and the lower class, which is always left behind. The capitalist society prefers to deal with the capital and profits of its owners and does everything for the exporter and importer. At the same time, it does not see the implications of what is happening and denies the negative consequences of its method, since it is not prepared to deal with the problems it creates (Roham, 2013).

In the past, capitalism was considered pure and contributed quite a bit to democracy, responsibility, and citizenship. Capitalism aspired, and partly succeeded, to meet the needs of real people. In the words of Benjamin Barber, capitalism created a combination of making money and helping others. The manufacturer benefited when creating products for their employees, and this gave rise to a circle of values, profit, and good performance, which included elements of risk-taking and employee exploitation, but it also benefited the classes and society in general. On the other hand, capitalism now benefits only when it can turn to those whose essential and basic needs are already satisfied, and corporations have the means to produce “new” invented needs which Marx calls “imaginary needs.” Thus, capitalism is now considered the exact opposite of purifying, and the basic aspiration of capitalism is that people will buy constantly (Barber, 2007).

From another social perspective, capitalism is divided by Bauman into “heavy” and “light” versions. In the heavy stage, the capital, the labor, and the employer were connected, grounded, situated in space. The manager was also grounded, as were the workers. But in the light stage, the manager moves easily with a mobile phone and a laptop computer and can stop and stay almost anywhere, so he is not constrained by

space, although he still does depend on time to attain satisfaction. The job, on the other hand, has remained in the heavy, unmanned stage, and the position which was expected to be lifelong (the worker wanted job security for the rest of his life) has lost its firmness. A vain attempt is made to maintain firm and sure grounds to keep a job. The heavy capitalism was a world full of laws, procedures, and supervisors, a world run by others, who also set the goals. In this way, it was a world of authority: of leaders who knew better and teachers who said how to behave better.

On the other hand, the light capitalism, the easy-to-consume kind, did not abolish the authority that gives laws, but brought in many other authorities alongside the existing authorities. This is a characteristic that reinforces the ideological change toward “no single truth” that exists in postmodernism. The fact that there are multiple powers is an internal contradiction, since when there are many powers, they can cancel each other out, and so the only authority that has significance in the field is the person who must choose one of them. In other words, the chooser is responsible for the authority to be implemented in practice. In light capitalism, partners no longer expect to stay together for long. Flexibility is the new feature, the working format is short-term contracts, a mobile workforce, sometimes even working without contracts. And so, today’s working life is full of uncertainty. The postmodern period, liquid modernity, can be described as “flowing” and scattered. This period marks the advent of the light capitalism characterized by disengagement and loosening of ties between the wealthy and the labor force. The main sources of profit, especially the big profits, which are the capital of tomorrow, tend to be ideas rather than material objects, another characteristic of the contrast between liquid and solid. In the liquid modernity era, in the light capitalist era, the “old” workers were tied to production lines or to computer networks and to automatic electronic devices. Usually, these are also the easiest workers to replace and dismiss, so there is no long-term job security (Bauman, 2000).

In parallel to these processes, new technological developments are taking place that create marketing dynamics that are not limited by geographical boundaries and can create new business circles and market segments, as happened in the past with the telephone, the car, the television, and the microwave (Bijawi, 2013).

Due to today’s technologies, marketing methods, advertising, and consumption have changed immeasurably. Consumer behavior has undergone many changes and updates. Consumption is the driving force behind the capitalist economy. Everything

that is manufactured is for purchase. Capitalism has succeeded in proving that the thinking and intelligent man can create great things. Experience has shown that it is possible to increase marketing beyond the consumption of the consumer (Roham, 2013). Barber talks in terms of moralized overproduction and argues that capitalism today is characterized by buying products that we do not really need. The old capitalism dealt with the production and consumption of basic products that we really needed, authentic needs. And today, the new capitalism has become the capitalism of producing products that we do not necessarily need, counterfeit goods. Barber distinguishes between what consumers want and what consumers want to want; he calls it “civic schizophrenia.” Beyond the desire to choose products or to choose between options, we strive and wish for the freedom to choose, not necessarily the choice itself but the freedom of choice.

The liberty of the consumer in the capitalist age is questionable, and there are branding processes at work in the market. Brand culture or brand consumption is a form of marketing and a way of achieving customer loyalty. The potential and the challenge of brand loyalty comprise a significant goal for companies today. Thus, a brand market is created, a market aimed at imposing a similar taste on everyone. In the capitalist era, when brand culture is dominant, when the consumer wants something, he actually wants a brand. Moreover, he wants the identity that the brand tries to create for him. Marketers want the consumer to want in concert with what they tell him he really wants. This is a state of lack of liberty for the consumer in the capitalist era. In fact, the consumer is a captive and has no real will of his own, and the marketers lead him to develop a false consciousness.

Identity is a critical element of any personality, and shaping identity is one of the basic goals of branding. The secret of modern brands is that if they design an identity, then to know who a person is, you need to know what he is buying. The important thing about the identity of the postmodern consumer is visibility, which guides the purpose of marketers and the way they can capture young customers and their parents. Branding, commercialization, and the market are working on consumers from infancy, for example through television channels for young people who already recognize logos and brands. Thus, the feelings and experiences permeate and help create an identity.

After creating an identity, marketers want to create consumer loyalty toward their brand. They do this by means of articles, advertisements, and broadcasts that teach people about education, safety, and other things that are not necessarily related to the product that the brand sells. All of this creates associative connections between feelings, attributes, and behaviors that, as mentioned, are not related to the product itself. For example, Pizza Hut sold reading materials to small children. These had nothing to do with pizza, but the child came to know the symbol and acquired brand loyalty through the educational books in his home. Another example: a subliminal message in advertisements for cornflakes is that if a mother buys her son cornflakes (as depicted in an advertisement), it shows that she loves him. These are examples of how children and youth are used as targets for marketers (Barber, 2007). The companies achieve their goals by means of marketing and advertising methods that have sophisticated psychological components, and large companies invest huge amounts on advertisements aimed at minors, young people, and the rich who wish to purchase unique products. Thus, companies work to increase consumers' dependence on the fashions advertised (Roham, 2013).

Moreover, capitalist society displays a process of infantilization. Today's adolescents are very infantile and in fact exhibit age denial. That is, people do not behave according to their true age; young people behave like adults, and adults try to behave like young people. Broadly speaking, Western society does not want to grow up and would rather remain infantile and spoiled. Society acts through infantilized-baby media channels; the commercials are childishly presented; the successful films are comic-book adaptations like Spiderman and Shrek. Cosmetic surgeries have exploded in popularity, while men are taking all sort of substances in order to maintain a youthful and healthy body so that they can continue to function and feel like a young person. "This is not a period of second childhood; it is an ongoing childhood" (Barber, 2007). The whole world of advertising and marketers aims to sell to young people and to instill in adults the tastes of young people. More than ever, companies today try to win over the young consumer's heart and wallet, and the more popular ones overwhelm the younger population with never-ending advertising.

In parallel, adolescence is also undergoing a change. Ironically, the definition of adolescence has expanded in terms of age. At this time, young people are becoming wasteful with money before they start to earn even a small amount. And so, young

people have become a market worth billions for corporations and marketers. They see the future potential because adolescents comprise a significant amount of the world population, especially when adults stay young, do not act older, and maintain commonality with young people; that's how the market remains relevant to them. The additional irony is that the phenomena of infantilism and this expanded age group are increasing in the Western world. The whole market is aimed at children and youth, thinking, advertising, aiming for the world to become childish, and this market segment is becoming the largest one. The approach of a lot of marketers is to make kids their customers or turn their customers into kids. Infantilization can also be seen in Hollywood movies, on television, in programs, and in the news; of course, this affects the market too.

In this way, consumer capitalism is maintained at the expense of traditional capitalism, which makes do with little. Today, the market does not tell us what to do; it tells us what we want, and once it finishes telling us what we want, it helps us want it (Barber, 2007). Advanced psychological methods and components are also being implemented in shopping centers, with large shopping centers designed to make people move around and look around, so that the mall will distract them and entertain them constantly. The goal is for the person not to stop, think, meditate, or consider anything that is not being exhibited (Bauman, 1998). This is why, for example, malls do not have a clock, to create a sense that time has stopped, and consumer culture is to buy as much as possible until one's hands are full and one drops everything (Barber, 2007).

Thus, postmodern society refers to its members mainly on the basis of their role as consumers rather than as manufacturers. The difference is substantial. The "manufacturer" has a clear bottom limit for the things he needs to exist, to live and function in the world. On the other hand, there is an upper limit to what a person may dream and aspire to, and what goes beyond that limit is considered a luxury, which is perceived as sin in that society, and there is a desire to be conformist and actually remain between the upper and lower limits. On the other hand, today's "consumers" lack such norms; that is, the consumer is motivated by his own temptations and desires, which only increase and change frequently. The point of comparison and reference for a person's successful life in the global age is universal, and only the sky is the limit. The idea of luxury has little meaning in postmodern society, where the aspiration is to transform daily luxury into essential needs. Every desire is legitimate, and there are no

“false needs.” There is no criterion by which a person, the consumer, can measure his level of conformity, and therefore this is less relevant. The main concern is personal ability and level of functioning in order to achieve the needs and desires, together with constant readiness to exploit the opportunities that appear before him. Therefore, the consumer should be kept up to date (Bauman, 2000).

As mentioned, in the postmodern era and in the globalized world we do not need to move much physically; we move all the time without even getting out of the chair; we move quickly between spaces, for example flipping through television channels or between websites. And so, physical distance does not mean much. Wherever we are at a given moment, there is no escape from the knowledge that we could be somewhere else, so there are fewer and fewer reasons to be in any particular place. In a consumerist society, the promise and the hope for satisfaction are similar to the need they provide, and they will always remain stronger and more seductive than any existing need. To the taste of consumers in a consumer society, being in search mode, striving for a goal, not finding it, or rather not finding it yet, is not an illness but a promise of happiness, and perhaps even happiness itself. They move from a motive of hope, which makes achievement a curse (Bauman, 1998).

This can be understood from a biological perspective via Susan Weinschenk’s article in the journal “Psychology Today.” Weinschenk talks about dopamine, the neurotransmitter that makes us feel happy and experience enjoyment, and thus increases motivation to look for certain substances or behaviors such as food, sex, and drugs. Lately, studies have changed this understanding and shown that dopamine is responsible for the “wanting” which is the motivator of action, making people move and act; furthermore, dopamine is in charge of willingness, desire, curiosity, and the will to search. Another important and relevant system is the opioid system. The opioid system is responsible for the “liking” which makes people satisfied, and as a result, induces them to stop searching. The dopamine system (the “wanting”) is stronger than the opioid system (the “liking”), and if the seeking doesn’t stop for a while, then people get into an endless loop of searching and seeking. As a result, people are seeking more often than they are satisfied. This is one of the reasons why humans are driven to research, investigate, explore, and not just be satisfied by meeting some basic needs (Weinschenk, 2012). So, in the consumerist society, the goal is not to satisfy the consumer but to keep his desire “on the back burner,” keep him enthusiastic all the

time, excited, seeking; he should not be at rest but always awake and alert (Bauman, 1998).

Shopping and consumption are not the measure of behavior in the capitalist system, but they do define the meaning of life. The goal of the market is to capture time and space in a strong and stable way, to control every moment of the day, and to penetrate to the private soul of the consumer as much as possible. This is in fact the only way, in the eyes of marketers, the only condition necessary for the success of capitalism: that the needs of consumers who buy and think about shopping will be constantly responded to. Consumption should be total, not pluralistic, because pluralism allows space, and in this space can enter things that are not shopping, and this can lead to situations where people do not buy at any given moment (Barber, 2007). Marketers want people to buy all the time. For most people, shopping and buying are casual and routine processes of everyday life. But when it becomes extreme and extravagant, compulsive buyers struggle to control a powerful impulse to buy. Compulsive buyers are not buying anything vitally important in terms of products or services, but for them the compulsion is the buying itself (O'Guinn, 2002).

Addiction to consumption is one of many abnormal behaviors which are considered behavioral addictions. In the past, when it came to addiction, concepts and definitions centered on drug use. However, with societal and global changes, there are many behaviors that are considered behavioral addictions and do not involve swallowing/injecting/smoking a psychoactive drug. These include behaviors such as gambling, computer games, exercise, sex, internet use, compulsive buying, compulsive advice-seeking, compulsive eating, and so on. This diversity has led to new and comprehensive definitions of what constitutes behavioral addiction. So many behaviors, such as those mentioned, that can provide lasting rewards in the absence of psychoactive substance can be potential addictions and become behavioral and non-exogenous chemical addiction. According to Mark Griffiths, any behavioral addiction must include all six core components of addiction: Salience (when the behavioral addiction becomes the most important activity and dominates the thinking, feelings, and behavior); Mood modification (identified through the individual's reporting on their behavioral addiction, which can be seen as a coping strategy); Tolerance (a process in which there is a habituation of the body to the behavioral addiction and there is a need to increase the dosage in order to achieve satisfaction); Withdrawal symptoms

(feelings and/or unpleasant physical sensations resulting from a sudden cessation of the behavioral addiction; for example, irritability and tension); Conflict (as a result of spending too much time dedicated to the behavioral addiction. This can be interpersonal conflict, intrapersonal conflict, and conflict with other pursuits such as work, friends, etc.); Relapse (after a period of control and avoidance of the behavioral addiction, this is a tendency to go back, and even a little more heavily, to the earlier patterns) (Griffiths, 2000).

There are many common characteristics of people with behavioral addiction and compulsive behavior. In every case, the basic motivation is to relieve anxiety. Additionally, there are common personality traits among people with compulsive behaviors, which include low self-esteem, increased likelihood of depression, isolation, and lack of impulse control (Edwards, 1992). For example, the compulsive behavior of obsessive-compulsive shopping is an unusual form of shopping and spending. The person has a strong and uncontrollable urge to buy and spend when the basic goal is to relieve negative feelings of stress and anxiety. It is a behavior that becomes chronic, with compulsive repetition. The purchases themselves are almost pointless and unimportant for the buyer. So, when buying is seen as an abnormal, compulsive, chronic behavior of the consumer, and when the motive is to calm negative feelings of anxiety and stress, it can be compared to and treated as an addiction (Edwards, 1992).

Consumer addiction is not only a medical and psychological issue, but a problem with a social and economic dimension. Addiction leads to repeated behavior in which the addict returns to the same obsession again and again. The consumer society thrives at the expense of the addicts who buy tobacco, alcohol, drugs, and of course also participate in casinos and online gambling. All this is very similar in the context of young people when it comes to selling sweets, soft drinks, fast food, and so on. The consumer society helps create passion and hobbies, which may not be addictions, but which raise the motivation to search (as reflected in dopamine levels), and cause the consumer to experience cravings and a great desire for the same products over and over (Barber, 2007).

This is reinforced from the biological perspective, based on a lab experiment on rats. The dopamine system plays a major part in the human addiction process, and behaves analogously in rats. The study by Berridge and Robinson (1998) shows that lack of dopamine did not change the ability of rats to evaluate pleasure. This could be

seen by observing their evaluation of basic incentives like food, water, and other incentives, which the dopamine-deprived rats continued to seek out. The study suggests that lack of dopamine from the nucleus accumbens will lead to damage to the final reward experience. Namely, it will negatively impact the value of motivation to look for incentives. Based on this rat study, the dopamine-deprived rats still like pleasure and the things that make them feel pleasure, but they have less motivation to want and seek out pleasure (Berridge & Robinson, 1998).

Any addiction, as a driver to satisfy cravings, is self-destructive. It destroys the possibility of ever achieving satisfaction. Craving becomes an end in itself, the only purpose that is undeniable and unquestionable. Every member of the consumer society in the liquid modern era participates in shopping. The consumer buys all the time, day and night, at the mall and at home, in the street, during work and during leisure time. Shopping does not just consist of buying items of food, clothing, cars, or furniture. The keen and relentless search for new and improved role models and recipes for a happy life is a form of shopping. However, consumerism is no longer a matter of satisfying needs, but of satisfying cravings. Craving is something much more fickle, fleeting, elusive, and emotional than “needs” that stand on their own. As mentioned, as part of the modern process of technological progress, the period of liquidity creates a new order, changing and melting solid forms; therefore, the “need” is considered solid - inflexible and finite. In the liquid age, the need has been replaced by a craving that is fluid and has a greater capacity for expansion than does need.

There are many explanations for the drive to go shopping; some are an expression of the postmodernist revolution and present the obsession with shopping, shopping addiction, obsessive compulsions and other well-known expressions as materialistic instincts, a “commercial conspiracy” that privileges artificial displays of pursuit of enjoyment and pleasures as a supreme goal in life. The consumer is driven by pleasurable sensations of vision, hearing, touch, and taste, as guaranteed by pictures, advertisements, and display windows. But there is a complementary explanation: the addiction to shopping is self-complete and replaces a lack of confidence and uncertainty that make life difficult for the person and intimidate him (Bauman, 2000). Through shopping, the person obtains certainty and security; the person wants to be free from the fear of deception, error, neglect, or negligence. The great virtue of objects that are the focus of shopping is their arrival with a (false) promise of certainty and security and

a sense of trust. For example, electrical appliances guarantee reliability and good manufacture. In the area of service provision, coaches guarantee that their clients will increase their income after several sessions, and so on (Bauman, 2000). In addition, in an age of individualism, responsibility for one's actions is on the individual, and when a consumer is promised service or anything else in the market, they jump at the opportunity because they need help, and they want to have confidence in the fact that someone can help them with the burden of personal responsibility. In the context of liquid modernity, this certainty and security are temporary and do not fully satisfy, since the products have an expiry date; there is a life span as well as wear and tear, and so security is temporary, and therefore the consumer is ultimately not satisfied and cannot relax for a moment.

Buying is personal, even if there are masses of people around. Consumption is a single, private, individual action, and there is no need for joint cooperation or effort (Bauman, 2000). While in the modern era, the previous era to this one, it was clear what was right and wrong, what was proper and what was improper, with the new era, the world became an endless repository of possibilities. There are so many possibilities that the individual will not be able to explore or adopt throughout his life. In liquid modernity, the individual has free choice. There is no longer any fear of a "big brother" of supervision to punish any deviation from the norm, and there is no room to imagine a figure that will help, guide, and contain, a figure that can be trusted. In liquid modernity, the responsibility lies with the individual himself. He must investigate, examine, test, stretch boundaries, set goals, obtain the means to achieve them, and also bear responsibility for the consequences of his actions. The liquid world is full of opportunities, each more appetizing and beautiful than the last. In such a world, with very little predetermined, failure is not final; faults are reversible and correctable. On the other hand, victory is not final. In order to allow possibilities to remain finite, it is forbidden to fix them, it is forbidden to mold them, and therefore they must be kept liquid and thus remain temporary, so that they do not remain fixed for too long and acquire solid properties, thus reducing possibilities and future adventures.

The awareness that the game continues, that the future is expected to be realized, miraculously brings about a wealth of satisfaction and pleasure. However, the suspicion, or the understanding, that there is no guarantee that one can indefinitely postpone decay or fading, that there is no guarantee of longevity, that even what the

person has already tried and experienced is not absolute and safe, all this leads to a balancing act and offsetting of losses and profits. This is of course part of the liquidity of modern times. A world full of possibilities is a situation in which many options, stimuli, and withdrawals exist over and above the real needs of a person, of a consumer. The consumer's challenge is to set priorities, and to take into account that there will be possibilities that will not be investigated or exhausted, and so will remain potential. Hence, the multiplicity of choices leads to distress in the consumer (Bauman, 2000).

Another form of distress that afflicts the individual is pressure, stress. Capitalism believes in competition, and this is a source of friction that does not benefit anyone. In capitalist society, the socio-competitive pressures are high, and this becomes a source of mental distress for many in society. This pressure surrounds us; we are not always aware of its presence because we are used to it. It exists, affects, and sometimes oppresses everyone, but almost everyone has learned to live with it. In modern times, the person cannot function without this pressured and crowded atmosphere. This can be understood from the behavior of many who feel uncomfortable even in their leisure time, when they look for an activity that can cause them to forget what is going on inside them and restore to them the peace and tranquility that their soul yearns for (Roham, 2013).

These are derived from the problems that began to emerge at the beginning of capitalism when there were those who sought economic benefits only for themselves; they did not care about others or about what would happen to their society. These people strove to deceive their society and swept away whoever and whatever might be in the way. Thus, through capitalism, materialism and egoistic materialism only increased. Everyone dreamed of how to increase their fortune and wealth. The main motto among the principles of the founding capitalists was to anchor and preserve the basic needs of the individual.

Capitalists make calculations of profitability in every act and relate both to human beings and to machines primarily in terms of the profit they can derive from them. Today, almost no one is willing to invest resources and efforts for the benefit of others beside themselves. In the capitalist system, only materialism motivates actions. The rules of the game in society and in the Western regime operate in closed circles that are difficult to break through. Each one maintains his plot and niche, and no one is willing to move because of the fear and uncertainty of what might happen to him in the

future. The fear of something unknown leads each individual to equip himself with weapons to prepare for the blow. Everyone sees his own home as a fortress and protects it.

In every field of activity, there are people who will prevent any change that is inconsistent with their interests. Therefore, as long as many citizens depend on other people for their livelihood and development, the situation of exploitation precludes a balanced society. In such a situation, it is impossible to think of anything that will ease the minds of the citizens. Those who cannot and do not want to wait until someone helps them get out of the difficulties into which they have fallen despite themselves feel the need to act in their own ways. When the conventional way is blocked, everyone will do anything to get their needs met, even if what they do is not always pleasant for others. In an individualist society, billions of lonely people live side by side, and each one is interested only in what is happening for him, as if the others, so close by, do not exist. (Roham, 2013).

Thus, in the political sphere, the citizen does not receive a solution to his distress, since the democratic countries are also undergoing processes and changes that distance the citizen from a collective solution. Today, in democratic countries there is a policy and ideology that moves on the axis between the socio-democratic approach and the neo-liberal approach. These approaches are fundamental and substantiated, indicating government intervention or non-intervention in almost all areas: economic, social, health, and more. Each country situates itself on the socio-democratic-neo-liberal axis by policy decisions and laws. The capitalist context, in the economic sphere, dictates and influences the consumer market; while with the socialist approach and the social-democratic policy the market is not free and is subject to government intervention. At the same time, according to the technological developments and global processes described earlier, the approach on the other side of the axis is strengthened: the neo-liberal approach, which prefers a free market economy without government intervention. In the 1970s, the changes related to globalization began to be felt significantly worldwide, and the borders between different countries began to blur. Changing attitudes toward neo-liberalism, in addition to growing globalization, have led to a change in collectivistic perception and progress toward individualism, in which everyone wishes to empower themselves and increase their personal wealth. Social solidarity has always been one of the tenets of social democracy.

Many believe that the social approach in which the “I” is in the center has a destructive impact on social solidarity. In contrast, Anthony Giddens (1998), who is aware of the individual processes taking place in the world and who calls this generation the “I” generation, disagrees that this is a generation that symbolizes a process of moral degeneration. On the contrary, Giddens argues, and supports this with studies, the younger generation is more sensitive than previous generations to a wide variety of moral problems, such as the environment, human rights, animal rights, sexual freedom, and more.

Giddens argues that welfare states only strengthened and radicalized individualist ideology through established welfare institutions, as part of the idea of collectivism, and that this helped the individual to free himself from the things that previously grounded him to the broader society. Thus, society can neglect and diminish the power of traditional customs and practices. Nevertheless, Giddens argues that social solidarity has not disappeared from the world; it has only undergone a change, and there is a need and responsibility for the new generation to find ways to maintain it. In other words, in the era of the individual, the countries that advocate neo-liberalism will not produce or take responsibility for their social cohesion, formally and politically; this is no longer their agenda. Therefore, individualist ideology is maintained within the society by transferring the responsibility to the individual, along with many other things; here too comes the responsibility to create social solidarity. Today, each society must find the balance between the responsibility of the individual and the responsibility of the whole (Giddens, 1998).

In the realm of religion and faith in the postmodern era, society has been freed from belief in the act of creation and other religious beliefs as absolute conventions. The release from these beliefs has led people to stand “in their own right,” with the consequence that their success and failure depends on them alone. In liquid modernity, there has been a collapse and decline in illusions that were practiced in the first period, such as the belief that perfection can be reached at some point, the belief in the existence of a just and conflict-free society, the expectation of the fulfillment of all our needs, and so on. Thus, social perception and understanding becomes less collective and more individual, the ethical-political discourse shifts from the context of society to human rights, the process of individualization intensifies (Bauman, 2000).

In addition, postmodernism also brought about social changes, changes in social psychology. Today, society is no longer collective, but is a society of individuals. There has been a strengthening of the individual perception and self-focusing. At the same time, the mental connection to generality and nationalism has become more pronounced, together with the strengthening of feelings of personal alienation and the individual's sense that he is facing the world on his own (Gusacov, 2016).

Mutual involvement has come to an end according to Bauman. He describes the era of liquid modernity as reflecting the end of this feature, which was strong and significant in solid modernity. Liquid modernity is characterized by detachment and evasiveness. Those who evade are free to move and control others. The unique features and characteristics of postmodern life (the liquid) are expressed in instability, moment-by-moment change, lack of social interaction, lack of spatial solidity; that is, there is no power in space but only in time, mobility dominates, together with instability, insecurity, uncertainty, threat, and danger (to person and property). All these characteristics are prominent in today's living conditions. And then, tenure and confidence in the workplace seem like nostalgic concepts for previous generations, and no level of talent or experience seems to guarantee longevity in the workplace. Flexibility and liquidity are expressions that characterize the labor market today, and therefore there are no firm commitments or promises for the future on the part of the employer; all is temporary. Therefore, since there is no long-term security, "instant gratification" seems very tempting. If everything is temporary, take everything that life has to offer "on the spot." Live in the moment, because who knows what will happen tomorrow? Thus, future rejection and future planning diminish in their meaning and relevance in many cases, because no one has said that the investment, the work, and the long-term effort will be equal and meaningful in the future.

In the era of liquid modernity, everything changes very quickly. Fashions change quickly; what is considered new today is already considered outdated tomorrow; a lifestyle that is considered fashionable today will be ridiculed tomorrow. This fluidity leads to a lack of solidity and stability. Such conditions of social and economic instability cause humans to perceive the world as a place where everything is expendable and disposable, even human beings. "Now" is the key word in life strategy. This temporariness and instability permeate both contractual relations in partnerships and interpersonal relationships. That is, there is a tendency to perceive and treat

relationships and partnerships as things that are intended for consumption rather than for production. In addition, liquidity and instability of social existence encourages the perception of the world as a collection of products for immediate consumption. All this only increases and adds to the rise of individualism and the narrow view of the self.

Finally, society shapes the individuality of its members, and individuals create society through the actions of their lives. Individualization in the liquid period transfers responsibility to the person, to the individual. He is responsible for his good and bad deeds; the individual has the responsibility to train himself professionally and not to be lazy. Individuality is a phenomenon that will not pass quickly. It brings unprecedented freedom to experiment and explore to an increasing number of people; but it also brings the challenge of dealing with its consequences. In the end, being an individual means that there is no one else to blame for failure or lack of success, no big institution to blame; the individual can only blame himself and take responsibility (Bauman, 2000).

The Aspect of the Youth

This work examines and focuses on the youth. This age group is one of the most complex, interesting, and important stages of a person's development. Normally, youth have the ability to adopt and control technology more easily and quickly than other age groups in the population. As we have seen, technology in general and today's technology in particular shapes and exerts influence on ideological, global, social, psychological, behavioral, and other levels. Because of the unique characteristics of adolescence, the influence and design that today's technology occasions are far more significant for adolescents. In order to understand these effects and their significance, it is necessary to recognize, identify, and distinguish the unique characteristics and components of adolescence and the culture of youth.

Before that, it is important to note and explain a key point related to language and interpretation issues. The concepts of youth and adolescence are used intermittently in this work, since they comprise the research population. A lot of articles, books, and literature in general frequently use the terms adolescence and youth in an unclear manner. Indeed, the definitions and distinctions between these two terms differ from culture to culture, from society to society. From my review and reading, in Western literature and academia, there are three main concepts that describe the research population in this work. Usually, the two main terms are Youth and Adolescence,

together with a small use of the concept of Teenagers that I will hardly use. According to the Oxford English Dictionary, there are three slightly different definitions for these concepts: **Youth** - the period between childhood and adult age; **Adolescence** - the period following the onset of puberty during which a young person develops from a child into an adult, and **Teenager** - a person aged between 13 and 19 years (Oxford English Dictionary, 2019). These are the simple definitions of the words themselves, but each of the terms has many meanings, implications, and interpretations. According to many sources, the basic approach is to refer to a stage of life that separates childhood from adulthood, and to anyone at this stage of life, as young people. Then, “adolescence” refers more to the transition phase that is close to childhood, the life stage itself in terms of age, age characteristics, traits, physiological changes of development and growth, and hormonal maturation. Meanwhile, “youth” refers more to young people with the uniqueness and characteristics of a young person: vigorous, refreshed, bold, etc., and of course these have a connection to age. Moreover, the same young, stylish, rebellious, and bold characteristics that youth represent have created an independent culture - youth Culture, which is part of and within the general culture about which I will expand later (Blackman, 2007).

These differences in definitions and distinctions are usually distinguished by age (chronological), style, physical developments based on age, and more. Some of the reasons for the distinction, difference, and widespread disagreement about the definition are due to constantly evolving human understanding and recognition of individual and cultural diversity and differences, gender differences, scientific developments in the human realm within a developing and dynamic society, and so on (Curtis, 2015).

However, it is important to note that there are sources which refer to the terms with exactly the same interpretation. For example, reference and definition are shared by “adolescents” and “youths” between the ages of ten and eighteen, in addition to the notion that there are exceptional situations in working with youth where there are young people who can start adolescence before the age of ten and/or young people who can still be adolescent after the age of eighteen (APA, 2002).

So, in order to be as clear and precise as possible, I will adopt the distinction of the World Health Organization and the United Nations, who distinguish the terms in the same way. For statistical purposes and calculations, the United Nations has

determined that adolescence is considered to be between ten and nineteen and youth between fifteen and twenty-four years old, with both of them considered to fall under the category of “young people.” In this study, the research population falls exactly in the middle, between adolescence and youth as defined by the UN: that is, it consists of high school students aged fifteen to eighteen, so it is important to note that there are contexts in this study in which both terms are mentioned, and therefore the age range of the research population in this study should be remembered (Asia, 2010; The health of youth, 1989; WHO, 2015).

These definitions and distinctions are important and relevant for understanding this significant life stage. Indeed, changes have occurred over time in this field. Over the years, the age period referred to as “youth” has expanded to include part of what used to be considered childhood (Tenbruck, 1961). With the pace of change that has occurred in modern and postmodern society to this day, the period of youth should train young people in anticipation of activity in a dynamic world and in a society whose future is hard to predict. In most countries of the world, up until World War II, most students studied six to eight years at an elementary school and then went out to work. However, in the 1950s, with the changes in the democratization of the education system, the proportion of those who continued studying gradually increased, thus gaining an extended period of maturation (Smilansky, 1991). Today, the boundaries of this period are steadily expanding both downward and upward. The downward expansion is partly due to early exposure of young people to the adult world via television and the Internet. Some of the reasons for the upward expansion are the longer time required for training for adult jobs and the acquisition of specializations, and the increase in the age of marriage (Nave, Elad, & Ran, 2004).

In Chapter 2, I will continue to deal with age range and its meanings, as well as the history of this life stage, and much more. In this section, I will focus on the age characteristics and the changes that youth are going through, and elaborate on the effects of contemporary technology on today’s youth.

As mentioned, the present research deals with young people in the fifteen-to-eighteen age range, the age of high school students in Israel and in many other countries. The heart of the matter is youth, which is an interesting and unique period in human life. It is an age range within which there are many tensions and conflicts, an age range that is actually a liminal state, where aspirations for a new future conflict with the desire

to remain in the past and the familiar, between the desire to remain a child with all the implied rights compared to the desire for independent life (Katzenelson & Raviv, 2017). In addition, because of the changing trend in the period of adolescence, a gap exists between the preliminary physical changes and the emotional maturity that still needs extra time to develop. That is, there is no coordination between physical and emotional maturation. (Almog & Almog, 2016).

At the same time, this is the age at which society legitimizes youth to experiment, to take decisions, and to make mistakes both emotionally and financially. During this age range, the youth have great strength, courage, and creativity. However, this is a very challenging period in which there are many risks that can affect the life and also shape the identity of the adolescent. Despite the social knowledge that this is a critical age, this period is not necessarily a period of crisis. Indeed, there are emotional and social storms, difficult and threatening moments, and internal and external conflicts, but in many cases, these are isolated events and do not necessarily accumulate into an ongoing crisis. Due to the significant changes that occur during this period, there is a potential for vulnerability, especially emotional vulnerability, in the adolescent. But most adolescents succeed in managing changes, processes, and difficulties within the framework they are in by getting help from friends and adults who interact with them (Katzenelson & Raviv, 2017). Most adolescents function well, without significant problems, enjoying their lives and being content with themselves most of the time. Even in relation to family and parents, in most cases the situation is good, which shows that the family serves as the first psychological line of defense (Offer, 1990). This being the case, many adolescents experience this stage of life as a positive stage in which there are intense challenges, and most of them succeed in creating emotional and personal stability and sufficient connection with the parents and the peer group, all of which accompany them for the rest of their adult life (Katzenelson & Raviv, 2017).

Cultural changes initially affect young people. And then, the changes also spread to the older age range (Twenge, 2017). Today's youth have been born into a world of accelerated technological development at an unprecedented level, featuring smartphones, social networks, applications, text messages, and more. All these technologies and communication channels have a great influence on the lives of today's youth (Katzenelson & Raviv, 2017). It is a technological world that deals more with information and knowledge and less with practicalities and practical skills (Almog &

Almog, 2016). The Internet and social networks have an impact on creating peer groups that are not based on geographical proximity, virtual social relationships that are not realized face to face, but through the mediation of the screen. Exposure to information without limitation and open discussion of subjects that were previously discussed only in private rooms allows for personal learning and development (Nave, Elad, & Ran, 2004).

Normally, youth tend to adapt easily to new technologies and adopt them readily. The penetration of the Internet into the lives of youth is very important and significant. The Internet and social media provide a free and egalitarian space for youth. The use of the Internet and social networks is an inseparable part of the world of youth and is even preferred over other types of communication. In contrast to real life, which is directed by the rules of behavior and supervised by parents and teachers, forums, blogs, and social networks offer youth a field of expression that is free of supervision and direction, a place and space in which the participants determine the rules while maintaining communication among themselves. At this age when identity formation takes place, adolescents experience radical and significant changes, confusion, impulsivity, conflicts, and physical symptoms. The self-disclosure of adolescents stands out in social networking on the Internet, and this is one of the best ways for them to release and open up. In this context, they exhibit feelings and reveal their thoughts, attitudes, beliefs, and experiences. One of the characteristics that has influenced youth culture is that social networks, and the Internet in general, have changed the way in which one can expand one's circle of friends on the one hand and maintain existing connections on the other (Bar-El, 2013). For the adolescent, the Internet is an important source of information thanks to its ease of access and the ability to find updated information (Bar-El, 2013). In this context, it was found that the current generation rarely reads whole books and mostly reads online. This is because the information on the Internet is constantly updated, while the book is getting older and becoming less relevant (Twenge, 2018).

All of the above highlights an important and complex feature of today's youth culture, which is privacy: on the one hand, the ability to obtain privacy, and on the other, a culture characterized by a lack of privacy. The physical nature of the house enables almost complete privacy by closing the door to the room; thus, the adolescent creates a separation between himself and his family. In his physical space, there is

probably at least one screen, which can be a television, computer, smartphone, and more. The privacy that the adolescent achieves in his room sometimes creates detachment and liberation and sometimes even creates a problematic distance. The house, the physical walls that once served as a protected space, are now penetrated by and subject to the influence of social media, which sometimes serves as a supporting factor, but sometimes can be a critical and weakening factor. At the same time, on the other hand, today's youth culture is characterized by lack of privacy. Any person who uses the Internet leaves "digital traces" stored in the network for the long term, without the control and knowledge of the individual. This electronic information is sometimes transmitted to various entities and stakeholders, for example, marketing and commercial interests, and even state surveillance.

Furthermore, a feature of the youth experience is discovery and exposure. Today, there is over-exposure due to the Internet in general and social networks in particular, encouraging disclosure of details from daily life and personal experiences. The results of these exposures are not always positive and cannot always be predicted. For example, posting an image, a personal story, or an opinion can receive negative responses. As noted, youth are also exposed to harmful content, such as free content that sometimes young people are not yet mentally ripe for coping with. Examples include content encouraging violence or objectification of women.

Another characteristic of today's culture, and especially youth culture, is availability. Since the massive entry of smartphones, the Internet has become available to almost anyone, anywhere, and anytime. This availability has two sides to it. On the one hand, the person is highly available and feels up to date and involved. On the other hand, involvement may be subdued; there is an expectation to be available all the time, which adds to existing pressure and also affects the ability to rest and go through internal processes (Katzenelson & Raviv, 2017).

Today, one of the easiest ways for people, and especially youth, to access the Internet is via the smartphone. Smartphone use has increased tremendously, and concomitant with this increase, smartphones have become smarter and offer ever more options and applications, such as communication platforms and many entertainment options (Shin, 2013). Adolescents are using technology on a daily basis for a variety of purposes, and particularly for communication with others (Salehan & Negahban, 2013). This technology has a huge and multifactorial influence on youth culture, including in

the areas of communication and interactions, sleep habits, and popularity in the peer group. Cultural activities today have become much more complex because of the increasing use and improvement in digital media technologies, including smartphones (Brien, 2010). Moreover, contemporary youth tend and prefer to make interactions and communications through the smartphone, sometimes in preference to face-to-face interaction. A good example that could indicate a broad trend is a research study in New Zealand that examined the common priorities among adolescents for engagement with psychological support in the context of contemporary youth culture. The study offered them some options for accessing the mental health service. The results showed that text and telephone counseling were particularly attractive options for the youth, more so than face-to-face meetings. Perhaps these allowed them to avoid adult control, maintain their privacy, and achieve a sense of autonomy (Gibson, 2016).

Adolescents with smartphones spend much more time on the Internet and social media per day than adolescents with simple cellphones (Lemola, Perkinson-Gloor, Brand, Dewald-Kaufmann & Grob, 2015). The smartphone has changed the manner of communication and the everyday lives of adolescents. Not surprisingly, it has become children's favorite means of communication (Campbell, 2005). It has also become a fashion accessory that youth brag about to their peers (Srivastava, 2005). They treat smartphones differently than adults do. They take care of their smartphone and nurture it by purchasing special covers, decorations, and upgrades (Almog & Almog, 2016).

In the context of sleep habits, use of communication technology is very common in American youth before and after bedtime (Polos, Bhat, Gupta, O'Malley, DeBari, Upadhyay & Chokroverty, 2015). Youth are using smartphones a lot while lying in bed, and this is correlated with shorter sleep duration and with sleep difficulties (Lemola et al., 2015). Use at and after bedtime has been found to correlate with low academic performance (Polos et al., 2015). This use has an impact on adolescents during the week and makes them feel tired, which has become more and more common in adolescents (van den Bulck, 2007).

The technology of today and especially the social networks on the Internet influence youth culture with regard to bullying; the smartphone in particular becomes a platform that can lead to cyberbullying (Trucano, 2015). The lack of supervision by parents and teachers and the anonymity that enables the removal of barriers and unrestrained emotional expression lead to the development and expansion of people's

ability to harass and abuse. Common forms of bullying on the Internet include: defamation, sharing intimate information, photography without permission, and boycotting (Katzenelson & Raviv, 2017).

As mentioned, the main research population in this work is the youth. In terms of generations, they are called Generation Z. In addition, I also examine the previous generation - Generation Y - for the sake of comparison. I will elaborate in depth on these generations, and on generations in general, in chapter 2. For now, let's just point out that global, economic, and technological advances have a huge impact on these two generations, with a greater emphasis on Generation Z. Some of the effects and changes I will detail in Chapter 2 include the changing way of knowing the world more verbally and visually (Lecturer, 2014). There are also changes in the manner of protesting both in general and in youth culture in particular. There are changes in communication, such as communicating through symbols rather than words (Twenge, 2017), and sharing of information in general and about their lives specifically with everyone else in the world, near or far, in seconds and without difficulty (Berkup, 2014). The smartphone and social media allow adolescents to interact and socialize through technology (Twenge, 2018). There is an assumption that they can do everything through technology (Berkup, 2014). Also, to be noted are the practices of solving problems (Bencsik, 2016), and the changing of relationships among youth through their constant availability and the changes in how they meet and interact. (Twenge & Spitzberg, 2019). Finally, there is the influence on independence (Galland, 2003), and also the influence of technology on skills-learning and attention (Shatto & Erwin, 2016).

The adolescents in my study belong to the Western, postmodern culture. They have been sampled from various places throughout Israel and are considered to belong to Israeli culture. The State of Israel is considered a state of good socioeconomic status with a strong economy. Israel is also considered to be a technologically stable and advanced country that includes electronics, pharmaceuticals, and aircraft sectors, alongside software, research, and development services (OECD, 2018). Accordingly, the adolescents in this study are compatible with all the studies cited here which present the influence of the postmodern era in general and Internet and smartphone technology in particular.

Research Problem

Smartphone technology is a very big issue in the global environment in social, psychological, and educational aspects. There are a lot of opinions in favor of embracing this technological revolution, and, on the other hand, there are those who want to reduce and even avoid this technology, especially insofar as it is involved with school and education. Most of the things written here and below will be relevant and will relate to almost everyone in today's society. As a teacher of adolescents, high school students, I can watch, feel, and ask the interesting and intriguing questions, and examine the changes that arise from the use of smartphones. **The main problem that this work explores is: What are the characteristic features of the influence of smartphone use for the everyday life of contemporary youth in Israel?** In addition to this large and significant question, the further 17 questions are examined: (1) What specific and peculiar features characterize the process of creating the smartphone culture in Israel? (2) How is the smartphone culture developing currently, and how does this process affect the youth culture in Israel? More than that, and as part of deepening understanding of the phenomenon, (3) I deal with the needs of youth that the smartphone cannot provide. Additionally, we are witnessing an additional and complete world that takes place in a virtual, parallel space, so I intend to identify (4) the main features of the smartphone as the youth's "virtual friend."

Smartphones as a means of communication have a profound and fundamental impact on the daily interactions of users. Therefore, this study examines: (5) How does the smartphone influence the motivation of youth to engage in face-to-face interactions? (6) How does the use of the smartphone change the interaction patterns among youth and between youth and other people within groups? And (7) what does the increasing use of the smartphone do to the ability of youth to recognize facial expressions? I will also discuss the influence (8) of digital media use via the smartphone on youth social involvement and (9) how smartphone culture affects intimate relationships among the youth. Also, (10) I address how the smartphone affects the youth's courage to express an opinion.

The smartphone has become the youth's most private device, and also their close companions, which they carry almost every moment of the day. As a teacher responsible for many students, I examine (11) the impact of having a smartphone during class on the satisfaction of the youth student with the teacher, the lesson, and the course.

In addition, I look at other daily activities and private usage of the smartphone, like (12) the effects of smartphone use on youth sleep behavior; (13) The influences of smartphone use on daily decision-making among the youth, and (14) how smartphone culture affects the independence of the youth.

In the past it was possible to know at a glance, during breaks at school, who was popular and who was not, who was isolated and who was surrounded by friends, all things that greatly affect self-esteem. With this background, and to complete the study and examine the main research problem, (15) I examine the issue of smartphone addiction, and the level of addiction and dependence of youths on smartphones. Additionally, smartphone addiction is used as a variable for (16) the issues of the smartphone's effect on self-esteem, and (17) the effects of using digital media via the smartphone on classroom popularity. I address all these questions in the present work.

Paradigm and Methodology of the Research Project

A guiding paradigm is necessary for this study. A paradigm is a perspective that reflects basic ideas and assumptions about the nature of society. A paradigm can be considered a theoretical structure that attests to dominant values that represent views and philosophies (Hulberg, 2006). It is designed to define phenomena and explain concepts in science. The paradigm provides a background or framework by which one can examine and measure a theory derived from it. The paradigm serves as a guide for conducting the experiment and as a guideline for interpreting the results (Wither, 2018). There are four main paradigms within sociology: functionalist, interpretive, radical humanist, and radical structuralist. These approaches are based on two opposing approaches, and so can be distinguished - the subjective versus the objective paradigm. Another distinction is between positivist paradigms, which assume the existence of an absolute reality that the researcher must examine according to objective measures and seeks the discovery of one clear truth in an objective reality, and the interpretive paradigm (the anti-positivist) in which there is no single truth, the reality is subjective, has many points of view, and there is no objective measuring tool for describing reality.

The paradigm that guides this work is the interpretive paradigm. The interpretive paradigm is a perspective which sees reality as a social creation constructed through everyday interactions. The interpretive paradigm emphasizes and relates to how processes are created. That is, how people create their environment, and how those

processes are maintained and preserved (Hulberg, 2006). The paradigm wants to understand the world as it is and sees the basic nature of the social world at the level of subjective experience. The paradigm seeks to explain the individual's consciousness through his attitude as a participant in the experience, rather than as an observer of what is happening. The interpretive paradigm is anti-positivist, that is, it sees the social world as a process created and developed by the individuals who share the interaction, which cannot be measured by a single objective tool. In an interpretive perspective, social reality is perceived as questionable and problematic, and thus daily life receives a status of great achievement. Interpretive philosophers and sociologists want to understand the source of social reality; they can deepen into the subjective consciousness of a person and thus try to find basic meanings for social life. The paradigm sees the human world as united and orderly and does not refer to conflicts, problems of control, etc. (Burrell & Morgalm, 1979).

Looking at the individual in an interpretive manner, human behavior, external and internal, provides every context and frame of reference for human activity. Additionally, there are unique patterns that can, of course, be interpreted in an understandable manner. The understanding of human behavior is achieved through an interpretation that contains different levels of understanding. The interpretation has a personal, individual nuance, and this still does not mean that it is accurate or reflects the reality of the situation. It is possible to interpret and explain the motive of action according to external behavior, but this does not yet mean that this is the real motive for a person's behavior and actions. Rather, in order to understand the context of the actions and behaviors, it is important to validate and to identify, as far as possible, the patterns and forms of thinking before action is taken, before explaining and interpreting the action. When giving an interpretation, we take into account rational actions and also understand the emotional components and consequences of the action.

Sociology first examines the reasons and interpretation based on the rational contexts of action. In other words, the specific focus is not necessarily internal or external, but is on action itself. Action is the understandable and objective aspect of behavior. Interpretive sociology, an approach developed by Max Weber, deals with the distinctions and terms of significant relationships, namely, the meaning people give to their social world, and its role in understanding why people behave as they behave; thus, it goes beyond merely observing the behavior itself.

The approach examines and characterizes the instrumental rational action, which serves as an ideal through which to understand the irrational (Weber, 1981). Interpretive sociology remains part of sociology and does not spill over into psychology. For Weber, the goal of interpretive sociology is the understanding and explanation of meaningful social action precisely in terms of the significant terms and aspects of the action. Interpretive sociology focuses on the meanings and motives, presumed or real, of the individual or of a random group of people, that is, a group without a group identity. In Weber's view, when one approaches reality and explains it in a complete social manner, one must have an interpretive understanding of the meaning of the complexity of the action. The explanation for the motive for action, the verification or certainty of the hypothesis, must be produced with reference to the typical methods of action that are considered normal (Fulbrook, 1978).

Why did I choose this paradigm? I chose it because, in my opinion, it is the most relevant in our liquid and constantly changing society. As has been said, in the postmodern age there is no single truth, and it is legitimate to hold different opinions; the interpretive paradigm is the most reflective of this reality. As stated, this paradigm believes in building reality through interactions in interpersonal communication, between people. In this work, the technology I am researching, the smartphone, is predicated on interpersonal communication and a new virtual network interaction that creates reality at any given moment. The symbolic interactionism approach is derived from this paradigm. This also corresponds to my research aspirations, when analyzing reality according to the consent or disagreement of the people in the interaction and the interpretation they give to symbols. Similarly, in the virtual world, phone users create their own new reality by agreeing on symbols that represent the continuity of society and culture based on smartphones, a culture that I seek to explore and clarify.

In addition, this study deals with the influence of technology through the smartphone in the context of youth. It deals with the change in the pattern that is created in their interpersonal communication, in the daily interactions. For these reasons, an interpretive paradigm can help in describing the current reality; according to this approach, it is necessary to find the common or non-shared interpretation that exists between the partners in interaction. There is also a need to examine agreement or disagreement on symbols and thereby build reality and preserve or change future social processes. Finally, the approach is relevant to our time, when the collective is deficient

and the processes of individualism are dominant and controlling, and this paradigm takes account of this and focuses on the actions and their meaning for the individual.

To fulfill the aims of my work (especially the explanatory aims), I am going to verify a set of hypotheses. When dealing with changes in interaction patterns, I assume that the more the youth are using smartphones, the less motivation they have to engage in face-to-face interactions. Further to this, I assume the increasing use of smartphones leads to lack of ability to recognize facial expressions among the youth. During the classroom study, I assume that if there is no smartphone use during class, the youth student derives more satisfaction from the teacher, the lesson, and the course. And when I study self-esteem, I think that the lower the self-esteem, the higher the possibility of smartphone addiction. And the lower the popularity in class, the higher the possibility of smartphone addiction. I assume that because of using smartphones, the youth have less courage to express an opinion because it can lead to negative face-to-face feedback. Additionally, thanks to smartphone usage, the youth is more independent in the knowledge world but less independent in the physical world.

The type of research is qualitative research and quantitative research (non-representative statistically). A blend of several research methods was used, including features of sociological ethnographic research, field research, and comparative research. The techniques (methods) I'm using are: questionnaire, informal interview, individual in-depth interview (IDI), participant observation, analysis of personal documents and of statistical (formal) data, and analysis of media content (newspapers, radio, television, Internet). The sample selection is a purposive sample and is composed of subjects from Generation Z (ages 15-18) and from Generation Y (ages 33-37).

1. The Smartphone

There have been many studies in the field of sociology about the influence of technology on society. The amount of knowledge in this topic area is growing and expanding all the time in the academic world. Therefore, there are many pertinent studies about smartphone influence on sleep quality, satisfaction, self-esteem, and about the role of smartphones in relationships, both friendships and romantic partnerships. These studies examine students in colleges and universities as well as the general public, with participants of various ages, including adolescents, from all over the world.

One of the reasons that there is a lot of interest around this subject is because technology influences human life in every aspect: in society, in our decision-making, in our behavior, our relationships, our sleep quality, popularity, self-esteem, satisfaction with life, and so on. The smartphone is one of the most important new technologies of recent years. In a paper presented to the Social Change in the 21st Century Conference, the researchers discussed the effects of smartphone use on social change and how this phenomenon affects many basic aspects of life, such as relationships, family, and school (Campbell, 2005).

The smartphone, before it became so smart, went through many versions, roles, and goals. The initial goal of the mobile phone was to allow a phone call in the car. This is a bit ironic, since a review of several websites presenting factors and statistics of road accidents in the world shows that today, the main cause of road accidents is the distraction derived from the use of a cellular phone, a reason that is ranked between fourth and first place when it comes to phone calls while driving and sending text messages while driving in countries such as the US, Australia, and Israel (Magen, 2016; QBE, 2017; King, 2017; Pines, 2018; “Pines Salomon,” 2019; “Top 7 Causes,” 2018; “What are the Most,” 2019).

Historically, mobile phones began to be used during World War I, when the German army tested cordless phones on military trains. Later, in World War II, many armies made use of wireless telephone technology. After the end of the wars, these technologies aroused great interest and desire to develop this field in the business world. As mentioned earlier, the mobile phone was designed for the vehicle, that is, to talk to a distant person inside the vehicle and while driving. Bell Labs developed such a mobile phone in 1946, and not long after, AT&T developed a similar technology. These

products did not immediately gain momentum, and did not become highly sold products; there was a small number of customers. At the same time, on the other side of the world, between 1957 and 1961 the Soviet Union (USSR) developed several mobile phones which were also designed for use in a vehicle. Also, in Europe in 1959 in Manchester in the UK, a service was provided similar to that in the US called the Post Office Radiophone Service. These technologies were cumbersome, heavy, and with many limitations. The service required a connection through an operator. The service was very expensive: in today's numbers, about \$200 per month, not including a local call at a cost of \$4. In addition, the maximum call time was approximately thirty minutes, and the battery was charged for ten hours to reach full charge.

All the technologies up to this point had been based on radio technology and had relied on the radio channels in the phone owner's car. And in spite of everything, the technology continued to evolve and develop, and so in 1973, the first cell phone call was made by one of the researchers at Motorola named Martin Cooper. Since then, the phones have only become more sophisticated, and as of today the cellular phone has four generations. The first generation, 1G, was launched in Tokyo in 1979 and four years later came to the United States. The network suffered from security problems because it was not encrypted, and thus it was very easy to eavesdrop on conversations. These problems were not so interesting or critical for most people. Then, on March 6, 1983, Motorola's first cellular phone, DynaTAC, was launched, with a retail price of about \$3,995. In 1990, the second generation (2G) was born, whose systems are already digital rather than analog. This generation for the first time also allowed basic SMS communication. And in 1993, IBM launched Simon, which some people think was the first smartphone. Compared to today's technology, of course, it seems simple and primitive. But it did include calendar features, address book, clock, notepad, keyboard, and email service, with very slow speed compared to today. Simon was a great success, and it was sold for around \$1,000.

This generation exposed the world to the cell phone, and suddenly everyone needed one. So, in 2001, again in Tokyo, the 3G phone was launched. This device was designed to meet the needs of people beyond phone calls, and to do so, it needed to provide faster surfing of the Internet. So, with improved data transfer technologies, data transfer could be fast, and then other device capabilities such as video and music

support were enabled. Later on, 4G is upgrading devices ten times faster than 3G (“BeBusinessed,” 2016).

In 2007, the first iPhone was launched. At this stage, the telephone device seems to have been moving from its role as a means of communication to a tool on which all daily tasks could be based. This device, produced by Apple, mainly featured the additions of touchscreen functionality, virtual keyboard, faster Internet surfing, and thus access to emails. This year was also the first time in history that Americans received and sent more SMS than they received and made phone calls. In 2008, the first Android was launched. This is the iPhone’s largest competitor, and both are still the two major players in the world’s smartphone market (Dyroff, 2018). Over the next few years, the smartphone changed completely, from its role as a device for making calls from anywhere to a technology with many different functions, starting with Internet surfing and continuing with an advanced music player, digital camera, video game platform, television, and more (Groening, 2010). And in fact, today, thanks to the advancement of technology in such a fast and widespread way, the mobile phone has become a real multimedia tool. We use it as a hand-held computer for fast Internet surfing and sending and receiving email; the camera is constantly improving; we update statuses and upload posts on social networks; and many more things (Ray, 2015).

As the cell phone progressed and became smarter, it has come to have more options, apps, and things to offer, and so it has become central to the user’s life. As a result, as part of its extensive actions and capabilities, it has become one of the technologies that affects almost every aspect of a person’s life today. The more the smartphones’ uses increase in number, the more it affects the user’s life. Smartphones have a significant impact on psychological and social fields, and also on cognitive and biological fields.

As humans, we are social beings, and we have the need for interaction and communication. Smartphone technology has a huge influence on our interaction patterns. The use of smartphones is becoming ubiquitous in every public and private interaction. Sometimes, it presents as a delicate object in the background, and there is a cognitive impact on people who are enabled to think about other people or events not in the present moment and outside of the immediate context. This can distract people and prevent them from focusing on the present experience of their interactions (Przybylski & Weinstein, 2013). The need for interaction, belonging, and even

relationships has been much studied in the context of smartphones. For example, a public research study at a university in the southeastern United States looked into college students' psychological need to belong. The study showed that the students' need to belong made them use and apply social media and smartphones to communicate with others. Furthermore, it showed that the more they used and applied social media to communicate with others, the more they were involved in social activities (Kim, 2016).

Smartphones also have an impact on the quality of our face-to-face interactions, even interactions with our closest friends. A study at a university in the Pacific Northwest of the United States took pairs of close friends and asked them to wait together for five minutes. The waiting period was recorded and showed that 76% of the paired participants chose to use their smartphone at some point during waiting together. Based on their responses to an interaction-quality questionnaire, it was implicit that the more time the participants used their smartphones, the lower they estimated the quality of their in-person interaction. Furthermore, the participants themselves reported that the interaction felt more tense and less pleasant (Brown, 2016).

But there is no need to actually use the smartphone for it to influence the interaction; it is enough for it just to be present in the same room. A study at the University of Essex, UK, conducted two experiments to examine the influence of smartphone use on relationships. Both experiments showed that the presence of smartphones in the room influences the development of closeness and trust in the relationship, and the participants reported reduced feelings of empathy and understanding toward their partners. The second experiment showed that these results from the first experiment were more pronounced when the partners talked about important and intimate subjects. Moreover, the results from the second experiment show that talking about meaningful and intimate topics can encourage intimacy and trust in relationships. According to experiment two, smartphone use during interactions and within relationships reduces important and intimate conversation, and as a result, influences the quality of the relationship (Przybylski & Weinstein, 2013).

Moreover, the smartphone also has a significant impact on romantic relationships, which are normally based on intimacy and trust. A study surveyed 143 married or cohabiting women who filled out an online questionnaire examining how smartphone and other technologies interfere in their relationships with their partners in

general. The research showed that technology interrupted most of the participants in their relationships with their partners. For example, 62% (n=143) reported that technology interfered in their leisure time at least once a day; many more reported that technology could cause interruptions during conversation and dinner time. These patterns of technology use can lead to more conflicts in relationships and reduce relationship satisfaction. These findings become more important in light of the fact that studies have found that wellbeing is related to the quality of the time couples spend together (McDaniel, 2016).

Even with youth, when intimate relationships begin, the smartphone can affect their construction and destruction. A Turkish study dealt with the way smartphones affect youth relationships. They distinguished two themes—constructive and destructive—to characterize the effect of smartphone use in youth relationships. The first theme is “building and maintaining romantic relationships through smartphones,” and the second is “damaging and ending relationships through smartphones.” For the constructive theme, it was found that thanks to smartphones, youth feel less shy about starting a relationship, because it is easier to get to know each other, and from there it is easier to start a romantic relationship. Additionally, smartphones allow young couples to be there for one another most of the time, thanks to features and applications that smartphones offer. On the second theme, interviews revealed some negative ingredients among smartphone characteristics that can damage and end relationships. For example, they found that after some time in the relationship, use of the smartphone became a habit, and even an addiction, and could finish relationships more quickly. Additionally, the social media that smartphones offer can lead to trust issues, which can influence negatively and ruin relationships (Cizmeci, 2017).

Relationships, and romantic relationships in particular, are significant and powerful predictors of life satisfaction, especially during adolescence (Guarnieri & Tani, 2015). Life satisfaction is influenced by the smartphone’s symbolic function. This study focused on the effect of the symbolic function of smartphones, meaning that the smartphone is a symbol of a person’s status or identity. Life satisfaction as influenced by the smartphone’s symbolic function was investigated in 656 adolescents from a rural area of southwest China. The results showed that the attitude toward the smartphone as a social status symbol reduced life satisfaction. It is important to note that 25% of the participants (n=656) didn’t own smartphones, and the researcher designated them an

“out-group” (as opposed to the group who owned smartphones). If their attitude toward the smartphone as a social status symbol is high level, they will feel less life satisfaction (Xie, 2016). Another study examined the relationship between problematic smartphone use and satisfaction from life. A sample of 353 students found that the more problematic smartphone use increased, the more life satisfaction decreased (Dayapoğlu, 2016).

Additionally, a large public university in the Midwestern United States¹ examined the influence of smartphone use and texting on academic performance, anxiety, and satisfaction with life. In a sample of 536 students, the results showed that high-frequency smartphone users tended to be low academic achievers, with high levels of anxiety and lower satisfaction with life in comparison to their peers who used their smartphones with lower frequency. The article offers several suggestions for an explanation. For example, high-frequency smartphone users dedicate less time to academic engagements, like attending class and studying at home, because of the time spent on the smartphone. Moreover, smartphones can turn into a temptation for the user and become a distraction from academic pursuits and studying at home. To evaluate satisfaction, the study used the very commonly used Satisfaction with Life Scale (SWLS). Using the Satisfaction with Life Scale, it found a mediated connection between smartphone use and happiness; moreover, there was a relationship between low satisfaction and low academic achievement, as that is the main reason and purpose for students to be at university (Lepp, 2014).

Additionally, as mentioned, smartphones have different smart functions. With these functions, the user can save pictures, memories, personal information, and so on. Smartphones have become an important and integral part of human communication. Such communication includes electronic media (Miakotko, 2014). Electronic media refers to e-mail, instant messaging (IM), cellphone communication, and social-networking sites (SNSs). A study at a private university in the western United States² found that the use of electronic media is negatively correlated with academic success.

¹ According to the article: "Participants were undergraduate college students from a large, Midwestern US public university. A key variable in this study was an academic performance which the researchers objectively assessed using participants' actual, cumulative college Grade Point Average (GPA). Because these are sensitive data, and collecting them involves accessing participants' official academic records, participants needed assurance that data collection, storage, and reporting would guarantee confidentiality and anonymity."

² The authors did not mention the name of the university, but from the text, they report that the university enrolls approximately 30,000 day students each semester.

One of the most distracting factors is the use of electronic media during academic activities. Two thirds of the participants (n=1,026) admitted to using electronic media during class, studying, and homework. Although students are skilled at multitasking, it still increases distraction. Further findings from this study show that the use of SNS and smartphone communication, which is online communication, increases offline social interaction (Jacobsen & Forste, 2011).

Many studies have focused on students at college and university. But the phenomenon of the smartphone among school-age children and adolescents is growing and becoming an issue that occupies a significant place in the lives of children and adolescents. The school takes action and takes a position when it comes to smartphone use during school time. Overall, when technology and education are brought together, it can create conflict. It can be seen that the technology of smartphones is affecting schools worldwide and causing them to change rules and policies, while the conduct is different in every place.

There is controversy over whether to ban smartphones or to allow their use or possession at school. In the United States in 2002, the decision to ban or allow the use of smartphones at school was transferred to more local jurisdictions. Bans came into force in places like Nigeria in 2012, in Uganda in 2013, and Malaysia also confirmed a similar ban in 2014 (Trucano, 2015). Denmark and Portugal are allowing or not banning the use of smartphones in school. In schools in the UK, Belgium, and Ireland, smartphone use is highly restricted; in Romania, smartphone use is less strictly controlled (Murray, 2014). In France, they were banned for a long time, and in 2018, the parliament decided for prohibition by law. This includes elementary school and middle school (AFP, 2018). In Israel, the Ministry of Education recommended prohibiting smartphones to be brought to school because of the danger of radiation from smartphones and the potential for theft that goes along with violence in schools (Vining, 2017). The influence of the smartphone gives many reasons to ban them in schools. Some of them are biological, some psychological, and some social. For example, smartphones cause many distractions, and they can cause damage to health because of radiation. Smartphones can facilitate cyberbullying and even cheating and copying in tests and exams. Some smartphones are expensive, and having them in school can lead to thefts (Trucano, 2015). Also, in school, uncontrolled use of

smartphones during lesson time may reduce and impact the level of attention among students and damage the learning process (Vining, 2017). It can be seen that smartphone technology is a cause of great concern for schools around the world. This attests to the great power and influence this technology has. There are many opinions about the effect of having smartphones in school. A study checked data on smartphone policies in schools in four cities in England; the results showed different impacts of banning smartphones on two groups: low-achieving students, whose outcomes were improved, and high achievers, who were not significantly affected. The results suggest that high achievers can handle and focus in spite of the smartphone's presence, and low achievers are further interrupted and disturbed by it (Beland & Murphy, 2015).

Other aspects of the smartphone's influence can create potential psychosocial risks. These effects include sleep disturbances, possibly caused by using smartphones after lights out and feeling excited after talking; it is also possible that electromagnetic fields created by smartphones influence sleep quality (Sansone, 2013). In Sweden, a population- and data-collection study examined young adults (ages 20-24) who answered a questionnaire at baseline and one-year follow-up. The purpose of this study was to check the associations between psychosocial aspects of smartphone use and mental health symptoms like stress, sleep disturbances, and symptoms of depression. The study found that constant smartphone use can lead to sleep disturbances (Thomé, 2011).

Technology, and the smartphone in particular, has an impact in the workplace. It increases productivity at work and facilitates being in contact with family and peers, even from a long distance. In a study at the National Chung Cheng University in China, a new term called "technostress" was introduced, which refers to stress that results from the overuse of smartphone technology. The study examined employees in companies and in teaching institutions who use smartphones for work purposes. The study showed that there is "technostress" everywhere, and it does occur in organizations, and more importantly, it has a direct positive impact on job stress and employees' productivity. However, use of new technology has weaknesses and negative consequences. For example, the use of smartphones is a major source of distraction in places like work, school, and academic institutions, because of the applications and access they have to

offer for easy communication, games, easy creation of pictures, videos, the Internet, and social networks (Vining, 2017).

So many impacts and influences can be caused by the smartphone, and no user is immune. From the psychological perspective or personal character, the smartphone has an important role and effect on the user's self-esteem. Self-esteem is a central factor in a person's personality, whereby a person knows who s/he is, how to evaluate him/herself, how others appreciate him/her, and how to behave. Self-esteem is also important in shaping human behavior, especially in the present era, when we place great emphasis on appearance and external form (Bar-El, 2013). Self-esteem is very important for mental and social wellbeing. It influences a person's motivation, targets, and interactions (Mann, 2004). But the discussion of self-esteem will be expanded later on.

A study at a large private university in Gyeonggi province, Korea, suggests that self-esteem is a significant factor in smartphone addiction. This study focused on the relationship between smartphone addiction and avoidant attachment, self-esteem, and anxiety in college students. They examined 376 students, and according to their results, self-esteem has a major effect on the development of smartphone addiction. The main explanation is that people with avoidant attachment usually try to avoid others, even online, because of the fear of rejection (Kim, 2018).

A study from 2006 involving 881 Dutch adolescents (ages 10 to 19) was one of the first to discuss the consequences of adolescents' use of friend networking sites for social self-esteem. The study found that the tone of the feedback the participants received on their profiles affected their self-esteem. Positive feedback amplified self-esteem, and negative feedback reduced adolescents' self-esteem (Valkenburg, 2006). High self-esteem can be a protection against addiction to the smartphone. A study of 768 Chinese adolescents (mean age = 16.81) drew this conclusion about students with an increased need to belong, as opposed to students with low levels of the need to belong (Wang, 2017).

The phenomenon of smartphone use has spread and influenced in very large numbers in all age groups all over the world. Many researchers try to define at what point the use of the smartphone is too much; when are people dependent on the smartphone? When can smartphone use become an addiction? A survey examining

addiction and dependence on smartphones among people through an online questionnaire showed that the need to check out the smartphone took up a major part of people's routines during the day, they were checking it in bed before sleep time, in the middle of the night when they woke up; people regularly took their smartphone to the toilet. Another research finding that refers to addiction and dependency on smartphones is that people with smartphones get attached, and when they are without their smartphone, they become concerned about losing it (Harris, 2012).

After examining and dealing with the effects that the smartphone causes, and how it affects users, the traditional meaning and function of the smartphone must be examined and recognized. The change in the role and use of the smartphone, as opposed to the changes and effects of the cellphone, can cause confusion. That's why it's important to put things in order. The cellphone as a phone, in its old version, served as a means of connecting people, and that was it. Today, because of the technological capabilities offered by the smartphone (which is why it is called a smartphone), its function has changed, and so has its use. In the world of work, for example, smartphones create and lead to changes in the way a person works and the boundaries of his work that separate his private life from his work life. Smartphones create the possibility of constant contact, regardless of time and location. A study conducted in Australia in 2009, two years after the launch of the iPhone to the global market, found that smartphones affected organizational life in the company, and employees may experience more work, a higher pace of work, and increasing pressure and stress at work (Bittman, 2009). The possibility that the smartphone allows the employee to be connected all the time, to be available all the time, leads the worker to check emails, messages and other work-related matters. Thus, the employee finds him/herself doing work-related things on weekends and at other times that they are not at work. In fact, the boundary between work and home becomes thin, and so advances in technology have led to increased use of communication technologies at work and long after the work day is over (Boswell, 2007).

When the discussion is about home life, it inevitably relates to the employee's family. In general, there are conflicts within the family related to work. Because of the situation today, another problem begins because, just as the lines between work and home are becoming blurred, so are the lines separating family and work (Hunter, 2019). Thus, the smartphone, which is characterized by mobility and availability, enables the

worker to take on work at home, outside working hours, and this leads to an increase in family and work conflicts (Wang, 2017). These are substantial changes, which are somewhat ironic. After all, the use of a smartphone (telephone in the old version) is intended to involve, connect, and strengthen the relationship between people in general and partners in particular, and it is now found to be a hindrance and impediment to the relationship, a factor that delays spouses from reaching satisfaction and depth in the relationship. The degree of use or distraction of a person by his/her smartphone while in their partner's company may prevent the development of a deeper and more intimate relationship because of the great self-preoccupation together with the disregard for the partner who is physically present next to him/her. Moreover, the more time a person spends on his or her smartphone, in the presence of the romantic partner, the lower the level of satisfaction of the partner from the relationship, which later adversely affects their personal wellbeing, with implications for the wellbeing of the family and eventually the potential for divorce (Roberts, 2016). In other words, the smartphone has an influential role in family and couple dynamics.

In addition, the way families have used the media has changed significantly since smartphones have become an accessible and affordable product. The smartphone is no longer just a communications tool, a mobile device that is a communications option from anywhere. Rather, it has obtained the significance and the ability to reflect, to some extent, the relationship in the family between parents and adolescents. A family study at Provo, a northwestern city in Utah, USA found some interesting characteristics that reflect and illustrate the nature of the relationship in the family. For example, older adolescents are creating more intense relationships, whether by SMS or in a telephone conversation, than younger adolescents, who create less contact (the hypothesis is that the younger adolescents have fewer smartphones than the older adolescents). It was found that girls are more communicative with mothers than fathers. And it was found that there is a more intense relationship between adolescents and their parents when the family is single-parent and especially when the parent works late. From this study, one can learn that smartphones are given a role that can bring families closer together and unite them, allowing them to discuss and share issues such as school, work, and home. On the other hand, on the less positive side, the smartphones receive a role as a tool for expressing protest or resistance and can serve adolescents as another way to deliberately ignore their parents in situations of conflict, as a rebellious act. Moreover, the study

found that technology as a source of connection to social-networking sites by adolescents is associated with lower levels of family relationships (Padilla-Walker, 2012).

The smartphone plays an important role in the relationship between parents and adolescents, and because of it, the relationship between parents and adolescents is changing. Its role is to be a direct and rapid route, an easy and accessible means of communication. At the same time, the nature of the conversations is important and significant. That is, the child may initiate the conversation in order to receive social support, for example calling to consult and overcome a difficulty in his/her life, compared to a follow-up conversation about what is being done or not done at school. It is not surprising that in cases where the child calls for social support, the relationship between the parent and the child becomes better and better compared to a follow-up conversation that can lead to conflicts and impatience. Unlike the past, because of the speed and ease with which the smartphone allows communication, the child receives more and more frequent feedback about the nature and quality of the relationship between him/her and his/her parents, which greatly affects his/her self-image and self-esteem (Weisskirch, 2011).

Many parents buy their children smartphones at an early age from a need for security and the desire to know where they are, and to know that their children can communicate in a situation of distress. In other words, the smartphone is given the role of mobile guardian, a device that provides a sense of security for parents. However, there is a problem with this role, since an unintentional message is conveyed here by the parents to the children of a feeling of lack of trust or lack of confidence in society (Rosen, 2004). The parents have the need to supervise. They feel the need to get information about their children's location, friends and relatives, their routine activities. Smartphones are a great way to do this. Therefore, because that smartphone plays an important role in the lives of adolescents, it can serve as an excellent monitoring tool. Thus, parents report that they communicate more with their children because they are less trusting of their children (Weisskirch, 2009). The mobile phone, as a tool that gives security, does not only belong to parents with respect to their children. Beyond the phone call, it plays the role of giving people a sense of security when they have the device. The ability to be available and in extreme cases to call for help at any given moment provides a sense of security (Rosen, 2004).

Availability anytime, anywhere, together with the options that the smartphone offers, lead it to add a new type of virtual dimension, along with the expansion of rapid social interaction and breaking geographical boundaries. Beyond being a tool for having a conversation with a distant person, it creates a change in the realization and the existence of social connections and interactions. It is a platform for setting up face-to-face meetings, travel, online communications, correspondence by email, instant messaging, and various chat groups. All this is fast, easy, and almost free of charge (Thulin, 2007). Besides, the smartphone is used for study, work, and leisure time. In a study of 423 adults aged 18-80 years, an average of 61% of smartphone users did so in leisure time. Smartphones offer many activities that can be done while sitting, such as: watching TV series, reading, video games, and if you even want to be more active then there are active video games (Fennell, 2019). Thus, the smartphone serves as an entertainment, distraction, and liberating tool throughout the day.

Text messages, in particular, fill empty parts of the day and relieve boredom. Text messages make tedious moments more meaningful, such as when waiting in line. Short messages enable and fulfill the need for communication and reduce the threshold for this purpose. That is, the need for communication exists, but there is no need to realize a real voice call; a short text message will provide the desired communication, and thus the threshold for satisfaction decreases. Text messaging is becoming an increasingly important means of keeping in touch and interacting daily with friends. And this means of communication is not dependent on the community, social framework, or physical proximity (Thulin, 2007). Another study that strengthens these points was conducted at a public university in the United States, where 226 students were asked to report and evaluate the goals of using the smartphone. Indeed, beyond its traditional role, the phone is used for study and work, and 70% reported that the role of the phone is for leisure. Thanks to the mobility of smartphones, the leisure time can be filled in with almost all activities (indoors and outdoors). The study also found further confirmation that the smartphone was used as a device to entertain the user during free time. It found that most of the user's activity is sedentary behavior. In the study, 87% of respondents reported that they usually use their smartphones in a sitting position. Moreover, it was found that the greater the use of the smartphone, the greater the predictability of sitting behavior. And the smartphones may interfere with physical

activity, that is, other than music, the use of the phone during physical activity may cause decreased activity intensity (Barkley, 2016).

The role of the smartphone in leisure time is significant and significantly changes the nature of the user's leisure time. A study at a public university in the Midwestern United States attempted to assess students' subjective perception and experience of leisure time. It was found that those who used the smartphone a small amount experienced their leisure more positively, preferred more significant challenges during leisure, and were less bored during it. In addition, they had more awareness of leisure-time opportunities, and they also knew how to take advantage of those opportunities. On the other hand, in groups that used the smartphone more broadly, with the extreme group measured using an average of ten hours a day, they experienced more stress and distress, and felt boredom during leisure time (Lepp, 2015).

The smartphone controls so many areas of life, and its role in addition to everything that has been said so far is also to make life easier and more convenient. The ease and convenience are reflected in many areas of life. Here are a few examples in brief: with a smartphone, people turn on the air conditioner before coming home; by smartphone, they work with the tax authorities; in the medical field, paramedics send a picture to the hospital before the patient arrives, and one can make appointments to see the doctor. Contractors send pictures and receive updates without being on the construction site. The smartphone allows previously untold levels of convenience, when everything is accessible from the smartphone without even getting out of the chair, which saves the user time and money.

In addition, because the smartphone has become so popular, it has become a fashion item, and this influences its design. This started in Asia and is already found all over the world. Now a smartphone has a bag of its own, the pants have matching pockets, and the backpack also has a place designed for a smartphone. (Rosen, 2004).

The smartphone already has so many influences and roles, and it only continues to progress and acquire more and more meanings for the user. The functions of the smartphone in the user's life can be divided into visible roles that the user understands and initiates and activates on the device, and then there are hidden roles, which are not immediately apparent to the user's understanding. These include the interference and influence of the smartphone on the process of socialization.

The process of socialization is intended to help the individual become a member of the society into which he was born. According to sociology, a person's personality is not innate but is formed through the process of socialization. Usually, the first to teach the individual the values and norms of his society are family members, led by parents (Parsons, 1956). Socialization involves social learning stemming from the interactions between the individual and those who want to influence him. This influencer is considered an agent of socialization. The socializing agent can be human or non-human, for example father, mother, or the media or institutions like the school. Learning can include behavior change or changes in attitudes and values. Some of the ways of learning include imitation, when the individual imitates characters that are his model and evaluates their behavior in the context of the environment (Kandel & Andrews, 1987).

The process of socialization is a process that continues throughout the life of a person. The media is an agent of socialization and over the years has become part of the social environment of people of all ages, but its potential role in socialization of adolescents is perhaps the strongest. Adolescence is a time when important aspects of socialization take place, particularly with regard to issues related to identity, such as preparation for occupation, gender roles, and the development of values and beliefs. However, this is also the time when the presence of the family and its influence has diminished. Adolescents are using media tools that contribute to their socialization process, when they seek entertainment or excitement from the media, using media tools to form an identity or cope with the content of their own age and stage, and this socialization through the use of media replaces the influence of family members. (Jensen, 2012).

Adolescents are the most enthusiastic users of smartphones all over the world. And especially for them, the smartphones have become socializing agents with capabilities for social change. In many cultures, the smartphone makes a difference in the lives of adolescents and affects their norms, values, and behavior patterns in society. The implications are, for example, an increase in the virtual social context and the creation of new social interaction patterns, as is the case with the popular WhatsApp application (as of June 2019, there are more than one billion downloads for the application). The use of a smartphone meets many needs, such as a sense of belonging, closeness to friends and family, constant availability, and maintaining long-distance

connections. Patterns of use of the smartphone and its effects are different for adolescents compared to older generations. For the young generation, the smartphones affect their identity and prestige, serve as a cultural object, and serve as socializing agents. For example, adolescents use much more communication via text messaging, play more games, and utilize other options that the phone offers, than do older people. Today, smartphones are reshaping many norms that are common in culture. For example, people did not use to hold personal conversations out loud in public spaces like trains and restaurants and would keep their voices down. Today, discourse on the cellphone in a public place is conducted freely and almost without modesty (Nurullah, 2009).

The smartphone also constitutes a significant and influential factor in the socialization process of the media. For example, a study designed with qualitative methodology in New Zealand, which examined participants between the ages of 13–19, found that the smartphone can maintain and preserve social relationships, develop romantic relationships, maintain privacy, and prevent unwanted interactions. Moreover, the smartphone serves as a tool for the initiation of relationships, romance, and platonic friendships. The study noted that there is indeed a problem with the benefit and usefulness of connections created by the smartphone, when they are not based on prior acquaintance, and they can only be summed up by sending text messages, and the relationship is almost meaningless. The participants see the smartphone as a tool for private socialization, that is, by means of text messages, private conversations can be held, which are as if in a parallel virtual world, simultaneously in the presence of a public forum in the physical world. In addition, adolescents prefer to text-chat rather than talk on the phone, as text messages allow them to communicate without parental supervision for their media content and timing (Vacaru & Sheridan, 2014).

Family dynamics, and the relationship with parents in particular, are a significant and influential factor in the process of adolescence and the process of socialization of adolescents. In the present era, the postmodern family, unlike traditional families, is much more egalitarian and democratic. Accordingly, parenthood and education have changed and have come to provide the potential for negotiation between parents and children for independence and authority. These changes involve the smartphone, which is so dominant in the lives of adolescents and is also very useful in parents' lives. Parents become more open in front of children, sometimes even acting

with them as if they are their “friends.” Sometimes in parent-child relationships, there is less emphasis on authoritarian parenting and more on parenting through sharing. In fact, there is parenting which comprises dialogue and negotiation between the child and the parent over boundaries, but control is ultimately left in the parents’ hands.

A study conducted in Cardiff, Wales, in which boys and girls aged 15-16 and their parents were examined, focused on the negotiations that take place regarding spatial boundaries and parental authority. There seems to be a transition from more traditional parental authority with the definition of curfew and boundaries to a more liberal approach, a change that is partly promoted by the smartphone. The boundaries seem to have been removed or reopened for discussion because of the fact that adolescents use a smartphone that is an advantage for both sides. On the one hand, it allows the adolescents more power to negotiate with their parents for greater autonomy. And so, because of the smartphones, negotiations can be conducted outside the home, meaning that the space for conducting negotiations extends beyond the borders of the home. But on the other hand, the adolescents are monitored and under supervision by their parents, who use the same technology (the smartphone) to track and limit their children’s time and space. Parents can keep in touch with their children and to a certain extent control them. They use the smartphones to enter their children’s space and thus to influence it, even just by their presence. In general, parents use their smartphones to monitor the activities of their children outside the home, in order to invade their private space. Thus, through the smartphone, parental control is possible. The adolescents are aware that the parents are following and in contact with them by smartphone. This situation can create tension between the parents and the children, but the price is still worth paying for the specific independence that they earn. On the parents’ side, there is room for compromise and willingness to release control when they know that the child’s smartphone is open and available immediately. These things are quite agreed upon and illustrate the role of the smartphone in the relationship between the parents and their children (Williams & Williams, 2005).

For adolescents, in relationships with their peers, smartphones serve as a significant tool in forming relationships within the peer group, relationships that are most important during this age. As noted, the smartphones allow teenagers to gain some autonomy because they do more and more things without the direct supervision of the parents. Mothers report that they give their children a smartphone because they see it

as a potential for learning responsibility, learning roles of matriculation. Others see this as an opportunity to reward for personal responsibility. When the smartphone takes on a meaning of independence for adolescents, there is the potential to reduce situations of loss of control and decreased contact with their child (Blair, 2011).

In addition, the smartphone can also facilitate the parents' education process. In a study that examined the effectiveness of an intervention program based on home visits to at-risk families, they added the smartphone as an aid to the program. In the study, 371 mothers of low socioeconomic status and their children aged 3.5 to 5.5 years were sampled. They were tested before and after, months after the intervention. The efficacy of the treatment was assessed by observations of mother-child interactions as well as maternal interviews on depression, parental stress, and child behaviors. It was found that the smartphone increased the efficiency of the treatment in a program in which parenting strategies were provided, such as positive interaction with the child, setting rules and boundaries, and providing feedback on the child's behavior. It was found that when the smartphone was a means by which personal trainers could be involved between home visits, by text messages and voice messages, they gave encouragement and reminders of the new parenting strategies. The results showed that thanks to the mobility and availability of the smartphone, the intervention through it improved parenting skills due to continuous communication with their family coaches relative to the control group without the smartphone. Clearly, those mothers used more parenting strategies than those without a smartphone. The children also showed more adaptive behaviors, mothers showed a greater reduction in pressure of parenting immediately after intervention, and lower rates of depression (Carta & Lefever, 2013).

At a later age, when the children are already adolescents, the smartphone becomes a significant part of their everyday lives. It can therefore serve as an assistant in education and as a tool that can influence their thinking. A study conducted at a high school in Auckland, New Zealand, examined an intervention program for preventing depression among adolescents through the smartphone. The study examined 835 adolescents aged 13-17 who were divided into two groups. Each group was sent two messages per day for nine weeks, where the messages could be text, video, and/or a cartoon that conveyed a message. One group received fifteen key messages derived from cognitive behavioral therapy (CBT). The other group was sent messages on various subjects, not based on CBT. The results showed that CBT-based messages

transmitted by phone were effective for young people, who reported that these messages helped them to be more positive, get rid of negative thoughts, relax and solve problems, and deal with school issues (Whittaker, 2012).

To summarize this chapter, it was found that the current version of the smartphone has come a long way from its beginnings as an auxiliary device in the World Wars. Later, it developed initially for use in cars, passed on to business purposes, and after trickling into the private world became a basic commodity for every person at almost any age. Today's smartphone has undergone many changes of technological development, changing its role and meaning from a device for creating a remote call to a device that meets almost all the needs of the user, while its overt and covert functions are only growing and we are witnessing its many influences in many areas of life such as social, psychological, physical, biological, and cognitive. This chapter touched upon many issues in which the smartphone is involved, and these topics will be discussed in detail in forthcoming chapters.

2. The Youth

Growing up has become a more prominent and conscious period of life. This has happened as part of the lengthening of the stretch of time between early school life and the young person's final entry into a professional-unique job. Adolescence involves many physiological changes, the most significant of them being the genital maturation which bothers and engages the adolescent. In addition, the adolescent is disturbed by uncertainty about the expectations of society regarding his or her role as an adult (Erikson, 1968). This short paraphrase taken from Eric Erickson's book briefly mentions a number of key points in a person's adolescence: a phase of life and its elongation, physiological changes, and sociological processes.

In this chapter, I will discuss and go into depth on the study population of this work: the youth. I will define this stage in human life; we will see that history has not always seen young people- adolescence/youth as a separate and unique stage of its own; I will deal with them in the cultural, generational, and social aspect, and as regards relationships with parents and peer group.

Therefore, as I mentioned in the Introduction and to summarize the difference and meanings of youth and adolescence in this work, adolescence is more related to the age, growth and development process and physical form of the young person. Youth is more related to the social changes, style, and consciousness of a young person. Both are also limited as to chronological age, for which I embraced the WHO and UN definitions (see Introduction p.??). As for their definition, my research population is right in the middle, in the seam, in the overlap between the two settings. And so, I will address and mention them in parallel.

Therefore, I'll start by defining the term "adolescence." The word adolescent comes from a Latin verb "adolescere," which means to "grow" or "grow toward maturity" (Muuss, 1988). Adolescence is a period that contains a diverse age group in many aspects: its physical structure, cognitive, emotional, interpersonal skills, development of perceived needs, interests, and patterns of behavior (Smilansky, 1991). There are many different approaches that define the beginning and the end of adolescence in various ways. Some assign this period to the ages of 11-18, with three periods within this range: pre-adolescence (ages 11-13), adolescence (ages 13-16), and late adolescence (ages 16-18) (Apter, 1997). Another division sees this period as an extended transition from childhood to adulthood and locates its range from 13 to 21

years old (Smilansky, 1991). There is also a breakdown per different fields of research that define adolescence differently. For sociology, adolescence is a period of transition from the childhood period dependent on an adult figure, usually the parents, to the maturity of an adult who can satisfy his needs independently. Psychologically, this is a borderline stage in which it is necessary to adapt to all new situations in a given society. Chronologically, this is a time span between the ages of 12-13 and the early 20s, when there are slight differences between individuals and cultures. Another minor difference is gender, where girls tend to begin adolescence earlier than boys.

The chronological range is influenced by biological aspects that have changed over the years. For example, adolescents today achieve sexual maturity sooner than in the past and reach their peak maturity earlier (Muuss, 1988). These changes have occurred, among other things, because of the effects of changes in food that humans eat and the changes in nutrition patterns. For example, the physical height of current generations is much taller compared to previous ones. As another example, the onset of menstruation in girls today on average appears at the age of 12, while about 150 years ago the average was around the age of 16 (Smilansky, 1991). The unique hormonal development of these boys and girls, according to the biopsychosocial approach, will determine the beginning of adolescence: that is, biology defines the beginning of adolescence, while the end of the period is defined by the social component. Since the status of the adolescent varies from society to society, so does the age at which the adolescent socially ends adolescence. For example, Israeli society has an obligation for high school graduates to serve in the Israel Defense Forces, which defines the beginning of the end of the period (Apter, 1997). On the other hand, in primitive societies, some of which are tribal, the end of adolescence is defined in a clear ceremony after which the person becomes an adult. As mentioned above, the biological component is a sign of the beginning of adolescence. At the end of this period there is no clear or objective psychological or social phenomenon through which the end of the process can be defined. Thus, the end of the period varies from culture to culture, but social phenomena such as economic independence, occupational independence, and marriage are commonly regarded as a psychological sign of the end of the period (Muuss, 1988).

The age ranges, the definitions of this life stage, and the distinctions between childhood and adulthood are significant today. But this has not always been the case.

Throughout history, adolescence and childhood have not always been seen as independent stages, as separate periods of life with unique characteristics and components. In the Middle Ages, it has been shown that the attitude toward children was as mature, but small, persons. That is, physical immaturity was thought to be the only reason for immature behavior. But in all other respects a child was considered to be like an adult. This manifested itself in education and in the relation to a child as an adult; the child was a full partner in the adult world, in activities, entertainment, work, and more. Only at the beginning of the modern period did children begin to receive different and unique tasks; only then did they begin to address needs and emotional and physical abilities differently. Then, the term “children” began to take on the developmental meaning that is familiar to us today and different from the adult world. In addition, children and adolescents used to be in society within diverse age groups, and it was not possible to clearly and completely distinguish the characteristics and components unique to each age stage. Therefore, researchers have not drawn conclusions on trends and permanent forms of development and behavior.

The school was the first and main institution to bring together children and youth of the same age group; it developed a division by homogeneous age groups, which led to the creation of a rich and new social dynamic. These dynamics formed a significant part of the socialization process, and later this process could not have been complete without the social involvement created at school. In the didactic context, homogeneity has led teachers to tailored and specific teaching approaches and methods (Tenbruck, 1961).

Later, in the last decades of the nineteenth century, schools in Europe and the United States were filled and growing compared to the former situation. This led to a reduction in the children’s workforce and in some places even to its cancellation. This change made it difficult for the poor to rely on child labor, and even created two child groups: schoolchildren aged 10-12 with a school education (elementary), and a second group of children without such training, children who remained in their families for vocational or household training as they always had done. At the height of capitalism in the late-nineteenth century, as a result of technological development and change, schools were expanded from elementary to high schools. In some places, compulsory education began in schools, which marked the beginning of the school-learning process (Rosenmayr, 1979). In schools, adolescents began to develop customs and norms of

behavior in order to maintain social order. Thus, gradually and imprecisely, adolescence began to develop and shape a new and unique image, separating it from other age stages. This led to the unique attitude, roles, and expectations of adults and society in general (Tenbruck, 1961).

The distinction and definition between adolescents on the one hand and adults on the other were coined as a real term for the first time in Stanley Hall's 1904 book *Adolescence: Its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion and education*. It gradually emerged as a concept and later evolved into its own separate culture, called "youth culture" (Cloete, 2012), which I will discuss later in the chapter. Adolescence is a sensitive period in human life in modern society. The reason for this is that the adolescent undergoes dramatic physical and spiritual changes, and is required to fulfill new social roles and responsibilities, such as supervision of younger siblings, work experience, relationships, and so on. This is a period of fractures, confusion, and great uncertainty (Nave, Elad, & Ran, 2004).

Adolescents, especially in late adolescence, are idealists. At this age, they tend to challenge and question everything, looking for social, political, and sometimes spiritual causes that they connect with to find a solution to big, even global, problems. Almost all adolescents have ups and downs, periods of boredom and apathy; on the other hand, they also show extreme energy and enthusiasm, or can be non-communicative and withdrawn. Another characteristic of this age is that basically, teens feel safe when they know how far they can go. Undoubtedly, they want freedom and liberation, but they also seek and need boundaries; although often they seem challenging and rebellious, they need someone to set clear boundaries for them (Fenwick & Smith, 1994). Youth are required to learn and adopt new behavior patterns, and they are less under the immediate influence of their parents. They are more susceptible to the influence of the peer group and their school. They are characterized as being in a transition period, which constitutes a process of delay, stay, and debt relief. In other words, the youth no longer enjoys the child's rights but does not yet have the adult's obligations. They have a kind of social authorization to experiment without commitment. The youth imitates and gradually learns adult roles. In modern society, youth are given time to search and contemplate. Industrial society led to the youth acquiring a degree of independence and learning the skills required of an adult in society (Nave, Elad, & Ran, 2004).

By observing youth, it is possible to predict the changes that are taking place in society; and in many aspects, the youth constitute an indicator of social norms (Miles, 2000). Still, adolescence is seen as a turbulent period, a period of emotional tension, instability, impulsivity, emotional confusion, and search for identity (Tenbruck, 1961). The complexity and problems of this age are due both to culture and to biology (Orukibich, 2005). And it should be taken into account that physiological development and social adolescence are not parallel, which creates the cultural problem of youth (Fenwick & Smith, 1994).

When sexual adulthood begins, childhood itself actually ends. These changes and developments cause the child's confusion in the face of what he/she has known and relied upon to this day. These changes include speed of physical growth and the development of physical sexual maturity. At this point, when many changes are occurring, adolescents are primarily concerned with how they look to others, compared to their inner feelings about themselves (Erikson, 1950). The adolescent is primarily exposed to relationships with the so-called primary groups, who most often include the family and close friends, as well as anyone with whom they interact directly. The school can sometimes also become a primary group, especially when the number of students is small and the relationships between teachers and parents are close, thus making the relationship more personal and allowing the student to interact beyond the core context of studies. Thus, the school can also impart norms and values. Due to the fact that most of the time, the school is a tool for maintaining and supervising the adolescent during the day, the adolescent grows and develops around his peers all the time, both in reality and in consciousness. This exposure becomes organized and institutionalized rather than being the responsibility of adults (Tenbruck, 1961).

In earlier adulthood, the self-esteem of the youth is considerably dependent on close friends. At this age, there is not yet complete confidence that adolescent friends will love their friends just for who they are, and everyone is aware that looks and appearance have a great and significant bearing on how one judges another. Therefore, in the area of social popularity, a topic that engages many youth, it is found that attractiveness of the external appearance gives a great advantage to such a boy or girl over those who are less attractive externally to the environment. In addition, social relations are more transient, most often of the same sex, and based on joint activities and in small groups. As adolescents grow older, social connections become closer, more

intense, and more stable. By late adolescence, most adolescents are already developing more stable and lasting social relationships. There is a gender difference; girls tend to make one or two really close and good friends. In these friendships, the relationship is very intimate and private, filled with the secrets and personal stories of each one, with listening and empathy. In boyhood friendships, the features of intimacy, listening, and empathy are less significant, and do not take up much of the friendship; for boys, the acceptance of the social group is more important. Around the age of fifteen you can see mixed groups of friends with both sexes, and then the first appearance of intimate friendships with the opposite sex. In later adolescence, sexual relationships play a significant role in the life of the individual, and then the need for privacy also increases. In later adolescence, boys are able to rely on wisdom, intelligence, and self-confidence, and so they impress and attract the others that interest them (Fenwick & Smith, 1994).

At the same time, the family is losing some of its functions within society, such as in the areas of education, religion, and leisure. This change reduces the power of the family with the youth and with society. In fact, parents are no longer the only and main model for the youth, because parents are not included in the youth (sub) culture; they are not present there, and thus their example as an adult is absent (Tenbruck, 1961). The youths spend a lot of time together, then become dependent on each other, influencing each other and slowly becoming a social-culture community. A community that adults, parents, do not know and are not connected to, they do not know what their children like, see, fear, want. Sometimes the effects of the mutual influences between youths can have negative effects and there is no responsible adult to see or monitor what is happening (Cohen, 1997). Even though they sometimes are present, the structural strength of youth groups is so strong that adults are not sufficiently influential. In addition to all this, adults in Friedrich Tenbruck's time (1961)—and this holds true of today's adults too—exhibit more childish behaviors, making it difficult for the adolescent's emotional adjustment and then causing the peer group to have more meaning and a greater impact on shaping the adolescent's identity (Tenbruck, 1961). This change is significant, because one of the important elements for building self-confidence in adolescents is being close to a responsible and even admired adult. A person whom you can look up to (learn up to), learn from, trust, and imitate. At the same time, adolescence involves a process of development and understanding, with the adolescent realizing that his parents are just human and imperfect, and not omnipotent,

as reflected in his eyes as a child. This process of development is a milestone in the process of growing up, with independence and separation from parents as a natural process. But today, in an open, liberal world with unclear boundaries and authority, it is hard to maintain the revered and all-confident adult figure. Furthermore, the process of development and understanding begins earlier. Since parents identify with their children, they are infantilized, and sometimes build a relationship ‘as if they are friends,’ taking less of the traditional parental role. The parents’ choice is understandable, because in the information and sharing era there are many different approaches and parenting methods, and the parents have expectations and requirements for guided and perfect parenting, which they sometimes fail to meet and then experience a lack of authority and boundaries. This lack of boundaries and authority alongside adolescents’ ‘early development’ leads to the undermining of adolescents’ self-confidence because the ‘backrest’ they need is unstable and lacks cohesion. This could be another explanation for adolescents’ reluctance, in recent years, to grow up and become adults (Almog & Almog, 2016).

Those who fill in the blanks, who provide the confidence in this instability, are the peer group. It has power and dominance in the youth’s life, and the youth becomes more and more dependent on the group (Fenwick & Smith, 1994). Moreover, the youth group becomes a community with shared interests and aspirations. Youth no longer depend on comparing and aligning themselves to the characteristics of the adults around them. They are a group in themselves, an independent group. Despite the crystallization of adolescence as an age group, despite the fragmentation and unique characteristics that have emerged, still, the youth group is part of a wider society made up of many diverse groups. Such groups, which differ from one another in many characteristics and components, are referred to by sociology as subcultural within society. Such a group should have economic, religious, political, and other views in common, and must strive for independence to sharpen its distinctiveness from other groups in society, but it is still part of that society (Cloete, 2012).

Therefore, groups that exist in the same society and share the same material and historical conditions also understand and share the same culture. Groups and classes are unevenly rated and even different in relation to each other, in terms of their needs, wealth, and power. So are cultures that are different from one another, and contrast with one another, and sometimes become involved in control and subordinate relationships

along a scale of dominance, power, and centrality. The main culture is the one that dictates ideology and line of thinking. Therefore, dominant thinkers and opinion leaders at certain points in time lead the less dominant cultures to the same modes of thinking, thereby perpetuating, reproducing, and strengthening their cultural dominance. This does not mean that only the central, dominant culture makes the decisions. Even less central and dominant cultures find ways to express their ideas and worldview. Often, they will try to challenge, dispute, change, and fight the main culture, try to negotiate or take its place as the main culture. At times, the subordinate and less dominant culture will not try to challenge or change the existing situation, but will try to settle and gain comfortable space and foothold within the overall culture (Hall & Jefferson, 1976).

Therefore, the relationship between the dominant and central culture and other subcultures can sometimes be complex. The dominant culture sees the subcultures as a nuisance, disrupting the accepted way and path in which the dominant culture wants to march, move forward, and control. The subculture style interferes with the existing cultural order and therefore poses a threat to the known and given reality. Therefore, subculture, at its core is protest, resistance, aspiration for change, and challenge to the central culture. The main protest with which the subculture threatens the dominant culture is the protest against worldview, life conduct, and a different perception of the important values and norms in society, in other words ideological-moral protest. Thus, the subculture becomes a social perversion, that is, different from the normative in society, in certain subjects and fields. The diverting and protest component can sometimes lead to disruption of the social order and in some cases to violence and crime. It can present a certain subculture in a negative light, leading to the delegitimization of the ruling culture and ultimately the denigration and extinction of the subculture, that is, of the unique worlds of content and meanings it is trying to manifest and present. On the other hand, the subculture that wants to make its voice heard wants to integrate and embed its moral ideologies within the dominant culture. Thus, the ruling culture neutralizes the subculture's opposing power without being annihilated. There are two main ways to make this assimilation: 1. By introducing the subculture's content into a familiar and normal framework, for example, to present youth who are different from the protesting image and present them as ordinary human beings. 2. The unique subculture accessories and styles can be transformed into a consumer product in the dominating cultural industry. An example would be the

adoption of unique clothing items, making them more profitable and accessible to everyone (not just to members of the subculture), or gradually incorporating unique music into popular music. Thus, the style, the contradictory statement, and the uniqueness are merged into the general culture, and the subculture loses its oppositional power and integrates into the dominant culture.

The cultural changes of the 1960s (which I will discuss later), the growth and expansion of subcultures led many groups of young scholars in the social sciences around the world to re-examine the content, meanings, and institutions of the popular culture. Cinema, television, and popular music have gained momentum and proliferation, and the emergence of other cultural forms has led researchers to recognize that there is a need for critical, protest, and negative approaches to the popular, central, and dominant culture. The Birmingham School is a name associated with a group of researchers and thinkers who worked at the CCCS (Center for Contemporary Cultural Studies) at the University of Birmingham in the 1970s. The researchers in this group sought to examine whether popular culture functions as a reproductive or critical factor (Regev, 2011). They concentrated on the lifestyle of social groups, such as workers, youth subcultures (like mods or skinheads) and others, who flourished in Britain after World War II. Mainly CCCS authors referred to the relations between youth culture (youth subcultures), class-culture (mainly working class culture) and dominant culture, which, in the capitalist culture of the West since the end of the II World War, dynamically developed in a form of capitalist consumerist culture (see: Hebdige, 2002; Clarke, Hall, Jefferson & Roberts, 1976). Mainly theoretical analysis of this areas led them to conclusion which confirmed former perspectives of analyzing youth and their culture – youth culture can be regarded as 'partial culture', *Teilkultur* in Friedrich Tenbruck's words (Tenbruck, 1961). This does not mean that is weak, inferior, or less good culture. The idea was that the youth culture is part of the overall culture but is not the leading and central part of society, a situation that can change. So, when examining youth culture, one must examine its relationship with the dominant culture (Clarke et al., 1976), and this standpoint still is relevant.

Throughout history and also today, youth and their culture have their uniqueness, peculiarities, and also many stigmas and prejudices to do with perceptions of irresponsibility, of rebellious, hedonistic, and sometimes violent behavior (Berger, 2016). The youth culture can stand out in dress, lifestyle, form of speech, and focus on

their interests and concerns, all of which distinguish them from the dominant and class culture. Then, through visible forms, external expression, different and unique lifestyles, they can give a cultural response to the problems that exist in the overall culture. Importantly, despite the distinction and difference they still belong to the broader and inclusive culture; they share the same institutions, the same environment, and sometimes the same beliefs and ideologies (Clarke et al., 1976).

And yet, from a sociological perspective (as mentioned above), contemporary youth have their own culture. The norms and forms of life become autonomous and unique to them as a part of society as a whole. This is not because they are uniquely separate from society, but because youth are less focused on the adult world; they do not hide their way of life, do not measure their lives in terms of and by the criteria of the entire society's values, and do not feel the need to justify their actions to society, as part of their increased independence which enables control and independence in almost every area of life. As was the case in 1961 at the time Tenbruck was writing, still today, the youth have their own forms of behavior, sport, leisure, fashion, morals, literature, and language, i.e. their own culture (Tenbruck, 1961).

Culture in general is central to human existence. It is a key aspect of how people understand themselves, what they believe in, and how they choose to live their lives. Culture also can be a platform to show and express people's collective identity (Cloete, 2012). Culture shapes what we believe, what we do, and the way we live our life day to day. It binds us to those who think and live like us. Culture is a universal feature; wherever there are people, there is culture. Culture is shared and can be learned by everyone; it is dynamic and developing all the time (Mueller, 2006).

Culture is a basic human-social invention in which humans give meaning to phenomena, objects, and conditions of existence that have no internal meaning in themselves. Culture provides frameworks that allow one to experience co-existence (collective) and personal existence as having an order, structure, logic, meaning, and purpose. Culture determines what is right and what is not, what is moral and what is not for that culture. Then, for example, one can discern what is unusual and what counts as social deviance (Regev, 2011).

As a culture, youth culture underwent its significant development, and some would say beginning, right after the end of World War II as a new way for young people to configure modernity (Feldman, 2009). The youth culture has become distinct and

unique and offers young people a form of identity which can be characterized by school, work, and class. They begin to have a unique lifestyle, values, and ideology, which provide the symbolic means for them to build an identity and to feel the sense of an independent and separate life from the adult and parents' world (Miles, 2000).

But it took a while for the youth culture to crystallize into the form it has today. The relationship of youth with society, or in other words, of youth culture with the overall, dominant culture has undergone many processes and developments throughout history. World War II was a significant milestone for youth culture, but this culture had begun even earlier, in the late-nineteenth century when European society still had classes. These classes greatly influenced the interaction between children and youth who were in intra-class interactions. For example, higher-class celebrations of birthdays differed from interactions around traditional lower-class ceremonies and events. And there were those who fell in the middle, since on one side their status was not allowed into the upper-class dance parties and on the other, they did not share the lower-class traditions and ceremonies. In the Netherlands, for example, the youth who fell in the middle sometimes suffered from loneliness and a lack of social life, which led to cultural change due to shared distress and social difficulties. As a result, new social connections were created such as through joint learning sessions and sports. Thus, more and more youth groups emerged, seeking mutual interest and employment. Later, youth movements formed in Europe and grew rapidly, acquiring common aspirations and ideologies (Heilbrunner, 2014).

The twentieth century has brought with it many significant events that have shaped humanity as a whole, have been milestones in culture, in society, and for various generations throughout the century to the present day. This has played out over several different generations, some of which I will elaborate and some of which I will discuss in detail later. It is customary to divide the generations according to the years in which the people were born, and each generation has one or more nicknames. Generations are divided in several ways in the literature, most of which are similar but with some small differences. Therefore, the division is not sharp and clear. In addition, there are generation members who are on the border and can be part of two different generations at the same time, thus absorbing the unique features of both generations (Wiedmer, 2015). A generation is initially defined according to when the person was born. Then, a generation is discerned by some common elements such as taste, attitude, and shared

experiences. In the time period in which a generation lives, many different social, economic, and demographic events take place. Events become meaningful for an entire generation as they awaken the attention and emotion of masses of people (sometimes millions), and these events become significant to them. Other elements that characterize generations are popular music, heroes that the generation shares, and of course, shared history. All of these influences and create a distinctive personality in the people of the same generation. This does not mean that every person of that time has the same personality, but that time, events, and experiences in shared history have a decisive influence on their personality (Zemke et al., 2000). Accordingly, there are differences between generations. Time goes on; great social and cultural events happen; sometimes sudden and even traumatic events (like wars and economic crises) cause shared destiny and unique collective memory. At the same time, common ground and generational ways of thinking evolve slowly and gradually, also influenced by new technology and intellectual ideas such as new theories. These can lead to a change in perception, ideology, and behavior in an entire generation and may be preserved for future generations (Almog & Almog, 2016).

For example, in Germany in the early twentieth century and before World War I, youth movements began to realize that youth were free and responsible for their own future. This is an approach that demonstrates independence and personal responsibility. Youth movements began to gain power, forming around common ideologies that led to cohesion, independence, and responsibility. Accordingly, a free choice in dress, music styles, and other areas was expressed, which became symbolic and created an external expression of independent and autonomous culture - the youth culture.

After World War I, the adults seem to have experienced an ideological crisis; they were no longer so convinced of the stability of their own bourgeois culture; their personal confidence was low as to their ability to manage and advance in the world. At the same time, the youth movements began to understand the weight of responsibility they had, and increasingly concentrated on social responsibility and less on the pleasures and sexual needs typical of their biological age. The image of young people in the eyes of the adults changed, and in the period between the two world wars, became an image of those with ideology and boldness. This encouraged and strengthened the youth clubs as they continued to develop. These changes, the new responsibility that was becoming acceptable to the adults, satisfied the desires and needs of many youth.

For example, for high-class youth, it gave more freedom and independence, less parental supervision. For working-class youth, it brought interaction and proximity to the upper class, to the elite. The youth movements were legitimized in society, mainly through the presentation of “young people” as idealists working for goodness and the truth. Importantly, not all youth were uniform in this approach, and some found it difficult to give up their free time and the pleasures offered by this age (Moore, 2006). Indeed, another element that had already distinguished youth culture from parent culture at the time was the forms and patterns of consumption and recreation among young people, which were not customary and consistent with the dominant parent culture (Heilbrunner, 2014).

In 1939, World War II broke out in Europe. This war was a significant event in many respects in human history, significant for both the present and future generations of the time, and thus was a relevant and important event for youth development and youth culture. During World War II, children and adolescents appeared to be outside of the control and supervision of adults (Cohen, 1997). This was a time when schools were closed, young people were inactive, walking the streets, sometimes having to steal to get food and lie to protect their families. There was fear of a fundamental violation of society’s values, tradition, and morality. Adults began to experience fear and concern from young adults (Moore, 2006).

Next, there was a generation born during war, a time of separated families, missing fathers, an atmosphere of violence (Hall & Jefferson, 1976). Thus, in the post-World War II period, there was a change within the youth as a result of the youth’s deliberation and rebellion against the adults. Instead of encouraging youth for a future of growth and hope, this period is characterized by distrust and fear of youth behavior. In many Western countries, adults looked at the younger generation more critically, as a social force that may be destructive rather than constructive and beneficial (Feldman-Barrett, 2019). Violent incidents with a racial background, fear of school violence, vandalism, gang fights, and violence on the sports fields were a major part of the reasons for these feelings and attitudes toward the youth. During these years, subcultures also developed within the youth, some of which symbolized and reinforced the concerns of adults (Hall & Jefferson, 1976). These youth subcultures arose one after another and sometimes even in parallel. These trends have spread and flourished in the United Kingdom, the United States, and other industrialized countries. Subcultures of

youth have attracted much public attention, as their outward appearance and behavior in some public places have been seen as deviating from proper social order and sometimes implicated in crimes. Even so, one of the main goals of the subcultures is resistance and protest toward the central and ruling culture (Regev, 2011). The well-known youth subcultures during those years include Teddy boys, Mods, Rockers in the UK, in addition to Punks who were also in the US, and Skinheads who emerged in Europe as well as in Americas, Asia, and Australia. Each such group had its own unique style and peculiarities. Following the period, the atmosphere and the behavior, the style is perceived and presented as a symbol of insubordination and violence (Hall & Jefferson, 1976).

Style is one of the symbolic values of youth culture, reflected in music, clothing, haircut, language, and typical phrases and entertainment. These have become a distinctive feature of the youth culture through which one can protest against the dominant, culture (Heilbrunner, 2014). The youth from these social groups were the main ones who took a significant part in riots. Most were working-class boys who over time became more organized in the eyes of society, but the attitude was variable and not absolute, which meant that the wider society often treated the youth as threatening to social order and not harmless at all. Some of these conclusions were due to objects, clothing and symbols that created labeling and stigmas. Some examples of signature styles of clothing and appearance are pointed shoes, black clothes, and motorcycles. In fact, due to the forms and behavior of these members, the symbols they use and wear have added meaning beyond the physical and simple meaning as functional objects (Hebdige, 2002).

Insurgency and violence are just one part of the development that has begun in youth culture. In addition, after World War II, youth culture grew significantly. During this period, many social changes occurred in the Western world, with the leading and influential countries being the United States, the United Kingdom, and France. At that time, a culture of abundance began, and many political changes strengthened the trend of the juvenile life stage (Heilbrunner, 2014). In addition, the Baby-Boom phenomenon, in the late 1950s, which is also the nickname of an entire generation in the Western world, so called due to the large number of births that came after the end of World War II (Wiedmer, 2015), naturally caused the number of young people in the Western world to increase significantly, led to country's preparations in terms of

education, welfare, employment, and other areas that young people connected to (Heilbrunner, 2014). The acceleration of secondary education for everyone and a significant expansion of higher education have had an immense impact on society, the economy, and youth culture. The desire and need on the part of the countries to create economic growth came along with the growth of talented and skilled personnel in technical and technological fields (Hall & Jefferson, 1976). There are social implications from the increase in time spent at school. A large part of the social disparities, such as geographical disparities, have narrowed as students, youth from the city and the periphery met, creating encounters and dynamics between youth from different classes. The school provided a daily framework for the youth and in addition, gave the youth ever-increasing job opportunities for the future. Moreover, when the youth have the opportunity to work and earn more money, as the economy improves, much of the money the youth earns can stay with him for his own needs and desires and not for the most part for the home economy and parents. Accordingly, the available market for youth is expanding and growing (Moore, 2006). At this point, the youth become a potential target audience that expands and gains power, and who are worth a lot of money. As mentioned before, the bounty period also led to a boom in the market, especially in the youth-oriented market; there was a feeling that there was a lot of everything. Compared to the period immediately after the war, when there was a lack of, for example, food and entertainment, suddenly at the end of the war there was a release and a wealth of products (Hall & Jefferson, 1976). Thus, in fact, young people began to be a decisive factor in consumer culture, in the market economy that was becoming more and more targeted to the youth. Over the years, this has helped globalization and wealth growth, led by the US. In addition, technological developments have begun to be primarily aimed at young people. The advantage of this is that young people rapidly absorb technology and innovation, compared to older people, who are more traditional and more conservative (Heilbrunner, 2014). This is one of the key features of this generation, a generation characterized by hard work and striving for status and money, many in this generation are workaholics and see teamwork as a contributing factor to their personal goals. Workplace loyalty and professionalism are measured by the amount of hours a person spends at work; they believe that stability results from having a single workplace, and in all this, find it difficult to strike a work-life balance (Berkup, 2014). They try to be independent,

responsible, goal oriented, and competitive. Due to the growth of possibilities and options for employment and education, the youth hungered for success. Many of this generation were the first in their family to be educated (Wiedmer, 2015).

This PhD thesis examines contemporary Israeli youth; therefore, it is important to examine and describe the cultural processes that Israeli youth have undergone over the years. In parallel with the post-World War II period, the State of Israel arose in 1948 in the shadow of the Holocaust that occurred in Europe during the war. The dominant culture at the beginning of the state was Ashkenazi-Zionist culture. In the early years there was a kind of youth hegemony and mobilization of society, and therefore, the youth and young people were required to be available to the parent culture. The youth in Israel joined the youth movements that were characterized by ideology and activities in social, cultural, and pioneering areas. The protest component of some of the youth in Israel, as in other youth subcultures (such as Teddy Boys and Mods in UK), was a departure from the usual way of life in society, in politics, in the military, and more. The various youth movements adopted nicknames, a style of clothing that was usually trendy Western (such as a wide-collar jacket, or black spitz shoes), smoking, specific music styles, and alcohol consumption (Heilbronner, 2014).

However, within world history, and in terms of generations, these are years of exchange of generations, from the baby boom to the Generation X. The youth of this generation experienced parents who were almost absent, usually due to multiple working hours. Therefore, it was a generation that grew to independence from childhood and acquired autonomous capabilities in the face of less parental attention (Berkup, 2014). It was a generation that strove for independence, especially for mental independence, a generation that wanted to engage in interesting and meaningful work, since they valued their personal time. A generation that strove for a balance between free time and work. And because of their childhood and adolescence experiences, as parents they tried to emphasize the family's integrity, future financial planning and thinking, and the desire for one available parent at home (Wiedmer, 2015).

In addition, the 1950s and early 1960s were years of technological development that led to mass media and mass entertainment, which soon came to be directly addressed to the youth. These developments have led to many global and social processes. Television, radio, and cinema were heard and watched by many, and in fact, they helped promote new youth traditions and became an influencer for youth culture.

For example, in cinema, films and shows portrayed youths who roam aimlessly on city streets, in leather coats, with unique hairstyles and sometimes with motorcycles (Moore, 2006). The films raised themes and messages for the youth. There were more and less violent movies, science fiction, detective movies, and war movies. These were some of the forms of adult supervision and control over children and youth.

In American culture, the comic strips that began to be produced in the 1940s were also a messaging platform. Some have argued that the messages were violent and motivating for antisocial actions, and some have argued that the comic has promoted socialization processes of what is good and moral to do, such as heroes fighting violence. In one way or another, comic booklets have had an impact on youth culture (Cohen, 1997).

Popular music has also had significance and influence on youth culture. Words and melody have great significance for a wide range of youth. There are many styles that have influenced and still influence youth culture, such as Jamaican reggae, black soul music, hip-hop, and rock and roll. The music expresses social problems such as discrimination, degrading treatment, for example of blacks by the establishment and the police, the desire for freedom, and the removal of bureaucratic red tape. In this vein, black churches have been a haven and a place for identification and containment of social problems. Asian boys have also connected with hip-hop, disco, funk, and soul music. Many youths from all over the world connect to music and feel that a song's sounds, words, melody, and rhythm express their own experiences and emotions (Willis, 1990). In fact, music has become meaningful beyond entertainment, and has serious cultural and protesting significance. Music has been accepted as a means of socio-political expression of revolt and rebellion. Rock 'n' roll music is a great example of this cultural and global process. During those years, the transistor that made the radio accessible was invented, and then in July 1955 came the single with the song "Rock around the clock" by Bill Haley and the Comets in first place in the US charts. The growth and success of the rock 'n' roll style¹ is symbolic, since it is a style that is rooted in black musicians, and in the mid-'50s, this style was adopted by many white musicians who elaborated on Rock 'n' roll, who cultivated it during the 1960s and transformed it into a music style with artistic ideology. Rock 'n' roll and rock music in

¹ Started with the great success of Elvis Presley and many other musicians important for the history of popular music e.g. Jerry Lee Lewis, Little Richard, Chuck Berry and Buddy Holly.

the 1960s and 1970s and beyond, were seen in society and culture as expressing a social and cultural uprising against various aspects of capitalist reality.

Subsequently, the rapidly evolving technology of these years also affected music with amplifiers, recording devices, electronic instruments, elaborate studios, and more. These technologies have made music a unique and legitimate means of expressing art, ideology, and protest (Regev, 2011). Some of the most notable and culturally significant musicians of the time are the Beatles, the Rolling Stones, the Kinks, the Who, Bob Dylan, the Birds, Janis Joplin, Jimi Hendrix, the Doors, Led Zeppelin, David Bowie, Lou Reed, The Stooges & Iggy Pop, Ramones, Sex Pistols, The Clash.

What was interesting, the Beatles were banned from performing in Israel in the 1960s, with the claim that the band had a negative and bad influence on youth. The parents' generation blamed Western culture for being empty and responsible for the behavior of criminals who emerged among young people in Israel during those years (Hallamish & Schiff, 2017). These artists and bands made records during the 1960s and '70s that are considered key works that express emotional depth and social utterance. Through words, tunes, and technological improvements, messages such as criticism of the establishment, and dominant culture were conveyed to represent an ideology and worldview (Regev, 2011).

Another noteworthy youth subculture that emphasizes youth culture as a subculture and counterculture is the hippies that formed in the mid-1960s in the United States, especially in San Francisco in California. In the late 1960s, the subculture expanded to other cities in the US, Canada, and Europe, such as Amsterdam and London (Hallamish & Schiff, 2017). Their essence was the abandonment of the normal life trajectories of competitiveness and achievement, resistance to industrialization and urbanization, the return to nature, and the cultivation of each individual's inner world, as well as an optimistic approach to interpersonal relations and existence in general. Slogans such as "make love not war" and "set your mind free" express and exemplify the spirit of their culture. Drug use (such as cannabis and acid, LSD), communal living, and free sex were some of the accepted norms for this subculture. The exterior look was also unique and striking - floral and colorful clothing, outdated in relation to the time, colorful and prominent decorative jewelry and accessories such as large sun chains and colorful strings of beads. There were long robes in Indian and Arab style, long hair for

both women and men. The colorful and floral aesthetic gave rise to the nickname “flower children.” The liberation, the color, the disconnection from the routine and trivial-capitalist life path, expressed a counterculture to the dominant culture and linked the hippies to the political and social protest movements of that time, for equal rights, for example, for blacks, against the Vietnam War, the Cold War, and generally, for world peace and brotherhood (Regev, 2011).

At the same time, in the late 1960s and early 1970s, the atmosphere of global protest also reached youth in Israel, who were in fact opposed to everything: the oppressive school, the conservative parents, the boring bourgeoisie, consumerism, chauvinist nationalism, and wars. The counterculture could be felt in the written press, literature, poetry, theater, music. At that time, the culture of clubs developed in the center of the country (mainly in the city of Tel Aviv). The loud music, the wild attire, the rock 'n' roll symbolized resistance and protest. The beginnings of television broadcasts in Israel during those years constituted another platform for protest through satirical programs. Youth protests against the government evolved and become more political, with a desire to understand and criticize before being inducted into the military. Many youths demonstrated not only opinion and rebellion, but also concrete actions, such as sending letters and petitions to the government, meeting with ministers to hear and understand whether the state's intention was really for peace, demanding transparency from the government, that it should tell the truth and not deceive its citizens. Indeed, following economic, social, and political processes and the global atmosphere of youth changes and protests, the young people's resistance bore fruit and brought about real political change and the decline of the hegemonic central party that ruled Israel from its inception (Halamish & Schiff, 2017).

Another significant youth subculture that is noteworthy and felt to this day is the punk culture. This is a subculture that existed in Britain in the mid-1970s. Some of the explanations for its formation are the encounter between young white men and dark-skinned young immigrants, Jamaicans and other Caribbean expatriates, whose presence in the United Kingdom was growing. The punk culture became prominent because it turned the accepted principles of order and beauty into different and inverse metrics for aesthetics, cleanliness, order, and beauty. This was done through outfits, and out-of-the-ordinary external appearances, such as torn leather clothes, safety pins, underwear worn over outer clothes, unbuttoned seams. In addition to all this, there is the Mohican

hairstyle with the intense colors in the hair. All of these external features resulted in distinctiveness and uniqueness. Punk-rock music was different to in the popular music of the mid-1970s. The musicians demonstratively rejected values such as complexity, sophistication, or professionalism, which were central to rock at the time. The sound was very basic, simple and thin (one or two chords, with no musical depth). The lyrics were often spoken in angry, cynical, threatening screams, and sometimes there were curses and obscenities (Regev, 2011). Punk culture also came to Israel, but later, in the 1980s. It provided some young people with a means of protest against the culture of parents and a refuge from the reality of political riots, the Lebanon war, and acceleration of economic liberalization (Heilbronner, 2014).

Historically, as mentioned, the turning point is undoubtedly World War II. At that time, the control of the adults was reduced and, on the other hand, the accumulation of power in the hands of the young, who also became more dependent on each other and less on adults, changed the power relations in favor of the young, and this created an opportunity for the re-recognition of ‘youth’ that holds true to this day (Moore, 2006).

Furthermore, during the development of youth culture as mentioned, adult culture has also become more oriented toward youth culture, and thus there are characteristics of youth culture that become more prestigious in the sociological sense. For example, in the business world, there is youth marketing intent; everything is marketed to appear younger and more entertaining. Even within politics, in political propaganda the intention is more childish and oriented younger. All of this leads to the observation that youth, both at the time that Tenbruck conducted his research and at present, not only have their own culture (Teilkultur) but in some ways a lot of its features have become the crucial elements of a dominant culture (Tenbruck, 1961).

When adults try to get closer to the youth culture, try to learn from the young and aim for their world, a kind of generational confusion can occur. This is because throughout history, and in many cultures, children and adolescents are most influenced by previous generations: the adults (usually parents) and sometimes grandparents. That is, the adult generation is the leading and dominant generation. But now, a situation can arise where the adults are somewhat confused about their role as adults. “Generation” refers to the socially constructed age group that a person is born into. Each generation has its own and unique system of values, beliefs, norms, and interests (Neely, 2015).

Additionally, relationships exist among the different generations living together in the same society at a common point in time. Several different generations lead a shared and overlapping life, share collaborative experiences and life events, and share some values and norms in common. However, thanks to technological, economic, and social changes, differences between generations that live in the same society, place, and time are developing (Berkup, 2014). These changes affect intergenerational relationships and, subsequently, cultural continuity. Margaret Mead, in her book *Culture and Commitment* (1970), deals with these intergenerational relationships and argues that cultural continuity depends on at least three generations. That is, grandparents, parents, and children. Mead distinguishes three types of culture. In the first type, the Postfigurative, Mead refers to earlier, traditional societies where children's fate is already known. That is, the past of adults is the future of the children. Everything is known in advance; the world of parents and grandparents guides the future and role of the children (the third generation). For example, in tribal societies of hunters and gatherers, children at the age of six learn their cultural roles from their parents; namely the boys learn hunting skills, and the girls, gathering and cooking skills. Intergenerational relationships are not always straightforward and smooth. In some cultures, there are young people who are expected to rebel and disrespect the dreams and aspirations of adults. For example, there are children and young people who feel and experience anguish, a sense of fear and humiliation caused by uncles and aunts in their family, following ceremonies that take place in those cultures. Due to these feelings, as they grow up, they have an expectation of their brothers and sisters to perform these rituals in front of their own children. These mental scars and fears pass from generation to generation and are hard to get rid of, and they affect the sense of cultural identity. Mead compares this to a prisoner who fails to get out of prison habits even after he is released. These traditional and ancient cultures are resistant to cultural change since, as a rule, people do not ask questions or challenge adults about the norms and behaviors that have existed for generations, which is very different from what is happening in Western society today.

The second type, according to Mead, is the Configurative. This type of culture begins with a change in which members of the culture learn from both the adults and the adolescent peer group. Both adults and young people understand that there is a difference between the generations. But it is still clear to all that adults are dominant

and dictate their lifestyle with its boundaries, and they decide and approve behavioral changes if necessary. Furthermore, the adults expect the young people to continue to stick to the change. Sometimes, as part of global processes, lifestyle and other generational differences are created as a result of immigration. Hence, young people who are better adapted than adults gain power and the ability to dictate their own lifestyle, norms, and behaviors. The young are exposed and get to know their peers at school and at work. And so, they learn and discover practical forms of heritage and local forms of behavior. A situation has now arisen in which the peer group increases its influence as a social agent and as a facilitator of social adjustment. Importantly, adults still have the power of influence and guidance, especially when the young are few and in small groups. The younger generation notices the differences between himself and his parents, and realizes that there will be similar and other differences between himself and his children in the future. Thus, the differences, known in advance in the nuclear family with the expectation of adaptation of the younger generation, give the individual the feeling of living in a world full of change. Unlike traditional and older cultures, what is known is what is. This leads to the third and final culture type according to Mead, which is the Prefigurative culture.

In the Prefigurative culture, children face an unknown future. In this culture, there is an inverse socialization process in which adults learn from children. Following the rapid changes taking place from the mid-20th century on, such as the invention of the computer, the splitting of the atom, and urban developments such as population growth, generational gaps have increased, especially between the older generation (grandparents) and the younger generation (children). Through Internet communication, young people exhibit abilities that adults (parents) have difficulty demonstrating and older ones (grandparents) will never succeed at and may never know.

Since there are still areas in which the present world is an extension of the past, society is still dealing with many characteristics of the second culture, the Configurative. The parents are the ones who send their children to school; those who run the school and the class are adults, and they teach old ideas and subjects; for example, science is learned from old models. These are just some of the areas in which parents/adults still teach children norms, behaviors, and traditions from previous generations, known in advance (Mead, 1970).

The relationships between generations are changing and progressing, and indeed, thanks to many changes that were described in this chapter, significant differences can be seen between generations. The generations I will deal with in this work are mainly Generation Y and Generation Z. However, it was important for the study to be aware of earlier generations in the 20th century, since these adjacent generations have a great influence on the design and culture of the generations in question. Furthermore, brief descriptions can also highlight the changes that have taken place over the generations, and how they are influenced by many processes described so far such as globalization, technological development, and individualism.

To be clear, I will give a chronological order for existing generations in the 20th century. The first generation of the 20th century is known as the Traditionalists or the Silent Generation, born in 1900-1945 (Wiedmer, 2015); there are other sources that indicate the beginning of the generation in 1925. The next generation is the Baby Boomers, born in 1946-1964, then Generation X born in 1965-1981, Generation Y born in 1982-1999, and Generation Z in 2000-2010 (Twenge, 2010). Some divide Generation Y from 1980-1995 and then respectively, Generation Z from the mid-90s to 2010. The last generation is currently Generation Alpha, from 2010 to the present (Bencsik, 2016). Studies have shown and found many differences between these generations in personality, attitude to life, mental health, ideology, behavior, and more (Twenge, 2010).

The subjects sampled in the present study are clearly divided over generations. That is, I examine and model the Generation Z high school students who were born between 2001 and 2004, and for comparison, I model the Generation Y, born between 1983 and 1987. Therefore, even if there is a gray area in the distribution of years in the literature, the research population in this work belongs strictly to Generation Y and to Generation Z according to all the different divisions in the literature. I will also point out that when features of an entire generation are characterized, this is done in a general, relatively coarse and broad way. This does not mean that every detail of the population accurately meets all descriptions, but there are many similarities that indicate a time period, characteristic of a broad and large population.

As mentioned, part of the connection between different generations is often due to shared life experiences, shared values and ideology (Lecturer, 2014). Generational research is done by gathering information and exploring various formative experiences,

such as global events, technological advances, and social and economic changes. All of these allow for a macro-level view of life cycles of generations and what shapes their ideology and worldview. It is important to note that the point of distinction and division between generations is imprecise. The boundaries between generation and generation are subjective and interpretable, and there is no single formula that will differentiate the boundary between one generation and the generation before or after it. At the same time, technology, as influencing the way people communicate around the world, is one of the designers' considerations for a whole generation. For instance, Baby Boomers, whom I mentioned earlier, grew up with television, which expanded dramatically, changed individual and family lifestyles, and altered the connection to the world in fundamental and profound ways. Generation X, also mentioned above, grew up when the computer revolution began, affecting millions of people around the world. Generation Y, which will be discussed immediately, grew up as the Internet penetrated the general population. And finally, Generation Z, the central generation for this work, was simply born into an advanced technological world, with according influence that will be discussed in more detail later (Dimock, 2019).

Therefore, the older of the two generations that the current study deals with is Generation Y. It has many nicknames: Millennials, the Internet generation, the global generation, and more. This generation was shaped in the era of commercial television channels and the evolution of the laptop, the Internet, and cellular phones (Almog & Almog, 2016). This is a generation where there is a transition, liminality between the era of print and online media (Heilbrunner, 2018). In addition, during their own time there has been a development and intensification of social and cultural processes, such as the strengthening of feminist culture, civil rights, and individualism (Almog & Almog, 2016). This generation is more open and respects different races, genders, diverse ethnicities, cultural values, and sexual orientation choices (Berkup, 2014). It is the first generation connected to social networks on the Internet; many of their actions take place there. They share, search, use, and actively play and work through this platform (Bolton, 2013). Generation Y has grown up in a world where there is technology that enables information about events in the world to be transmitted through digital media. Generation Y is more aware of social problems and is a generation that is less independent and seeks for reasons and meanings in its actions. It is a generation that needs more oversight, boundaries, clear goals, and guidance. Search and

investigation are most often done through the Internet (Wiedmer, 2015). They know how to gather information from various sources and can solve problems by gathering and consolidating information (Berkup, 2014). Generation Y was the first to be born into digital technology. Thanks to that, they have a very high level of digital technology knowledge. As a result, they easily practice and become versatile in the operation of various technological tools (Bencsik, 2016). In addition, due to the fact that they have grown alongside rapid technological changes and developments, they are a generation that is aware of changes, accepts change easily, accepts cultural differences, and are more flexible in their lives (Berkup, 2014). Some argue that this is a generation that is easily bored (Wiedmer, 2015). It is a generation that does not like to hold on and wait, with declining patience (Berkup, 2014). They love to live a fast life, live in the moment and do not rush to plan for the long term; they want to enjoy life. They are the first to have a virtual circle of friends and to manage these relationships on social networks. Using advanced technological devices, their communication happens primarily in the virtual space, and their online presence is almost constant (Bencsik, 2016).

Later on, as members of this generation grow up, in the field of work, it is difficult for Generation Y to stay in one place over time, and they love multitasking and working in several places at the same time. It is a generation that seeks after happiness in work and life (Wiedmer, 2015). Their worldview is global, and so is their way of thinking in the field of work. They strive for fruitful and meaningful work and see education as a boost to business success. They see the workplace as a place to learn and gain knowledge for their own life, with the ideology that knowledge is power. Job replacement is natural and normal for them (Berkup, 2014). It is important for them to work where they want to work and to enjoy it (Bencsik, 2016).

In Israel, for example, Generation Y and the youth of this generation meet and exactly match the characteristics of the global Generation Y. In Israel, this generation has experienced economic changes, a first Intifada along with a wide openness to Western culture, especially American. Accordingly, and as a result of technological advancement, the generation is characterized by the increase in individuality and so is the protest character described earlier; its intensity has decreased and become much more passive, compared to previous generations in Israel (Heilbronner, 2018).

Generation Y and Generation Z, in the Western world, are generations that are often integrated and have many common features. This is largely due to their

technological capabilities and orientation. For example, these two generations need more attention and external feedback than others, and compared to previous generations, there is more of a focus on external appearance. This is reflected, for example, in virtual situations when adolescents need external reinforcement on a profile picture on social networks; the “selfie” picture is the clear example of focusing on “myself and how I look” (Almog & Almog, 2016). In addition, because of the virtual world that feels natural to them, many of them fail to adapt to the real world (the non-virtual one), and this gap makes them feel insecure about their existence, which adds to their anxiety and mental stress. On the other hand, these two generations that control technology and live in the digital employ a lot of smart apps in regular life and thus make everyday tasks easier and faster (Bencsik, 2016).

As the years progress, Generation Z seems to becoming more and more individualistic. In addition, more emphasis and value are placed on leisure time, and more external rewards are appreciated (Twenge, 2010). Furthermore, Generation Z is an even more digital generation than Generation Y. It is also known as Igen, Gen tech, Gen net, or Digital natives (Wiedmer, 2015). Generation Z is the first global (from birth) technological generation in the world. They grew up using the same culture and usually like the same food, fashion, and entertainment venues. Globalization can also be felt in their language, with their use of similar words and phrases that previous generations do not know or use. Many times, they are exposed to and influenced by the same factors and communicate in the same Internet communication system, which is a significant and empowering aspect of globalization (Lecturer, 2014). Generation Z was born into digital technology, which is an integral part of human life; they have been using technological devices (IT) since they were babies, and for them technology is seen as part of normal life, that is, naturally and fundamentally central to life, not as a novelty, convenience, or privilege (Berkup, 2014). Members of Generation Z, experience similar struggles to the Generation Y, but their technical possibilities provide them with new communication frameworks that differentiate them from previous generations. Most, if not all, of their ways of dealing with adolescent problems are through regular and intensive use of IT, social media, and smartphones (Lecturer, 2014).

Generation Z is a generation that knows the world through the web, in a verbal and visual way. They run through pictures and short, informational text, updated in real

time every moment (Lecturer, 2014). Everyone used to say “a picture is worth a thousand words.” But nowadays, there are almost no words at all – most content is in pictures. As a result of the development of the smartphone and the strengthening of social media, there are changes in the pattern of interaction and relationships, especially with youth. There is a trend for communication through symbols rather than words, that is, through emojis, pictures, video clips, and more (Twenge, 2017). They play online games, live a social life online, and love to be online all the time, which sometimes can lead to a technology addiction.

Generation Z is a young generation that is not yet fully cohesive in terms of its identity and is trying to understand the constantly changing world. Technological advances are rapid and incessant, such as high-end smartphones (Berkup, 2014) (the iPhone launched in 2007). In their teenage years, the main means by which young people were connected to the network was through mobile devices, Wi-Fi, and high-bandwidth cellular service. Social media, constant communication, and entertainment are available all the time. Undoubtedly, these are innovations that Generation Y came on board with very quickly, but for Generation Z these are the means and capabilities that most of them were simply born into (Dimock, 2019). This includes Facebook, launched in 2004, and Twitter, which are used daily by millions of people around the world. Other social media such as Instagram, Pinterest, and WhatsApp (which is very popular in Israel) are especially used by youth and have become a fundamental and critical part of their personal and social lives. Most of their social connections are made over the Internet in a fast, practical, intense, and efficient way (Berkup, 2014).

Following technological development, the smartphone, and social media, there is regression and a decline in the desire for independence and to experiment with new things (Twenge, 2017). The youth of Generation Z learn to be autonomous, but this process is slower than for previous generations and more complex (Galland, 2003). The increasing time, both in general and in leisure time, spent on social media, smartphones, and computers, leads to immobility and more sedentary actions. This means they spend less time in outdoor activities and more on indoor activities, in the virtual world where the user stays home (supervised by parents). Then, social connections exist more through the network and less in face-to-face communication, and for them, this is a natural and typical situation (Lecturer, 2014). Face-to-face encounters and activities have great significance in acquiring social skills. And as the amount of face-to-face

activity and interaction decreases, social skills may also decline. In American society, these changes have led to a decrease in happiness for adolescents, an increase in loneliness, depression, and suicide attempts (Twenge & Spitzberg, 2019).

In Israel, it is found that most common activities among youth at leisure time are done indoors, the main ones being computer use, online chatting, email writing and, television watching (Harel, 2014). That's one of the reasons for the increase in their physical safety. They are less willing to take risks, and their definition of safety has also expanded to the emotional side - emotional safety, not just physical. Words are of greater significance for Generation Z; when they use words, they protect the body and achieve emotional safety.

In terms of characteristics of the youth like volunteering, altruism, protest, and the desire to change, it has become more verbal and less practical. They like to support with words, send reinforcing messages, and flood social media to inspire change on certain issues, but they are less likely to get up and do something to create change (Twenge, 2017). For example, in Israel, apart from the many protests that take place on social media, a "Petition" site was established in 2007 that allows anyone who wishes to protest and drive change. Opening a petition is easy and user friendly, and today there are a variety of leading areas available for voting such as: politics, health, education, environmental, civil rights, economics, and religion. The site reports 22 million signatures and success in leading change in hundreds of cases. This is just one example of the means for protest that technology allows, the way that one can try to influence and express opinion, when the action is merely a click on the smartphone or computer, without going to the streets ("Atzuma," 2019).

In the era of this generation, technological advancement is the fastest ever, with the emphasis being on cellphones that have become smartphones and the social networks, all directly affecting their lives. Accordingly, this generation has high expectations of technology products being better and constantly upgradeable (Kang, 2018). Like the previous generation, this generation also wants everything quickly; they are impatient, and their attentiveness is short and declining compared to previous generations (Berkup, 2014). Therefore, it is desirable to communicate with them effectively with targeted, short, and poignant messages, a simple message that gets to the point without unnecessary information (unnecessary in their opinion) (Lecturer, 2014). Furthermore, it's a generation that requires less instruction and guidance,

because they have independent access to digital tools, which makes them think they know and can do anything. They are a generation of knowledge (Wiedmer, 2015), and this is one reason why unlike previous generations, they learn almost everything independently, through technology. This creates a great challenge for teachers and educators in their education and learning, which requires creativity and rethinking of traditional teaching methods (Shatto & Erwin, 2016). Therefore, for example, teachers can primarily help their students correctly assess information sources and think critically (Wiedmer, 2015).

Generation Z has a passion for escape; they meet this need through technology, through video games that seem increasingly close to reality; technology allows for constant access to social networks and enables mobility with the devices with which to escape (Kang, 2018). Accordingly, they are less concerned with career planning and knowledge acquisition, and more with self-seeking, with experiences of relationships, and with finding a circle of friends. Acquiring rational knowledge is less critical for them at this point (Lecturer, 2014), especially when they have easy and fast access to any type of information they want online (Berkup, 2014). However, in the field of employment, this is a generation that is interested and engaged in more than one field at a time; they assume that everything is possible in the world and they can do everything using technology (Berkup, 2014). This gives them self-confidence and reinforces the desire for success and money, despite their need for help in finding their identity (Lecturer, 2014).

In contrast to previous generations, the youth of Generation Z have been found to be more tolerant and liberal, and to be difference-makers. Like the LGBT community, gender equality and racial issues are less relevant to them. This is a generation that believes in personal and free choice and is liberal (this indicates more individuality versus community) (Twenge, 2017).

The pace of learning can change in different areas of the young people's life and can change due to different life events that the youth is going through. They are in no hurry to take on their role as adults, are in no hurry to acquire knowledge and vocational training that will put them in the adult status. Youth today is less defined as irresponsible, but more defined as a stage of gradual accountability under the protection and responsibility of the family or state (Galland, 2003). For example, in American society, it has been found that this is a physically safer but mentally more vulnerable

generation. Some trends have been found in the area of independence and the growing-up process. Among American youth, there is a decline in casual actions and behaviors compared to previous generations, such as: decreased dating, decreased sex, less and later drinking of alcohol. In the process of coming to adulthood, there is a decline in the desire to work in the afternoon after school and in the summer, and there is no hurry to get a driver's license; the generation reads fewer books for pleasure, and goes out to parties and movies less (Twenge, 2017). Some of these trends are felt in Israel as well. Additionally, as has happened many times throughout history, when some trends and behaviors started in the United States society and American youth culture, especially in the global era, they will be gaining ground in many other cultures in the Western world.

Today's adolescents also have difficulty making decisions alone. This is a time when the range of possibilities in each field is huge. This makes it difficult to make a simple and quick decision, since behind each choice is the denial of what is not selected, and when there are many options the list of things denied increases respectively. With the advent of smartphones and their dominance in youth's life, in addition to infinite mobility and availability, consultation is possible at any given moment. Thus, it is felt that there is no need to make decisions alone because there is always someone to consult with through a phone call or text message. These situations have an impact on the independence of the youth. Moreover, parents also have a part in this change. The social expectation from children is to become responsible adults. The parents are ambivalent because they want their children to grow up properly but have a hard time processing the disconnection from them, and they sympathize with the children's difficulties. The adolescents are also ambivalent, since they want independence, freedom, and recognition as equal rights but are fearful of responsibility and the unknown. This all contributes to the character of the adolescence period, which is considered a tumultuous period, with mental difficulties, moods, insecurity, and many deliberations (Almog & Almog, 2016).

To sum up, the evolution of technology has led to particularly rapid and radical changes in the twenty-first century. These changes led people, born at different times, to be of different personalities and characters, with different attitudes and values. The changes have occurred in many areas, including economics, culture, and politics, and have a profound impact on individuals' perceptions, expectations, views, and ideology. As a result of the interactions between the different generations at the same time and

place, the boundaries between them are revealed, and thus the characteristics of the generation can be determined and become more prominent (Berkup, 2014). In a variety of areas such as education, family, employment, and health, youth in recent years conduct themselves differently from previous generations. The difference is mainly due to globalization, technological advancement, and global economic development. The youth spend more time in school than previously and in a trendy way start working at a later age. Globally and broadly, it is a generation that lives less in poverty compared to previous generations; their lives are more diverse and have many options, and their lives are safer compared to those of previous generations (Nugent, 2005).

However, it is important to note that this is a relatively new generation, so not everyone is exposed to the media so significantly, even though the age of exposure is declining. In addition, it is a generation that is still under investigation and discovery, and therefore all its characteristics are not yet known, and more will probably be revealed in the future (Wiedmer, 2015).

3. Socialization

The forty-fourth president of the United States, Barack Obama, was the first Black president in the history of the United States. He was elected in 2009 and served for eight years. In an interview before the end of his term with the Israeli news reporter, Ilana Dayan, Obama said that a significant moment for him was when he heard little children of any color or race take for granted the fact that their president was Black, African American. Moreover, he said that some of his white friends' children were surprised that their next president was not Black, adding "because that's what they know" (https://www.mako.co.il/tv-ilana_dayan/2017/Article-d4e465c8b288951006.htm).

Where does this knowledge that the children demonstrated come from? And why were they so surprised? How does a person feel/think and know what he knows? How do things happen in a certain order in society and get passed down from generation to generation? And what is different about the youth? How are Internet and smartphone technology involved, and how do they affect all of this?

In order to understand and answer these philosophical questions, and to understand the components and effects of technology among the youth, in this chapter I will deal with the process of socialization, a significant and important process, briefly mentioned on several previous occasions.

Much of the chapter's ideas and concepts are based on and inspired by the work of Peter L. Berger and Thomas Luckmann (1991), in addition to the interpretive view of Max Weber and the phenomenological approach of Alfred Schutz. It is important to note that these ideas, as well as many articles and books that form the basis of sociology in general and the study of the socialization process in particular, were formulated before the technological developments and changes effected by online media and smartphones on Western, postmodern society that this work deals with. In this chapter, I will combine the old and relevant theories, and the changes and influences that technological developments have brought to bear upon the process of socialization today.

The person, the individual, lives within a certain order of events, some more important and some less important, and these constitute his biography. The course of life is, in fact, a record of the events that the individual experiences in chronological order and according to the order of their importance. They are subject to change and

are superseded according to changing interpretations that the individual can give to the event at points in time in the present, by restoring memory, according to his present views, and according to what is more and less important to him at a given moment. Thus, the individual continues to interpret his life over and over again (Berger, 1963).

According to sociology, human knowledge is given and achieved through and by society. In other words, everything a person knows is a social creation. The sociology of knowledge, a term coined by Max Scheler (1920), deals with the analysis of the social construction of reality, the connection between human thought and the social context, or in other words, the social context in which thought arises. Karl Heinrich Marx argued that consciousness, man's knowledge, is determined by his being a social creature. Marx's ideas influenced classical sociology and were reflected in the works of many philosophers and sociologists, including Max Weber and Emil Durkheim (Berger & Luckmann, 1991).

Durkheim spoke of collective conscience and saw society as a binding force on the individual, in the sense that society dictates his behavior although he is unaware of it (Shapiro & Ben-Eliezer, 1996). According to Durkheim, society exists as an objective fact which must be taken into account and cannot be denied. The social order contains and encompasses all the details of the society; these details are situated within the society and pertain to specific sectors of the social system. The position of each concept is fixed and predetermines almost all human behavior and belief (Berger, 1963). Durkheim believed in an array of symbols agreed upon by society that gives a common set of concepts to all members of a culture. Culture affects a person's social life, and a person learns and appreciates the world through culture. In addition, the individual understands his life, and reality, thanks to the collective. Culture is everywhere; it has an objective existence, as objects, symbols, rituals, and content worlds (Regev, 2011).

In the reality of everyday life, individuals in society are constantly exposed to social information. This vast store constitutes the "stock of knowledge." This is a database with its own structure and relevance which matches the society in which it exists. The stock of knowledge also includes awareness of human history, as well as mythology and myths, ideological concepts, and even science. Knowledge does not just exist by itself in a factual and objective way, but is presented within historical and social processes that become the focus of interest in the sociology of knowledge; it becomes

part of the total store of knowledge in society, and the knowledge existing in the individual ultimately serves him as preliminary, foundational knowledge.

The stock of knowledge is available to anyone who is part of the society, and participation in it allows individuals to conduct themselves in the ways accepted by the society. It also includes knowledge about the individual's condition, his position in society, his role and limitations. For example, a poor person has social knowledge that he cannot live in a luxury apartment. It is a piece of social knowledge shared by all members of society. A person coming from outside will not be able to identify the conduct or position of the individual in society. Therefore, with the same example, a person who comes from a third-world culture will not understand why that same poor person calls himself poor, if he has pants and shoes to wear, since in his third-world society such clothing is considered a luxury or denotes the social position of an established person (Berger & Luckmann, 1991). Therefore, it is impossible to judge behavior without understanding the society and acquiring familiarity with its stock of knowledge, at least in part, and without any reference to the social context (Oetting & Donnermeyer, 1998), which can vary and which depends on culture, place, and time (Donohew, Clayton, Skinner, & Colon, 1999).

In tracing the differences between cultures, in social changes, in delineating the contents and meanings that distinguish culture, Weber argued for a collective understanding of cultural members, the unique symbolic meaning of cultural institutions, and that these strengthen and promote the growth of unique culture (Regev, 2011). Weber spoke of interpretive sociology, an approach that sees a person as an active creature who can shape and change his life. Interpretive sociology is not satisfied with the search for facts but focuses on finding the meaning that human beings give to facts and on understanding the causes and significance of social processes, events, and actions of people in society (Weber, 1981).

Alfred Schutz combined the ideas of Weber with the transcendental phenomenology of Edmund Husserl and became a leader who promulgated a version of phenomenological sociology that received much attention (David, 2010). The phenomenological approach observes and focuses on the subjective experience in the reality of everyday life and does not deal with causal hypotheses or objective explanations of reality. According to this approach, there are many perspectives and different interpretations for the reality of everyday life, based on social information and

common sense, which undermine the objectivity of reality and strengthen its subjectivity (Berger & Luckmann, 1991). This approach is consistent with the perspective of postmodern society, as I described in the Introduction, that there is no one truth, no one correct theory, and there are many interpretations and opinions. Reality is examined by a number of points of view, by reflexive observation, which undermines and casts doubt on social aspects and assumptions, and the certainty that existed in the past is no longer (McRobbie, 2005; Gusacov, 2016; Giddens, 1990; Beck et al., 2003).

Accordingly, the reality of everyday life is constructed and ranges from an objective reality with one interpretation common to all to a subjective reality with different and varied interpretations. Berger and Luckmann called these subjective realities sub-worlds or symbolic universes. These terms are based on the ideas of Schutz, who dealt with multiple realities, an idea I will address at the end of the chapter. Thus, according to Berger and Luckmann, symbolic sub-universes present additional, subjective interpretations of symbols in the central reality of everyday life, which strives for broad consensus, for a common interpretation for symbols, and thus for achieving objectivity of reality.

The individual, for his part, maintains in society, in the reality of his life, three basic components:

- Externalization - when the individual outwardly expresses his feelings and subjective experiences, for example, thoughts, attitudes, feelings, etc.
- Objectivization - Turning the subjective reality into an objective one. That is, the individuals in society give the subjective experience of the individual a common meaning that leads to a narrowing of the range of different interpretations, thus making the experience more objective, agreed upon and understood by all. This happens through symbolic tools, agreed upon by the members of the culture, such as language.

These components, as well as the next component, do not necessarily operate in this order or as a process cycle, and they can exist in society in a joint interaction, and also for the individual when he is alone with himself. That is, the individual externalizes, takes his thoughts out of himself, his inner subjectivity, interpretation and experience, and through a system of symbols summed up in society, makes them objective both to himself and to society. For example, a person feels an inner, subjective

feeling and when he transcribes it, says, “I am happy,” or “I am sad,” and through the words, which are symbols that become agreed upon in society, the feeling takes shape and becomes an objective name for his reality as well. He hears the word or says it in his inner voice, and his surrounding environment can also understand the word due to common interpretation, and thus can understand the inner, subjective feeling, clearly and without interpretations, that is, objectively.

If so, the third and most important component is a process of internalization. In internalization, the individual in society learns, understands, and accepts the objective reality that includes, among other things, values, norms, roles in society, statuses, and more. Internalization is not something autonomous and natural that happens by itself; it comes about through the very presence and existence of the individual in the world in which he lives and which he shares with other people. Internalization is complex - the individual identifies with and understands the subjectivity of the other, and he also identifies with and understands the world in which the other lives, and then this world also becomes his own. It is important to note that the internalization process does not require full and completely correct identification and understanding. That is, the subjectivity of the other, which is expressed and becomes objective, can be internalized in the individual inaccurately, or incorrectly, or may be completely incomprehensible (Berger & Luckmann, 1991).

Still, thanks to internalization, society is not only external to the individual, but is in his heart and part of his inner being and identity. Moreover, through these components and during shared social interactions, society creates the identity of the individual, or in other words, it can be said that the identity of the individual is a social product. Therefore, his character, whoever he is, is determined and shaped by society (Berger, 1963). The development, construction, and shaping of identity take place during the social processes, interactions, and social experiences that happen within the social reality of everyday life (Mead, 1934). According to the individual’s actions in society, his conduct, and, in accordance with his relations with others, the individual receives approval, consent, and social and self-legitimacy, whether his actions and behavior are correct, compatible, and acceptable in society or not (Berger, 1963). There is judgment as to whether he is acceptable, righteous, or sinful. This happens without clear awareness and understanding as part of the social context in which it occurred and was shaped (Berger & Luckmann, 1991).

During and throughout social interactions, social cues are converted through shared symbolic systems and perceived and interpreted by the partners in the interaction, thus expressing understanding of the external, objective world. It is a significant part of the social development and development of the identity of the individual and who he becomes. Partners see social interactions as something continuous and ongoing in which they are constantly engaged in trying to process and interpret, in order to understand and continue in the situation with the other. Thus, through an agreed-upon system of symbols, interactions change and shape the daily reality and the current and future behavior of the members of the society (Garcia-Alexander, Woo, & Carlson, 2017). Moreover, it can be said that in social interactions, through consent and common interpretation of symbols in reality, the partners build and define reality over and over again, perpetuating it and its objectivity, and in the process, they also become its product.

The most significant and central symbolic system is language (Berger & Luckmann, 1991). Language is a system of symbols with interpretations, and it is used intensively by people who know it and know how to interpret it, in an effort to provide a single, common, and agreed-upon interpretation. Through language, human beings can have a conversation, communicate, convey messages, and understand the world. Language does not have to be verbal (Mead, 1934). Messages can also be communicated and conveyed through tone of voice, expressions, and various facial gestures, such as raising an eyebrow, making a face, head and hand movements, etc. Language can sometimes also be expressed through music, painting, sculpture, clothing, and other cues, whose purpose is to communicate and convey social knowledge (Shapiro & Ben-Eliezer, 1996). Today, thanks to online technology, there is a new and online symbolic system – emojis - a collection of drawings/symbols and signs used for online communication, such as text messages, through which different types of content can be expressed in a visual, concise, and attractive way. Every emoji is meaningful and requires specific knowledge for interpretation, which can vary from culture to culture (Barbieri, Kruszewski, Ronzano, & Saggion, 2016).

When there is common agreement and interpretation of symbols among the members of a culture, they create and construct the social reality and help with the social order and the ordering of objects for the individual in everyday life. Through them, partners in the society build and preserve the social knowledge stock, which

enables the current and future shared reality and which is also passed on to future generations. When this happens and the individual takes part in internalizations, understandings, and social agreements, he feels and is considered a member of the society. In other words, the individual experiences **a process of socialization**.

Socialization is a complex and ongoing process that can be defined as the entry of the individual comprehensively and consistently into the objective world of a society, or a sector of it (Berger & Luckmann, 1991). In the process of socialization, the individual learns to be a member of the society in which he lives (Shapiro & Ben-Eliezer, 1996). The individual internalizes the subjectivity of the other, and so does the society itself. That is, the world in which the other lives becomes part of the individual's own world as well (Berger & Luckmann, 1991). In fact, the individual discovers who he is, the more he learns what society is (Berger, 1963), and in the advanced stages of the process, every individual in the society also becomes its final product (Renshaw, 1973).

Socialization is an interactive and dynamic process in which individuals learn and internalize cultural components such as values, norms, attitudes, beliefs, customs, behaviors, and appropriate roles in society, and these are passed from person to person and from generation to generation (Oetting & Donnermeyer, 1998). The process of socialization, unlike ordinary learning, involves a stable and prolonged apprenticeship in a set of social components (Shapiro & Ben-Eliezer, 1996). The individuals in society learn and internalize their role models in the social world, as well as their social roles and consequent social expectations, in a profound way which becomes a constant part of their identity (Seymour, 1993). A social role refers to a typical response to a typical expectation. That is, the society provides the role description, and the role provides the model according to which the individual is supposed to operate in a given situation, with each role having its own complexity and social knowledge stock. Each role attaches to itself certain identities, some changing, less important, and temporary, and some more stable and lasting over time and even for an entire period of life. For example, a waiter in a temporary job assumes a social role that contains norms and expectations for service and courteous behavior while working, which is different from the individual's gender or religion, which contain social expectations for gendered or traditional behaviors that last throughout his or her life (Berger, 1963).

At every stage of an individual's life, he must learn and internalize social roles appropriate to his age and mental and physical maturity (Berger & Luckmann, 1991). There are transitions and movements between roles that can lead to a change in perceptions and contain new social norms and expectations. Certain transitions can be significant for the individual and symbolize development and growth. For example, a child who no longer plays baby games because he is already in preschool will feel bigger and more mature, and such a change may contain different perceptions and new social expectations. Similar transitions, new roles and social expectations, occur throughout the individual's life, such as in school, during adolescence, with peers, at work, etc. (Frønes, 2016).

Social roles define existing social expectations according to the definition and social status of that role (Garcia-Alexander, Woo, & Carlson, 2017). Thus, in the process of socialization, individuals learn how to behave appropriately and in a manner that matches their current role and the expectations of the society. The internalization of norms and dictates related to the social roles of the individual constitute a considerable part of the individual's becoming socialized, which raises the issue of the individual's conformity within a society (Renshaw, 1973). Thus, often subconsciously, socialization also influences and shapes the individual's choices and decision-making, even though subjectively he has a sense of independent choice¹ for himself and others (Seymour, 1993). But the reality and society into which the individual is born are set up with relationships that have meanings, conventions, and social rules even before he comes into the world. Accordingly, this pre-existing situation and its transmission to future generations replicates and preserves its social existence, which establishes patterns and limits the level of uniqueness in society (Hall & Jefferson, 1976). Despite this, the processes of socialization feature reciprocity, bi-directionality, and also a dialectical discourse,² and these constitute negotiations on the common interpretation of reality, an important discourse that challenges socialization and preserves subjectivity in the social reality, which I will discuss later in the chapter (Berger & Luckmann, 1991; Shapiro & Ben-Eliezer, 1996).

¹ Independent and free choice allows the growth of the individual and encourages it, giving him the right to form an independent opinion on the essential issues in his life and to live according to his understanding and preferences (Stenger, 2010)

² A discourse that contains a conflict between the subjectivity that the other presents and that which the individual presents during social interactions (Berger & Luckmann, 1991).

It is customary to divide socialization into two parts: primary socialization and secondary socialization. From day one, a baby is objectively part of a setting, a social background. The individual infant is affected early in life by social facts and social relationships, which influence and shape his actions, behavior, and social status, even if at times this does not clearly seem so (Lewin, 1939). In addition, in those early years, the individual's personality and identity are still clean and smooth, other than hereditary traits inherent in him, and exposed to almost any influence (Shapiro & Ben-Eliezer, 1996). Thus, his sensation and experiences at an early stage enter and burn into his pure consciousness and identity (Berger & Luckmann, 1991).

Primary socialization refers to the continuous learning, understanding, and internalization of the basic components of culture and ideas in society in many areas of life. It refers to a time when an individual, usually a child, does not have much of an understanding of the world and its various phenomena. It is important to note that primary socialization refers (and so does this chapter) mainly to the process of socialization that the individual learns and addresses in the first part of his life, in childhood (Frønes, 2016). Despite this, there are situations, relatively rare, that not everyone undergoes, in which the individual experiences a dramatic change in his life, and then we see elements of primary socialization even at an older age. This can happen, for example, when a person enters rigid frameworks that differ from the central society in their values and norms. Such situations include enlistment in a rigid military framework or entry into prison, which require learning and internalizing values, norms, behaviors, and new roles broadly and in diverse areas of life (Kuchenkova, 2015).

Culture and primary socialization operate in mutual influence, with culture influencing and shaping the primary socialization when it determines the content conveyed in it. And on the contrary, at the same time, primary socialization influences and shapes culture, as it is the means of passing it on to the next generation, and the success of the transition strengthens and enhances the social order and the stability and continuity of society.

Every society has its sources for the process of socialization. These are based on interaction with the individual, and are directed to acceptable or deviant actions and behaviors within a society (Oetting & Donnermeyer, 1998). These sources, the external factors that affect the individual, are the socializing agents which I briefly mentioned in chapter 1.

This being the case, social agents can be anyone and everything, that is, human and non-human. For example, parents and the media are both social agents (Kandel & Andrews, 1987; Berger & Luckmann, 1991). Social agents, human and non-human, have a great impact on an individual's self-perception, attitude, and behavior (Garcia-Alexander, Woo, & Carlson, 2017). They can be many and varied, although in Western society they usually comprise family and parents, school, peer group, mass media, work colleagues, politicians, religious faith, sports, and various economic and enforcement institutions (Renshaw, 1973). For example, the institution of the legal system helps in the process of internalizing norms and values in society by enforcing the law and imposing formal sanctions (Frønes, 2016). Socializing agents can appear more or less openly and at different stages in life, from childhood to old age (Renshaw, 1973), while serving as ranges of reality in which any situation can confirm and reinforce the internalization of socialization.

When it comes to human socializing agents, a structure comprising the generalized other is created and crystallized in the consciousness of a person, where the most influential will be considered his significant others. After the crystallization, a symmetrical relationship is formed between the objective and subjective realities of the individual; in other words, the internal and external realities of the individual correspond to one another.

Furthermore, through the generalized other, the social world is transmitted to the individual selectively, in a filtered manner, and differently from person to person, since the presentation of reality by others is influenced by their biography, identity, and unique behavior, depending on the socialization they experienced and their own place in the social structure.

This filtering is especially noticeable when it comes to significant others in primary socialization, so the reality presented to the young individual is perceived as an objective fact (Berger & Luckmann, 1991). The attitude of the significant others is usually consistent with the central approach in society (Mead, 1934). Thus, the subjective identity of the individual becomes more lasting and adapted to society (Berger & Luckmann, 1991).

In order for socialization in general to be effective and optimal, it is necessary to identify with the other, especially in the primary socialization that is characterized as an emotional and deep process. Connection and identification facilitate learning and

internalization in the process (Crisogen, 2015). These have many implications and many points of significance for the development and future of the individual in society (Perez, 2014).

The primary socializing agents, the individual's significant others, are usually the parents and the family, who play a dual role in the socialization process. On the one hand, they are responsible for the learning process, its form and content (Shapiro & Ben-Eliezer, 1996). They serve as a basis for the child's social environment, influencing the shaping of his identity and roles in society. Parents serve as role models and are responsible for teaching the child personal and social skills, social norms as to what is allowed and what is forbidden, basic roles and social patterns in a variety of areas of life in the specific society (Perez, 2014; Frønes, 2016; Berger & Luckmann, 1991; Garcia-Alexander, Woo, & Carlson, 2017). For example, in societies in which studying is highly prized, parents will educate for studying; they will have expectations of their child in the academic context, and this can influence him to put on a good display and make greater investment in his studies later on (Perez, 2014).

In the emotional realm, emotional processes and the navigation of emotionally charged situations and experiences are conveyed through the parents. They provide feedback and response to the children's behavior and of course serve as role models. They affect the quality of the child's social emotions, such as the expression of his emotions, the type of emotions to be expressed, when it is appropriate or inappropriate to express a particular emotion, how to interpret emotional experiences, how to express emotions, and so on (Wong, McElwain, & Halberstadt, 2009).

On the other hand, parents are responsible for the insertion and placement of the individual into the social structure. Their social status, views, and lifestyle influence are passed on to the next generation. When a family conforms to the dominant culture in its values and norms, it will pass on compatible socialization to the next generation, which will internalize it accordingly, and thus the dominance of that culture can be preserved (Frønes, 2016). For example, a poor child accepts the world through the social perceptions and unique behavior of his or her lower-class parents. This preserves the existing situation, the existing reality, or alternatively, gives a less advantageous social starting point to the child and his future (Berger & Luckmann, 1991).

The status of parents as primary socializing agents stems mainly from the fact that they are the first to come into close contact with the newborn and maintain almost

exclusive contact with him in his early years (Shapiro & Ben-Eliezer, 1996). At this point, the young individual has no problem of identification. He has no choice as to who his significant others will be, and he has no option to substitute for other significant others (Berger & Luckmann, 1991). The intimacy prevailing in the family compared to other social frameworks, the tenderness and emotion that accompany the primary socialization process, and of course the child's great dependence on his parents, allow parents effective and almost exclusive use of reward and punishment methods, which behavior also serves as a role model (Shapiro & Ben-Eliezer, 1996). This situation leads to the fact that the adults are the ones who set the rules of the game, and the child has no choice but to play the game he did not choose. The child has a degree of agency in the process in that he can participate with enthusiasm or resistance. The child's lack of choice has the direct result of a fairly automatic identification. Therefore, internalization of the particular reality of the parents is inevitable during primary socialization; the child takes the world so presented to be the only world that exists for him, and this is enacted many times more strongly in the consciousness of the individual compared to secondary socializations (Berger & Luckmann, 1991).

Thus, as time goes on and the child progresses in his socialization process, he discovers and understands that his role in society stems not only from himself and his family, but also from additional expectations directed at him from the environment, by the general society (Berger, 1963). Now, he begins to develop sensitivity to the appreciation of others, who reflect him to himself. He observes them, tries to get approval and consent for the behavior he has internalized, and so he can make generalizations and understand whether his behavior is acceptable in the eyes of the environment and later in the eyes of society as a whole. These understandings create continuity and stability in his identity, which from now on will not change easily even in the face of the generalized other that he will meet in the future and that will be more or less significant for him. Now, when the concept of the generalized other has been established in the consciousness of the individual, primary socialization is over, and the individual becomes an effective member of the society with his own subjectivity. But the process of socialization never quite ends (Berger & Luckmann, 1991).

The division between primary and secondary socialization is not a sharp dividing line (Frønes, 2016). Although the secondary socialization exists thanks to the primary socialization (Berger & Luckmann, 1991), there is still an overlap between

them, and some of the time they exist together and in parallel within the life of the individual (Frønes, 2016). The process of secondary socialization begins in childhood and continues into adolescence and adulthood. This is a socialization that happens for the individual who is already socialized. Now he is discovering new facts, new worlds and expectations, and new roles in society (Garcia-Alexander, Woo, & Carlson, 2017). This begins when the child begins to interact in the social environment apart from his family (Crisogen, 2015), creating connections that will enable entry into the wider society, and also help to develop learning abilities and the development of self-awareness related to the understanding of the adaptation that primary socialization has instilled (Frønes, 2016).

The main purpose of secondary socialization is to introduce the individual to other sectors of society as a new member, or in other words, that the individual internalizes social databases of additional and different symbolic sub-worlds within the same society. He must acquire specific, focused knowledge and internalize certain roles in the society. Examples include school rules, mentoring a new employee in a factory, verbal or non-verbal expressions such as slang and hand gestures, or anything that symbolizes and conveys a message that requires knowledge of and familiarity with its interpretation within a specific society (Berger & Luckmann, 1991). In the online reality, these include the emojis which I mentioned earlier (Barbieri et al., 2016), and the “like” symbol, which acquires significance and interpretation that lead to motivational behavior and many emotional feelings that I will detail in the next chapter (Sherman, Payton, Hernandez, Greenfield, & Dapretto, 2016; Stjernfelt & Lauritzen, 2020).

As stated, the reality of the individual, achieved during primary socialization, constitutes his central world in which the internalizations and interpretations of symbols in the reality of everyday life take place, which provide his social knowledge stock. Secondary socialization constitutes acquisition of familiarity with the sub-worlds, the other sectors of society, and presents additional interpretations, perspectives, and views on the objective reality and symbols in society. In social interactions, diverse interpretations have two-way effects: that is, not only does the individual view society in a certain way because of his background and the way he has been socialized; he also does so because of the way he behaves in society and in various interactions. This behavior in turn can have an impact on society.

Secondary social agents are often interchangeable and changing figures in the long journey of an individual's life, and their effect is to make social knowledge, the specific and new, part of the individual's reality and identity. Therefore, it is desirable that the knowledge transferred has a common, close, and connected basis to existing knowledge from the individual's primary socialization. This can promote motivation for learning and facilitate understanding and internalization in the process. Despite this, the secondary agents have additional components and characteristics that are different from those of the primary ones, such as the anonymity component vis-à-vis the individual. If primary agents are in almost constant interaction with the individual and generally accompany him throughout his life in body and spirit, when it comes to secondary agents the situation is different, and the individual is mainly exposed to the specific and relevant occurrences and components that the specific interaction requires, and so their level of anonymity goes up. In addition, an element that is very necessary in primary socialization, and is less critical in secondary socialization, is the need for emotional identification with socializing agents, when most secondary socialization processes can exist only with a small amount of identification which occurs in almost every social interaction (Berger & Luckmann, 1991).

As mentioned, socializing agents can be human and non-human. According to Robert Merton, who advocated the functional approach, socializing agents, which include social institutions, such as the family, perform roles and assume social functions for the individual and society. These functions can be "visible" and "hidden." The visible is a function that is conscious and directed in everyone's opinion, whereas the covert, the hidden, is an unconscious and unintentional function that is not immediately clear and agreed upon in all its details within the society, including among the partners within the specific interaction (Berger, 1963). In addition, there are roles and socializations that are more formal, where the individual is focused and directed with the aim of learning and internalizing parts of the stock of social knowledge. In contrast, informal roles and socialization can be part of experience- or imitation-based learning, similar to parts of socialization that the parents pass on (Crisogen, 2015).

When discussing secondary socializing agents, it is customary in the literature to present the school and the teachers as the initial socializing agents after the parents and the family. But in the context of the Western world with its media-based technological developments, I have chosen first to introduce a significant socializing

agent which the individual meets already in the early stages of his life, in childhood, and which continues to exert its influence later and throughout life: the media.

There is no doubt that the media has long since become a significant socializing agent and influences the attitudes and beliefs of individuals in Western society (Garcia-Alexander, Woo, & Carlson, 2017). Mass media serves as a primary, available, and up-to-date source of information for the individual (Lachlan, Spence, & Seeger, 2009). Moreover, thanks to technological developments and the arrival of the Internet for the general public in the early 1990s (Stenger, 2010; Twenge, 2017), global processes have been accelerated, making information and communication fast, accessible, and independent of geographic space (Ursah & Baines, 2009). Since the beginning of this revolutionary change, and especially since the launch of effective search engines, the amount of information accessible to a person has been unprecedented; every piece of social, historical, economic, technological, or medical information, from any corner of the world, is available and within reach (Stenger, 2010).

Media influences can be compatible with the dominant culture and perceived as positive, and can deviate from the norms of society and be perceived as negative. For example, content can encourage helping others, or can represent violence and discriminatory treatment of women. The global media serves as a dominant source of socialization in society and can be used as a tool through which many values, aspirations, and beliefs can be normalized, which will later affect society as a whole (Perez, 2014). For example, when the media emphasizes the protagonist as a winner, after realizing his potential and inner strength, when the emphasis is on being true to oneself, being honest with oneself, finding one's own way, etc., this strengthens the norms of individuality and self-identity as unique and special (Frønes, 2016).

Furthermore, especially for children and youth, the media can be a socializing agent that affects the individual's identity, lifestyle, and aspirations (Perez, 2014), impacts their ideology and outlook on life, and more (McNaughton-Cassill, 2007). Online media in particular has caused some of the familiar socialization that traditionally takes place through physical interactions between individuals in society to occur partly in the environment of information and communication networks. The main types of Internet resources in which these interactions take place are social networks, forums, blogs, and chat rooms (Kuzmina & Galaktionova, 2019). Socialization in this way becomes significant since the more accessibility to and availability of media there

is, the higher its exposure and consumption (Haravuori, Suomalainen, Berg, Kiviruusu, & Marttunen, 2011). Accordingly, following the development of powerful mobile devices led by smartphones, and in light of the popularity and expansion of their use worldwide, there is an increase in engagement with various social networks (Tatar & Antoniadis, 2014; Uddin, Jamshed, Ahsan, & Alam, 2016), and in Internet consumption in general (Stald, 2014). Digital devices with a mobility advantage such as smartphones and tablets (Motamedi & Choe, 2015) are preferable for most people, especially the smartphone, thanks to its convenience and flexibility (Newman, 2019).

Furthermore, unlike the process of socialization transmitted by traditional media, such as television and radio, and similar to the traditional process of socialization in the physical-interpersonal reality, online media has a two-dimensional and sometimes even mutual aspect in the process of socialization. On the one hand, it is possible to learn and enrich one's social knowledge and awareness of the social environment within online media, and on the other hand, the individual himself can also influence and serve as a socializing agent for other users in social media, sometimes unconsciously (Feng & Xie, 2014; Turcotte, York, Irving, Scholl, & Pingree, 2015). An excellent example to illustrate this is the impact and weight of online socialization in the field of consumerism and tourism. As television and the press exert their influence, online media also develops, influences, and shapes an individual's consumption habits and knowledge gleaned through advertising. Here, however, the two-way relationship and sharing that online media enables are also emphasized (Feng & Xie, 2014; Aleti, Ilicic, & Harrigan, 2017). Modern social media structures communication and content differently than traditional media, with the goal often being commercial and sales oriented (Frønes, 2016). The consumption habits and decision-making of the individual regarding purchases, consumer aspirations, and the manner of buying are learned through online socializing agents. The basic premise of sites that allow comments and recommendations from surfers is that consumer ratings and reviews help other consumers learn about the products, services, and brands offered. The reputation marketplace teaches patterns of consumption, consumer knowledge, and approaches related to consumption, and these are designed to improve an individual's effectiveness as a consumer and his or her purchasing decisions. Thus, through recommendations and responses, the sellers and advertisers, as well as the surfers or site members themselves, all can model and influence the consumption habits of the

individual. Thus, everyone can become conscious and unconscious social agents in the socialization process that happens within online media (Aleti, Ilicic, & Harrigan, 2017).

In addition, socializing agents and role models in online media can be many and varied, and go far beyond the immediate environment of parents, teachers, friends, etc. They can be less close or actually far from the individual; they can be famous (Frønes, 2016); and they can even be members of the younger generation who have achieved something significant in their field or have become network celebrities through means such as videos and photos, which are transmitted through social networks³ (Töröcsik, Szűcs, & Kehl, 2014). This is especially the case when online information has a huge distribution potential in a short period of time; that is, the information can grab the attention of a huge amount of spatially distributed Internet users almost simultaneously (Uddin et al., 2016).

Thus, the various social media are information-sharing platforms and enable the possibility to build relationships and social interactions. On social networks, a huge stock of social knowledge is transmitted, where users share countless pieces of personal and social information such as feelings, marital status, demographics, photos, videos, and personal desires. Social networks such as Facebook or Instagram allow discovery of who is in the individual's circle of friends, who are his acquaintances or his followers (Feng & Xie, 2014). In addition, with the expansion and spread of social networking sites, social media has become one of the most popular Internet services in the world, and has wide social impacts. For example, social media can help build an individual's personal identity through feedback received from a number of different channels and from a number of colleagues within that environment. It can foster social norms of reciprocity and trust, while by exchanging frequent and additive pieces of information, it helps to build credible relationships between members, which also increase the potential for added human and social capital online (Gil de Zúñiga, Jung, & Valenzuela, 2012). Through online media, contemporary social discourse and myths take on a visual and narrative form, illustrating how the medium has the ability to shape the message.

³ Many good examples can be found of network phenomena of this kind. Here, I think it is advisable to turn to the unique story of Bana Alabeb, who, thanks to her tweets, reported the devastation she experienced in the fighting in Syria and changed the experience of many refugees by raising global awareness of what was happening there, leading to the rescue of many refugees (<https://atlanticcouncil.org/commentary/transcript/2018-freedom-awards-bana-alabed/>). And there is the unique example of Justin Bieber, who, thanks to YouTube videos that went viral, leveraged his position and grew into a global pop star with millions of young fans (<https://www.becomesingers.com/singer-success/success-story-of-justin-bieber>)

Facebook, for example, influences various phenomena of taste, style, identity, and popularity, while building a need for engagement and role models that can be considered as socializing agents for the individual. These are role models that can stand out and influence, whether it is in the context of profession, clothing style, attitude, or behavior, and also through values and ideology (Frønes, 2016).

Similar to the example of consumption habits, the events that take place in the online space, the cultural activities transmitted on social networks, also lead to social learning, self-education, creativity, and the acquisition of new skills while the individual is at home, or rather is not limited to physical space. In addition, there are new, visible, and intentional forms of learning such as courses, seminars, open lectures, etc., all of them online. These include lectures on popular channels such as YouTube like or TED Talks (Kuzmina & Galaktionova, 2019), or on the popular Coursera website, where academic courses can be taken online, and are presented by a variety of lecturers at various universities around the world (<https://www.coursera.org/>). In these ways, the individual has opportunities to acquire knowledge and improve his skills, all of it virtually and online (Kuzmina & Galaktionova, 2019).

Online learning and enrichment of knowledge is possible for anyone who has access to the Internet, and that includes everyone - children, youth, and adults. It is an accelerated and progressive style of learning, but different from physical, frontal, and traditional learning, and it is not (yet) a substitute, in the Western world, for educational institutions, which are significant secondary socializing agents of children and adolescents.

For the young individual, social institutions, usually school, are considered secondary socializing agents, among the most significant and important he will encounter in his life. In the process of socialization, educational institutions have a visible influence and impart knowledge on basic historical and cultural contexts, and the application of the stock of social knowledge conveys patterns of cultural values. Educational institutions also present universal criteria addressed to society in general, for example, values of equality (Frønes, 2016).

The school has latent functions in the process of socialization, as an important source of information about the unconscious curriculum, educational and traditional information about the society in which the individual exists, which he must internalize and learn through the framework and laws that exist in the school institution. These

include the requirement to meet deadlines, sit quietly through a lesson, request permission to speak in a respectful manner by raising a hand, have respect for authority, develop the ability to follow instructions, be creative, work in groups and independently, negotiate, and other necessary skills for belonging and adapting to society beyond the school (Garcia-Alexander, Woo, & Carlson, 2017).

The function of the school as a socializing agent has great value, both at the social macro level and at the micro level of the individual. In the macro view, when the school functions responsibly, most students will demonstrate good communication and good connection with the institution, and thus the school can communicate and convey positive social norms and provide appropriate sanctions to promote accepted social behaviors. Conversely, when there is no good communication and connection with the school, it can lead to deviant social behaviors (Oetting & Donnermeyer, 1998). In the micro and personal perspective of the individual, the school is very significant in shaping his identity, his personal development, and his ability to adapt and integrate into society (Ladd, 1990).

Educators are considered secondary socializing agents and are usually the first significant adult others for the child (other than the parents) (Frønes, 2016). Teachers have a variable degree of anonymity vis-à-vis the individual; although sometimes the relationship is close, they still have a professional role and keep a professional distance; they do not present every aspect of themselves to the students, and their impact on the individual is specific and limited (Berger & Luckmann, 1991). The formal and overt role of teachers is to impart specific knowledge, overt knowledge related to the school content world, such as math, language, science, geography, and more. Alongside this, there is a possibility for teachers to also have roles with elements of primary socialization for the individual student. For example, in capitalist societies based on economics and knowledge, school and teachers can be seen as imparting knowledge and learning as basic education components that belong to the processes of primary socialization (Frønes, 2016).

Moreover, in recent years, with the technological influences and changes in contemporary socialization, the role of teachers and of adults in general as social agents,⁴ and their relationships with the young individual, have been undergoing

⁴ Here it is possible to treat teachers, parents, and all other significant adults in a similar way and along common lines.

changes and adaptations (Feng & Xie, 2014). Because the knowledge store is vast and accessible, especially through the smartphones that have become an important part of daily life (Weiss, 2013), the older generation is more engaged in learning and imparting knowledge of social values and norms and life experience (Kuzmina & Galaktionova, 2019), with an emphasis on developing and achieving a wide range of attitudes, knowledge, and social skills (Feng & Xie, 2014). This socialization also meets the requirements of and is suitable for the younger generation itself, especially among youths, who aspire to learn not just about school subjects, but about life experience in a manner that will help them be more effective in their future social environment (Iartsev, 2016).

In addition, and as I described in previous chapters, these technological developments have led to changes in many areas of life, as well as changes in the world's control mechanisms (Cohen, 1997). The need of the older generation to control reality and the stock of the social knowledge becomes complex, especially with the mechanisms of knowledge in the world changing rapidly and in an out of control fashion, while young people are the first to internalize these changes and are already in a hurry to control and understand the technological world (Kuzmina & Galaktionova, 2019), since they feel natural and comfortable in the technological milieu and therefore strive to be constantly in an environment that includes technological devices (Bencsik, Juhász, & Horváth-Csikós, 2016). Therefore, it seems that the two-way element of the traditional socialization process exists and is influenced by virtual technologies, not only in the way it contributes to conveying the socialization process, but also in some of its basic principles and details. That is, virtuality enables the emergence of a kind of circle-socialization, a reassessment of existing values, new forms of learning about the world, and a new style of intergenerational interaction. In this way, the younger generation, children and adolescents, pass on and present current and up-to-date knowledge of new technologies, thus teaching the older generation skills and quick responses to innovations, leading them to adapt to the new technologies, some of which influence and change everyone's social reality (Kuzmina & Galaktionova, 2019). Interestingly, Margaret Mead's book from the 1970s, which I mentioned in the previous chapter, is relevant and accurate here as well. As mentioned, in the Prefigurative culture, the advanced and less traditional culture, the adults learn from their children, and an inverted socialization process takes place. Young people demonstrate abilities

and orientations that some adults will never display. Moreover, some of the parents' past concepts are no longer relevant to the next generation and therefore will not be passed on; that is, they will not be internalized in the process of socialization. The adult as a socializing agent, his role as a facilitator and guide for the young person, is not valid in some areas, when in fact in many cases the adults do not know more than the young people, and the children are the ones to say what is to come, not the adults (Mead, 1970). This socialization prepares for changes and complexities, for lack of control and uncertainty, although the ability to predict and observe, in the process of socialization, is fundamental in the design and socialization of life paths, especially among children and adolescents (Frønes, 2016).

Despite all this, in the circle formed and in the two-way socialization operating in parallel, the older generation is still the significant socializing agent of the younger generation, and no doubt also the significant one as the primary agent, when it comes to parents. In fact, adults lend new generational information and knowledge about the new virtual reality, change, and adapt their social and cultural experiences, according to contemporary conditions and lifestyles (Kuzmina & Galaktionova, 2019), and as part of the changes and adjustments, new learning and teaching methods are adopted that are compatible with and relevant to the current world. An excellent and relevant example is socialization that deals with the dangers of the Internet in the online world. This is a process of learning and internalizing habits and norms of behavior which emphasizes the necessity and importance of the older generation as a socializing agent of the younger generation (Feng & Xie, 2014).

Thus, as part of technological developments in general, and of social networks in particular, there is an understanding that the rules of the game have changed in many social areas, such as social exclusion and harassment, and physical, and especially mental protection, of children and adolescents has become paramount (<https://www.saferinternetday.org/web/sid/home>). The main purpose of socialization for conduct in the online space is learning and initiating rules and norms of behavior, in order to maintain the safety of children and adolescents on the various online platforms, while supervising and providing learning tools for dealing with problems and dangers online (Feng & Xie, 2014; Cohen-Avigdor, 2020).

This field is so current and dominant that in 2004, the International Day for Safer Internet was founded (SID). It is observed in about 160 countries worldwide,

including the United Kingdom, Nigeria, Hungary, Iran, the Czech Republic, Germany, Norway, Luxembourg, Greece, Ireland, Scotland, Austria, Finland, France, Bulgaria, Belgium, Poland, and Israel (<https://www.saferinternetday.org/web/sid/home>). On this special day, which is observed in various institutions, in addition to the routine of life at home, the older generation, parents, teachers and managers, maintain and deliver new and updated socialization processes for learning and education through a variety of content and activities focused on encouraging children and adolescents to develop choices, cultivate critical opinion, comply with norms and rules of conduct, and become familiar with rules for sharing and publishing personal information and details in the online space, in addition to imparting safe surfing skills, dealing with complex situations on social networks, and promoting sensitive, protected, and close interpersonal communication, which takes account of the individual and of others (Feng & Xie, 2014; Cohen-Avigdor, 2020). Major European entities such as the European Union, Global Liberty, Insafe, and INHOPE are involved in this day (Cohen-Avigdor, 2020). Its primary participants are educational institutions and schools (<https://www.saferinternetday.org/web/sid/home>).

This illustrates the fact that children and youths face serious challenges in the online environment, and besides, at an early age, from the moment the child begins to learn in school, he is exposed to and faces additional changes and challenges that he did not experience before; the child learns to negotiate in personal-internal areas and in cognitive tasks (Ladd, 1990). He is willing and keen to devote himself to the acquisition of the initial skills that will serve him as necessary preparation for the tools, symbols, and concepts of society, and he expects to take on social roles (Erikson, 1968). While learning the new expectations on him from the teachers and from school as an institution, he first encounters academic challenges and, in addition, learns to integrate and adapt himself to the expectations of his peer group who are with him in the same educational setting (Ladd, 1990). Thus, the school has another hidden social role, and that is to serve as a focal point for meeting and experiencing diverse interactions within a group of equals that form and shape a significant part of their social world (Shapiro & Ben-Eliezer, 1996).

I have dealt extensively with the peer group in previous chapters. In the process of socialization, the peer group serves as a central and dominant socializing agent which will accompany the individual for an extended period of his life, especially in childhood

and adolescence (Nave, Elad, & Ran, 2004). Largely due to the school environment, children and youth spend a lot of significant, physical, and intense time together. In these interactions, there are many opportunities for mutual influences (Hartup, 2016). These are expressed in conversations, in joint activities such as games during breaks, and more. Friends and the peer group have a great impact on the individual's adaptation and success, coping with the challenges he or she faces in school. Moreover, early acquaintance with friends before entering school and acquaintance with friends within the classroom has a great advantage for the child's adaptation and integration in the educational framework and fosters a more positive attitude upon entry to school. This can have future positive implications, such as future academic success, the development of skills and abilities for teamwork, and more. On the other hand, the lack of a supportive social network with a peer group can lead to negative consequences, such as varying levels of sadness, loneliness, anxiety, lack of academic success, and difficulties coping with school challenges (Ladd, 1990).

Part of the process of socialization in general is to guide the individual and help him adapt to and understand social situations. This way, he can conduct himself effectively in front of his partners in social interactions (Garcia-Alexander, Woo, & Carlson, 2017). This phenomenon is prominent and noticeable in the context of the peer group, where a significant part of the socialization takes place during joint social interactions, which affect both partners mutually and simultaneously. These interactions influence cognitive and emotional developments and the identities of the partners in the short and long term, through role modeling, conversations, and social reinforcements (Hartup, 2016). This is especially the case in adolescence, a time when there is much preoccupation with social comparison, and the self-esteem of the individual is linked to how he is perceived by others, all of which is predicated on the skills he cultivated earlier in childhood (Erikson, 1968).

Adolescence is one of the most intense periods in the process of socialization, where social influences increase, gain momentum (Seymour, 1993), and influence identity formation broadly and in many areas. This can increase confusion and stress in adolescents (Erikson, 1968), in areas such as sexual identity and social identity (Perez, 2014). Moreover, as part of the decline in family influence as a socializing agent (Garcia-Alexander, Woo, & Carlson, 2017), the peer group as a secondary socializing agent increasingly influences the adolescent's identity, experiences, aspirations, beliefs,

achievements, forms of behavior, and more (Garcia-Alexander, Woo, & Carlson, 2017; Ryan, 2000), since he undergoes many stages in his development alongside the peer group, including significant experiences, such as routine interaction, relationships, and group formation, as described in detail in the previous chapter (Ryan, 2000).

For adolescents, especially in the wake of technological developments and the increasing use of smartphones, the media has effects on almost every area of life as a secondary socializing agent, especially given that young people, children and youth, were born into the reality of network technology (Twenge, 2017), and use all kinds of virtual network devices, such as smartphones or tablets, consistently. Thus, in this way, they learn the environment and go through a process of socialization that is natural to them (Bencsik, Juhász, & Horváth-Csikós, 2016). They trust their smartphones; they spend time on them in increasing amounts during the day. They use them for communication, information seeking, dealing with boredom, media, games, dating, news, and more (Newman, 2019; Weiss, 2013). Social media, for example, allow users to unite in groups around common interests, hobbies, or events; they can initiate and schedule meetings in physical reality (Kuzmina & Galaktionova, 2019) as part of the need for personal and intimate interaction, which still exists and is currently not fully met online (Iartsev, 2016). Smartphones are largely responsible for the fact that a significant part of the time spent with friends is online time, virtual time, and that this is where many individual and group interactions take place, especially among youth (Twenge, 2017).

Additional influences of smartphones and online media in adolescence stem from the uniqueness and complexity of this age. As part of identity formation, the adolescent may suffer more than ever from role confusion. He experiences the transition between non-binding childhood roles and games to the ability to make decisions and establish roles for the rest of his life. It is an age accompanied by many internal and external conflicts, with much uncertainty toward the specifics of the adolescent's role as a future adult; it is an age when trust in another is needed, and the adolescent seeks loyalty, a character with whom he can identify and trust (Erikson, 1968). These characteristics and many others, which I discussed in the previous chapter, include socialization processes that are transmitted and influenced by existing social patterns and past traditions, and the challenge for adolescents today is to adapt to an unknown future and new ideas about the future (Frønes, 2016). In a society in which information

is unreliable and there is no one to trust, the individual must learn and acquire as many tools as possible to cope, demonstrate critical thinking, make choices, and formulate unique positions among the contradictory norms and values in society in the face of the many sub-worlds. All this sharpens his senses to absorb and evaluate principles and values, and the others, his socializing agents, will try to bring him closer to the norm and the prevailing social conformity (Renshaw, 1973). It is important to note that there are other and central socialization processes that have a broad impact on the individual and society which I will not delve into in this work, such as gender socialization (which is subtly mentioned throughout the chapter); this dictates society's expectations of male and female behavior (Perez, 2014; Crisogen, 2015; Garcia-Alexander, Woo, & Carlson, 2017). Another example is socialization in companies and organizations, which is very relevant in the Western-capitalist world, where it is understood that successful socialization is important for the integration of employees, their personal well-being, and of course economic gains in a competitive world, and so on (Livi, Theodorou, Rullo, Cinque, & Alessandrini, 2018; Renshaw, 1973; Batistič, 2018). Other means of conveying the process, other socializing agents and influencers, which I will deal with less but which are noteworthy are various games, which can include role-playing and thus teach the individual a little about the social role in which he imagines himself, in addition to toys, fairy tales, movies, superheroes, etc., which can lead to the learning and internalization of parts of the social knowledge stock (Frønes, 2016; Perez, 2014).

Socializing agents are often used as a source of socialization for the accepted and compatible stock of social knowledge. At the same time, socializing agents, like the peer group in adolescence, have the potential to guide the individual to internalize values, norms, and behaviors that deviate from what is accepted in society, such as drug and alcohol abuse or other rebellious or deviant behaviors. Deviant behaviors are part of socialization and social learning; importantly, they allow a comparison to be made as to what is acceptable in society. Adolescence is a particularly critical period for learning these behaviors. Weak ties and a weak connection with one peer group can increase the youth's chances of communicating and connecting with other peer groups which may deviate from the norm, compared to other sources of socialization, such as family and school, which are generally more coordinated and likely to maintain the accepted norms in society. However, even weak relationships with family or with

school can lead to aberrant behavior and socially deviant norms (Oetting & Donnermeyer, 1998).

It can be understood, then, that the process of socialization does not always succeed. One of the main goals in the process of socialization is to create compatibility, coherence between the two worlds: the subjective world of the individual and the objective world of social reality. At the same time, there will always be some degree of asymmetry between them, and therefore the relationship between the individual and the social world is always in continuous flux and is a balancing act.

Achieving the goal of coherence indicates the success of socialization and has varying levels that can range from high success to the possibility of failure. A successful socialization process is aimed at establishing an infrastructure and foundation with a high degree of symmetry, matching between the realities and the identity of the individual (Berger & Luckmann, 1991). In addition, a successful process leads to a certain level of conformity of the individual within the society or group to which he belongs, and to his adaptation to social expectations and requirements (Crisogen, 2015). On the other hand, an unsuccessful socialization process means that the adolescent understands the subjective and objective realities in asymmetrical, incompatible terms (Berger & Luckmann, 1991), in addition to learning and internalizing inconsistently with the rules of society and the expectations and social demands accepted in the central culture (Crisogen, 2015).

A complete and successful socialization process is unachievable, but also, a fully unsuccessful socialization process is very rare. A high level of successful socialization is possible primarily in societies with a very simple division of labor and roles, and with very little nuance in social knowledge. Usually these will be more traditional societies, where every individual adheres to the same fundamental plan for his social life, the social order leads to more or less equal responsibility for every person in the society, very similar social details are created, and so the same socialization processes that are clear to everyone are internalized. Even the gaps in the identity of the individual between the objective and the subjective identities are small; there are almost no problems of identity: the question “Who am I?” does not come to mind, because society has defined a clear answer in advance that is maintained and reaffirmed in every social interaction. Individuals know who they are, what their role in society is, and who their others are (Berger & Luckmann, 1991). In these societies, the younger generation

looks up to the older generation that guides them to a similar biographical social and personal life that is established in advance. In other words, in these societies, children learn mainly from the adults, who will be almost the exclusive socializing agents and will be present for most of the individual's socialization processes throughout his life (Mead, 1970).

In contrast, in complex societies, where the stock of social knowledge is large and the division of roles is expanded, there is an increasing likelihood of unsuccessful socialization processes. Although the lack of success is not dichotomous, it is dynamic and changeable, but there may be gaps and social differences which will lead to different and diverse socialization processes, and which will provide heterogeneous socializing agents who show inconsistency and disagreement on social issues, which will affect the socialization of future generations.

In these complex societies, the internalized content in socialization confronts the ongoing threat of the subjective world. That is, the multiplicity of roles in society, the emergence of symbolic sub-universes, which present a different interpretation and an alternative to the objective reality, are considered a threat to it, as aspiring to be self-evident and natural (Berger & Luckmann, 1991).

Western, postmodern societies are considered to be such complex societies, where the multiplicity of interpretations, gaps, and asymmetries can be reflected on several levels and in several processes within socialization.

At the beginning of the process, as mentioned, during primary socialization, the emotional connection and the quality of the connections within the family are necessary for successful socialization. Indeed, in general, most families are functional, compatible, and contribute to society; the parents love their children and therefore will do their utmost to instill attitudes and behaviors that conform to cultural and community values and norms, and will generally not encourage deviant social behaviors. However, there may be a mismatch within the family with the norms accepted in society, and the family will be considered dysfunctional within society, as in the context of physically abusive parents, criminals, alcoholics, drug addicts, etc. Not only can such parents fail to present a good relationship with their children; they directly convey perverted values and norms through the example of their behaviors, such as stealing, drinking, or using drugs (Oetting & Donnermeyer, 1998). And so, the likelihood of the individual's

choice, identification with, and internalization of the deviant social behaviors that differ from the central approach in society increases (Berger & Luckmann, 1991).

Here, it is worth noting that the process of socialization also serves as a mechanism of control and social supervision in order to prevent social deviation and violation of formal or informal cultural norms. Learning and internalizing social knowledge in the best way helps to identify behaviors that go beyond what is accepted in society (Frønes, 2016). So indeed, the content and the stock of knowledge can vary from society to society, but one can find certain norms that are considered quite broadly as deviant from what is accepted in all cultures, such as lying, cheating, and stealing. Murder is also prohibited in most cultures, as is the use of violence (Oetting & Donnermeyer, 1998).

In a different scenario, asymmetry and disagreement within the family may be among the primary agents influencing the social content passed on to the next generation. This may be based on different interpretations and definitions of the reality, or on competition and gaps between parents, which can cause confusion in the child and gaps in his identity and how he internalizes social knowledge. Subsequently, unsuccessful socialization can also result from asymmetry between primary and secondary socialization. As mentioned, for the individual, the internalization of social knowledge is perceived as basic and inevitable; his internal world is already largely built, his peculiarities and uniqueness are solid, at least in part; personal relationships with significant others are clear, and their world is perceived as the only world that exists for him. At this point, the individual still does not understand that there are other sub-worlds and other socialization processes with different interpretations of reality. With exposure to the environment and secondary agents a paradoxical situation is created, when, thanks to a successful primary socialization, the individual can look at his past and feel a sense of stability, security, and independence, which allows him to go out and explore sub-worlds and other interpretations of reality. Thus, he questions his world and perhaps discovers gaps and differences which reveal that not everything is complete and in order, so that the obvious and objective reality he thought he knew is no longer beyond question. Such a situation is considered a threat that may break or undermine objectivity in reality, shock the individual, and even lead to an identity crisis (Berger & Luckmann, 1991), a possibility that increases as the individual grows and matures, and the influence of other socializing agents increases (Garcia-Alexander,

Woo, & Carlson, 2017). This may occur, for example, with increasing closeness in peer-group interactions and with other adults in social institutions, such as school. Gaps between the world internalized in primary socialization and the world of secondary socializing agents can be experienced as a problem and a source of internal conflict for many children and adolescents. It can lead to negativity, negative behaviors, and helplessness, in addition to shyness, lack of initiative, limited speech and discourse, etc. (Shklyar, 2016). At the same time, several shocking events are needed throughout the individual's life in order to dismantle large parts of the reality internalized in early childhood.

The exposure to other interpretations and sub-worlds raises the social possibility of individuality (Berger & Luckmann, 1991). Individualism refers to the individual's unique and personal orientation and to his being a source of opinions, attitudes, tastes, and a way of life of his own. It can also be interpreted as the liberation of the individual from social and traditional shackles, while his identity is still rooted in social and ideological patterns (Frønes, 2016). The individuality that allows a person to choose between incompatible realities and identities presents unsuccessful socialization, because once the individual raises substantive questions about his identity and about the world to which he is connected, an appeal to identity is created and a window is opened for individualistic adoption possibilities and internalizations. The individualist is revealed as a specific social type with the ability and potential to move/migrate between a number of available and incompatible symbolic sub-worlds, and when this happens, he feels uncomfortable and betrayed.

In Western society, any person who has undergone primary socialization has the potential and possibility for such self-betrayal, especially in adolescence (Berger & Luckmann, 1991), which, as stated, is characterized as a critical stage in the shaping and formation of identity, accompanied by crises characterized by increases and decreases in the strength of the identity, of the "I" which has been formed so far (Erikson, 1968). This is in addition to the diminishing influence of primary agents and increasing closeness to the peer group, who can challenge the individual's identity by making different sub-worlds, perhaps contrary to his primary socialization, accessible, and thus, the threat is much more real (Berger & Luckmann, 1991).

Despite this, the different age characteristics, conflicts, and unique experiences that prompt youth to engage in specific activities and follow trends as part of

establishing and forming the youth culture (Erikson, 1968) build order and social cohesion, so that the culture acquires a kind of social and cultural stability. Then the youth, in their sub-world, cannot feel and be considered as socially deviant (Berger & Luckmann, 1991).

Accordingly, the pursuit of independence does not necessarily indicate social deviation, but can also be perceived as promoting, liberating, and growing into uniqueness and innovation both personally and socially. Moreover, in an information-technology-based society, an open and dynamic society, the individual needs scope for individuality, and he demands flexibility, mental independence, and autonomy so that he can adapt to society, cope with changes, participate in creating change, and finally choose from the many sub-worlds that offer him a different interpretation of reality. It can be said that the individual, metaphorically, negotiates with the social arrangements through his personal choices (Renshaw, 1973). Therefore, the possibility that unsuccessful socialization will be presented stems mainly from the changing knowledge environment in society, from the proliferation and flooding of information and sharing that only increase the absence of one truth and of clear, objective facts (Kuzmina & Galaktionova, 2019).

This is an age of information abundance that raises the need for critical thinking in an environment where the level of trust in information is low and everything is questionable (Turcotte et al., 2015), a period in which the younger generation have access to diminished and sometimes absent social ideals and lack trust in the content passed on by the older generation. That is, the social information that the older generation transmits is constantly reviewed and re-examined by a number of information channels, and as a result, whoever is supposed to serve as the transmitter of social knowledge is constantly questioned. Moreover, not only new information is questioned but also old information, such as historical facts that are considered established. Phenomena and events require understanding and interpretation, data must be examined and re-verified, and everything is cast into doubt. All of this poses a significant danger of the possible erosion of cultural identity and changing values in society and may lead to undermining and instability in the process of socialization (Kuzmina & Galaktionova, 2019).

Another type of unsuccessful socialization that can occur today, in an online world containing many symbolic sub-worlds, is due in many cases to the transition to

online, non-face-to-face interactions - not physical encounters, but interactions that occur in cyberspace.

A face-to-face meeting is flexible; that is, if there are gaps or disagreements regarding interpretations of the symbolic reality, it is possible to correct and reduce these gaps relatively easily and quickly, compared to what happens in non-face-to-face meetings. This can be achieved, for example, through language, which can be verbal or nonverbal, such as by conducting a conversation, or by using hand gestures or facial expressions for the purpose of clarifying and explaining the individual's subjective perspective, and for the other participant to understand what is meant at the time of the encounter, so that together the participants create a shared, objective reality with as uniform an interpretation as possible. In non-face-to-face meetings (such as interactions in the online space and through smartphones), there is no mutual influence on the subjective reality of the individual, there is no vivid presence of the partners, in which many socially significant things happen; the partners do not share the "here and now" of the reality of everyday life, and therefore some forms of influence like facial expressions, body movements, gestures, and behaviors, are in a way muted, removed, and deactivated, and so the interaction is not complete or wholistic. This may increase gaps in interpretation and lack of understanding or agreement regarding the various interpretations of the symbolic reality, and these are gaps and asymmetries that will of course increase the likelihood of unsuccessful socialization.

Another reason for the emergence of unsuccessful socialization is a fundamental problem of consistency in secondary socialization. Learning and internalization in secondary socializations are more fragile and less stable than in primary socialization, and are changeable. They are not sufficiently anchored or grounded, are not taken for granted, are not in the routine of the individual's consciousness, are more specific, and accordingly can be changed and replaced in the subjective world of the individual. Moreover, the threatening asymmetry can present as incompatible and even contradictory sub-worlds here as well, in the secondary socialization process. Since there is almost no need for emotional identification with others in secondary socialization, the individual's internalizations will be less rigid and stable.

On the one hand, this has an advantage and a benefit for the adaptation and development of the individual to life in society. He can learn quickly and in depth techniques and abilities that may be temporary but are important, meaningful, and

required in different situations throughout life. Then, thanks to the secondary socialization process, the individual achieves flexibility and adaptability, which the high rigidity of primary socialization does not allow or complicates in various situations throughout life. There are, of course, internalizations and pieces of knowledge in secondary socialization that are relevant to very broad areas of reality and are common to a multitude of different situations throughout life, and these can be stable and highly identified with by the individual.

The downside, on the other hand, is that when an alternative sub-world appears in secondary socialization, the individual can choose it manipulatively. That is, the individual faces a new reality without emotional identification, and instead of it becoming his reality, he uses it for specific purposes only (Berger & Luckmann, 1991). And many times, the individual may choose to emphasize certain behaviors which he sees as reflecting and representing a particular role in society, and at the same time to suppress other behaviors that can be reflected from that role. Therefore, in one form or another, the individual manipulates others in society so that they will see him in a different way (Garcia-Alexander, Woo, & Carlson, 2017). And as such manipulative behaviors appear and expand into additional roles, the individual achieves attachment and connection, and then deliberately activates them. Moreover, if such a phenomenon becomes widespread, and the social order as a whole begins to activate characteristics of mutually manipulative relations, there is a danger that the central, dominant society will become subjectively just one of the worlds and not “the” world for the individual. Thus, it can be said that when there is a multiplicity of incompatible sub-worlds and no one world is clear, agreed upon by a majority, central, and stable, it may lead to a multiplicity of different socialization processes and production of diverse and heterogeneous members who are not uniform in their socialization. Such unsuccessful socialization can have broad implications for cohesion, stability, and social order, as well as for the continuity of society in the future (Berger & Luckmann, 1991).

The instability of the central world and the multiplicity of sub-worlds emphasize a characteristic component in contemporary reality in which, through virtual technology, a phenomenon of alternative socialization is created, which can be represented by a substitute identity (Kuzmina & Galaktionova, 2019). It seems that the symbolic sub-universes within the same society and the idea of a multiple reality take on an additional nuance in today’s social reality.

The reality of everyday life seems to the individual to be independent, consistent, and self-evident, natural and simple; it is perceived as a place and as the central world in his life. According to Schutz, whom I mentioned at the beginning of the chapter, there are a number of universes, worlds, realms of reality that, together with the everyday universe, constitute and exist for the individual as “multiple realities” (Ayaß, 2017). Schutz based his work on the *Principles of Psychology* of William James (1890), which dealt with several types of worlds such as the world of science, madness, idols, and various supernatural worlds, including the worlds of paradise and hell (Ayaß, 2017; Hammersley, 2019). Schutz adopted the idea of multiple worlds, and besides the world of everyday life, he focused on other worlds like the world of dreams, of imageries and phantasms, especially the world of art, the world of religious experience, the world of scientific contemplation, the play world of the child, and the world of the insane. Each such reality, a sub-reality, has its own special and separate style of existence (Hammersley, 2019).

The reality of everyday life, the central world of the individual, serves him as a place of refuge and transition to other worlds, other realities. For example, when a person sleeps, dreams, fantasizes, he temporarily emerges from the reality of daily life and moves to another sub-reality. In addition, when the individual moves from place to place, for example from work to home, from school to the road, as well as in sleep and dream, any such transition is a jump between one reality and another. Schutz called it a “finite province of meaning” (Ayaß, 2017).

Berger and Luckmann, on whose ideas, as mentioned, I relied heavily in this chapter, were Schutz’s students and took the idea of provinces and the multiplicity of realities and used it in the context of symbolic universes, an expression that refers more closely to culture and society (Hammersley, 2019). Through this lens, I have presented the multiplicity of interpretations for parts of the existing social stock of knowledge in complex societies.

Combined with Schutz’s idea, a symbolic universe or symbolic world is a world of consciousness that contains symbolic systems as part of the components of culture, and the consciousness of the individual can range between different spheres of reality. That is, the individual is aware that the world is made up of multiple realities, and his consciousness is always directed and focused on something, no matter if it belongs to the physical world or to his subjective, inner reality. These different focal points of

consciousness include dream, memory, imagination, and of course something or someone in contemporary physical reality. When consciousness shifts its focus, it means that there is a transition between realities; such a transition involves a certain kind of shock that results from directing the attention of consciousness between reality and reality, like awakening from a dream.

Above all the symbolic sub-realities, there is the central reality, and this is the reality of everyday life. In this reality, the conscious attention is intense, urgent; the individual is most fully concentrated on it, in comparison with all the other sub-universes. In the central world, in everyday reality, the existence of consciousness cannot be ignored or denied, and it appears in its entirety (Berger & Luckmann, 1991).

Now these ideas are gaining validity and meaning and can be implemented in the online world. Schutz used to use the pattern of dream and fantasy while time does not stop. That is, when a person goes to sleep and enters a dream - a different sub-world, different from the everyday reality - external time continues to progress and exist in parallel, although he is oblivious to its passage. This can also happen, for example, when the person is playing or immersed in an interesting book (Ayaß, 2017), or as is currently the case with smartphone use.

When using a smartphone, with its various applications and games, surfing the Internet, interacting online with other people in a personal or wide social circle, writing, conducting a voice conversation, reading news, or any other occupation on the device, the individual turns his consciousness to the online world. The level of attention and presence in the real world, in the reality of everyday life, declines, and all of this happens while cosmic time continues to advance. As in any transition between the sub-world and the central world, in the case of smartphone use the transition from the online reality to the reality of everyday life takes place with a shock, awakening the user from one sub-universe and returning his consciousness completely and fully to the central reality of the everyday life. Schutz exemplified this with the shock of waking up from a dream or when the theater screen goes down and the viewers disconnect from the world of everyday reality, the central universe, and enter another world with other laws and norms (Berger & Luckmann, 1991).

Moreover, on a smartphone the transitions can be even more multiple, since it allows for the simultaneous and parallel existence of additional sub-worlds, and the individual can move in his consciousness from one sub-universe to another. For

example, the user can switch between a conversation on a social network and watching a video or reading the news, or switch from game to game, or to various notification updates, such as a new picture having been uploaded on one of the social networks, and so on.

Similar to Schutz's characterization, in this case too, the individual is physically present in the central reality of daily life, but his consciousness is in another symbolic universe with different values, norms, and roles that he learns and addresses through social interactions with the many different partners and social agents. The bounce from one time to the other can sometimes occur very quickly and automatically, and uncontrollably.

Therefore, the symbolic multiplicity of the universe, the sub-worlds, may increase and intensify the possibility of unsuccessful socialization that is fraught with unevenness (Berger & Luckmann, 1991). The resulting existence of sub-worlds, of alternative socialization and alternatives to reality, can be perceived as positive when they help to build the forms of socialization, but negative when expressed in addiction and offering the possibility of replacing the real world with the virtual world (Kuzmina & Galaktionova, 2019). These are structural features that exist on the Internet, and are the case today for smartphones, and promote interactivity, and to some extent define alternative realities (Griffiths, 1996). I will deal with this issue and more in the next chapter, where I turn to smartphone addiction.

4. Smartphone Addiction

The definition of addiction has always been a controversial issue and subject to debate (Griffiths, 2005). Traditionally, when talking about and dealing with addiction, the reference is to addiction that involves taking drugs. Over time, however, additional interpretations and definitions have been added that point to a number of behaviors as potential addictions, behaviors that do not involve taking drugs. These include gambling, overeating, sex, exercise, playing video games, shopping, using the Internet, work, even love (Chamberlain, Lochner, Stein, Goudriaan, van Holst, Zohar, & Grant, 2016; Atroszko, 2012; Griffiths, 2005), and of course the use of smartphones (Thompson, 2017).

In this chapter, I will discuss and diagnose in depth the phenomenon of smartphone addiction. I will examine whether the increasing use of smartphones can be considered an addiction. What has drug addiction got to do with it? What brain processes are involved? And how does this addiction affect youth and their specific age characteristics?

The expansion of the definition and the other perspectives reflect the existing question about the term “addiction,” since the word has different uses in academia at the clinical, social, and cultural level compared to everyday use; the term addiction is widely used in the population and can have different interpretations. It has many implications for several groups in the population, such as the addicts themselves, their families, researchers, policymakers, and so on (Griffiths, 2005). As part of the changes, and as part of the characteristics of Western and postmodern culture for which, as I have discussed in previous chapters, there is no one truth and science is no longer the sole and absolute authority to decide what is right and wrong, experts and physicians are in some sort of debate. When many currents arise that present an alternative to medicine and its definitions (Gusacov, 2016; Hardy & Palmer, 1999; Kuzmina & Galaktionova, 2019), the popular use of the term “addiction” becomes misleading. In today’s culture, and in recent years in general, there is a tendency to give labels or medical terms to non-medical symptoms (Thompson, 2017), and sometimes even to exaggerate in reference to them (Conrad, 1992). For example, a depressed or slightly sad person may say to his friend, “I am depressed,” when depression is a very serious illness that people die from, or if a person is very organized and loves everything to be in order, his friends can tease him and say “he is so OCD,” which is actually a severe

anxiety disorder whose sufferers need medical treatment to lead a normal life. There are many more examples, like the easy use of the medical terms ADHD or PTSD, and so on.

Medicalization is a process in which a problem is defined in medical terms, a medical framework is given for understanding the problem, and medical language is used to describe it. During the 1970s, the term medicalization was used as a concept for acquiring a clearer understanding of problems that become medical. But the term was also often used in the context of criticism of medicine, when in fact, thanks to the accessibility of information, an opening was created for social examination and control, and over time researchers and others argued that there was overmedicalization, that is, exaggeration in medicalization. (Conrad, 1992). Thus, behaviors, activities, and personal or social problems that were not previously related to health and medicine can be distinguished from a medical point of view and considered parallel to disease. Therefore, many of the social phenomena that interfere with many people in society receive medical terms and require physicians and researchers to deal with them and try to examine and test whether the phenomena meet the relevant criteria for the disorder. Smartphone addiction is such a behavior when it is widely used, and many consider the use of a smartphone to be a potential for abuse leading to addiction (Thompson, 2017).

The definition of addiction according to the Oxford English Dictionary is “the condition of being unable to stop using or doing something as a habit, especially something harmful” (Oxford English Dictionary, 2019). This dictionary definition is important, but short and somewhat general. In order to diagnose whether a person suffers from an addiction problem or not, there are criteria that are measured and examined by doctors who have been trained to do so (Thompson, 2017). These rely on the two international diagnostic systems of mental disorders: the leader is the DSM-5 of the American Psychiatric Association, and after that is the International Classification of Diseases (ICD-11) of the WHO (Mann, Kiefer & Schellekens, 2017; Harris, Regan, Schueler & Fields, 2020). The DSM-5 defines and treats addiction, first and foremost in its traditional form, as drug addiction, as a complex condition: a brain disease that is manifested by compulsive substance use despite harmful consequences (American Psychiatric Association, 2020; American Psychiatric Association, 2013), and call it “Substance-Related and Addictive Disorders.” This covers ten separate classes of drugs, such as stimulants, hallucinogens, and sedatives, as well as types of

substance such as alcohol, caffeine, marijuana, heroin, and other substances that may not even be known yet. Common to all the substances taken in excess is that they act directly on the brain reward system, and are involved in reinforcing behavior and producing memories. They produce such an intense activation of the reward system that ordinary operations may be neglected. And instead of achieving a reward-system activation through adaptive behaviors, the abused drugs directly activate the reward pathways, and these can produce feelings of pleasure and hedonia.

When professionals approach the diagnosis, an individual look is needed, depending on the patient's condition. In order to do this, there is a cluster of cognitive, behavioral, and physiological symptoms that drive a person's continued use of the substance despite significant problems associated with its use. The diagnosis is based on a pathological pattern of behaviors related to substance use, and is organized into diagnostic criteria that comprise eleven criteria divided into four groups:

1. Impaired control in the use of substances; the person can take the substance in larger quantities or over a longer period than was originally intended. This can be reflected in:
 - a. Willingness to regulate, minimize, or reduce use, but without success
 - b. Devoting much time to obtaining or using the substance, or in recovering from the effects of the substance
 - c. In more severe cases, substance salience, that is, daily activities are centered around the substance
 - d. Craving or a strong urge for drugs can appear at any given moment
2. Social impairment refers to failures in fulfilling the duties of main social roles such as at work, school or in the family, which are caused due to the use of the substance. This can be reflected in:
 - a. Using despite social or interpersonal problems caused or exacerbated by the effects of the substance
 - b. Avoidance of or reduction in occupational, social, and leisure activities due to use
 - c. Retreat from family activities and hobbies in order to use the substance
3. Risky use, that is, the use of the substance in situations that are physically dangerous. Reflected in:

- a. Use of the substance despite the knowledge and understanding that the use can cause a physical or psychological problem
 - b. Failure to avoid use despite the difficulties it causes
4. And the pharmacological criteria, which are:
- a. Tolerance - the need for an increasing dose in order to achieve the desired effect, or less effect at the usual dose (this criterion varies greatly between different people)
 - b. Withdrawal - Symptoms that appear when there is a decrease in the concentration of the substance in the body in a person who is kept from using the substance

The Substance-Related and Addictive Disorders occur in a wide range of severity, which can be divided and classified according to a number of symptom criteria that appear. A mild level will contain two to three symptomatic criteria, a moderate, four to five, and a severe level disorder will contain six symptomatic criteria or more. In addition, there is also significance to the time and duration of use and recovery from substance use (American Psychiatric Association, 2013).

As mentioned, over time and as part of the scientific and social interest, the concept of addiction began to refer, beyond the use of substances, also to a group of syndromes known as “behavioral addictions” or “no-drug addictions” (Pinna, Dell’Osso, Di Nicola, Janiri, Altamura, Carpiniello, & Hollander, 2015). Thus, in DSM-5, the behavioral disorders are classified together as addictive behaviors (BA), even though only two behaviors have received an independent diagnosis of their own: Gambling Disorder and Internet Gaming Disorder. It is important to note that the latest version of the DSM, released in May 2013, discusses some of these addictive behaviors, such as sex addiction, compulsive buying, exercise addiction, love addiction, work addiction, and technology addiction, which includes smartphone use (Pinna et al., 2015). But at the time, the study was less clear and did not gather enough evidence to establish diagnostic criteria for identifying these behaviors as mental disorders (American Psychiatric Association, 2013).

The ICD, released in June 2018 in its eleventh version, already addresses and defines, together, substance disorders and behavioral addiction: “Disorders due to substance use and addictive behaviours are mental and behavioural disorders that develop as a result of the use of predominantly psychoactive substances, including

medications, or specific repetitive rewarding and reinforcing behaviours” (World Health Organization [WHO], 2018). If so, the reference to addiction can cover both substances and behaviors, with some behaviors sharing the core components that characterize substance addiction. And if they do not share these ingredients, then they cannot be treated as an addiction (Griffiths, 2017; Mann, Kiefer & Schellekens, 2017).

Initially, many books and articles described a variety of addictive behaviors, with reference to the potential for addiction being based on compulsive, excessive, impulsive, uncontrolled, and indulgent traits. Subsequently, a definition was given that became prevalent and agreed upon by most books and articles on behavioral addiction. This is the definition of Marlatt et al. (1988), who defined it as:

A repetitive habit pattern that increases the risk of disease and/or associated personal and social problems. Addictive behaviors are often experienced subjectively as “loss of control”; the behavior continues to occur despite volitional attempts to abstain or moderate use. These habit patterns are typically characterized by immediate gratification (short-term reward), often coupled with delayed, deleterious effects (long-term costs). Attempts to change an addictive behavior (via treatment or by self-initiation) are typically marked by high relapse rates (Marlatt, 1988).

This in-depth definition indicates many significant components that influenced the medicalization of addiction. Together with this definition and the combination of clinical criteria for the diagnosis of substance abuse, several types of behaviors can be found that contain signs of addiction, that is, signs that can indicate behavioral addiction, non-chemical addiction, as characterized by Griffiths, which I mentioned in the Introduction. According to Griffiths, in order for behavioral addiction to be considered, six core components must be present:

1. **Saliency** - This is when the particular behavior becomes the most important activity in the individual’s life and is dominant in his thoughts, feelings (like a sense of craving), and his behavior.
2. **Mood modification** - the individual subjectively reports feelings as a result of engaging in the activity, for example experiences of highs or a buzz, or soothing of feelings of conflict and/or disturbing feelings, of escape or numbing.
3. **Tolerance** - this is an increase in the specific amount of engagement in the behavior in order to achieve the expected effect and the previous effects.

4. Symptoms of withdrawal - these are conscious and/or physical, unpleasant feelings that appear when the specific behavior does not appear or subsides. These symptoms can include tremors or sadness, and more.
5. Conflict - refers to conflicts between the addict, his environment, and those around him, as well as his internal conflicts, when the conflicts relate to the specific behavior.
6. Relapse - This is the tendency to return to the previous patterns of the specific behavior, and it can happen after a period of years of control of the specific behavior (Griffiths, 1996, 2000, 2005; Chamberlain et al., 2016).

Behavioral addictions can have negative health consequences that can manifest, among others, in the onset of sleep disorders, weight gain, somatic-functional symptoms, and even suicidal behaviors. The connection between addictions to substances and behavioral addictions is necessary, since there are similar characteristics and symptoms between different types of addiction, as well as in the biological and brain effects exerted in parts of the learning and reward processes (Pinna et al., 2015; Alter, 2017).

Addictive and rewarding actions involve many neurotransmitters that communicate with each other in different ways in response to different addictive substances (Dayan, 2009). The main ones are the neurotransmitters serotonin, norepinephrine, and dopamine. In most studies in the field of addiction, it has been found that the biggest, most recognized change is in the neurotransmitter dopamine (DA) and its receptors (Chamberlain et al., 2016; Chiara & Bassareo, 2006; Dayan, 2009; Adiele & Olatokun, 2014). DA originating in the Substantia Nigra (SN) and the Ventral Tegmental Area (VTA), is involved in and affects a variety of brain structures, such as the striatum, nucleus accumbens, amygdala, and hippocampus, as well as moving to areas in the prefrontal cortex. These create complex processes and circuits, loops, and neural networks that are essential to many motor, cognitive, and motivational processes. Dopamine activity is shown for responses that last for different periods of time; with the release and activation of DA, changes can be short-term, rapid, lasting seconds, or long-term and slow, lasting minutes to hours, being released slowly (Hauber, 2010). Dopamine does not directly affect intracellular conductivity, but rather it accompanies the processes and aids in the ability to elicit a response. In addition, dopamine, like many other neurotransmitters, acts through receptors located on the

target cell in the central nervous system, and upon release is dispersed in the extracellular fluid (in the synaptic space), from which it is slowly cleared as part of reuptake and metabolic processes (Chiara & Bassareo, 2006). For example, there are receptors for DA on the nucleus accumbens, and once DA activates them, there are emotional effects and behaviors, such as motivation (Ikemoto, 2007).

DA systems also play many other and central roles in decision making, motor output, sensorimotor activity, and performance control; they are involved in learning processes, behavior reinforcement, attention, and concentration (Berridge & Robinson, 1998; Koepf, Gunn, Lawrence, Cunningham, Dagher, & Jones, 1998; Montague, Hyman, & Cohen, 2004). They are also involved in and support many behaviors and behavior patterns, such as stimulating response and motivation for actions that involve different types of learning and reward (Chiara & Bassareo, 2006).

The great significance of DA is also reflected in its involvement in various diseases and mental disorders; for example, there is a link between a dramatic decrease in the amount of dopamine in the brain and Parkinson's disease (Giladi, 2004; Ayano, 2016; Cousins, Butts, & Young, 2009). DA deficiency can lead to decreased mood, decreased attention and concentration, and is found to be associated with major depression, ADHD, and other conditions. Also, excessive arousal and excess in DA can lead to hallucinations and bizarre sensory experiences and is involved in diseases including manic depression and schizophrenia (Montague, Hyman, & Cohen, 2004; Jentsch, Roth, & Taylor, 2000; Ayano, 2016; Stein, 2008; Cousins, Butts, & Young, 2009).

I have highlighted the involvement of dopamine in rewards and reinforcements in the Introduction, and this chapter is the place to expand and delve deeper into the subject. "Reward" is usually defined as a class of unconditional motivational stimulus which provides feelings of pleasure and hedonic sensations that can be used as positive reinforcers; that is, the stimulus will cause an increase in the frequency of response behavior (Chiara & Bassareo, 2006; Berridge & Robinson, 1998).

Motivation regions and brain reward regions, including the dopaminergic neurons in the brain, are linked to the striatum and the limbic regions, and these, as mentioned, radiate to the nucleus accumbens, the amygdala, the hippocampus, and some areas of the anterior cortex (Volkow, Wang, Fowler, Tomasi, & Telang, 2011; Russo, Dietz, Dumitriu, Morrison, Malenka, & Nestler, 2010). Behavior control is

related to the evaluation of resources and possibilities, with DA being the means to define rewards, goals, or desires that the person should seek, and these nerve cells play a key role in guiding the person's behavior and thoughts (Montague, Hyman, & Cohen, 2004). For example, the dopamine that passes through the striatum is involved in and supports the same diverse psychological functions of emotion formation, reward-related processes, decision-making, and performance functions (Pauli, O'Reilly, Yarkoni, & Wager, 2016). The striatum is also important in connections and cost-benefit analysis of the value of potential rewards against the positive and negative potential consequences of the pursuit of reward, a significant function for dependence and addiction which I will discuss later. The nucleus accumbens, which has been the subject of many research articles, is also part of a broad network that promotes access to potential sources of rewards, and is involved with positively reinforcing stimuli once they are absorbed by the senses. The nucleus accumbens is central to and takes part in helping and influencing the processes of motivation and access to actions and behavior. For example, when the nuclear volume is small, there may be structural limitations in the ability to weigh the reward against the risk, that is, the potential reward values versus the possible, pleasant, and deterrent consequences (Urošević, Collins, Muetzel, Schissel, Lim, & Luciana, 2015).

There are several approaches to explaining the different functions of dopamine in the reward systems of the brain. For example, some see dopamine systems as mediating learning or predicting reward, and some see dopamine systems as involved in and mediating enjoyment and the hedonic aspect of reinforcements (Berridge & Robinson, 1998; Ikemoto, 2007). It is commonly thought and can be said that it is traditional to think that dopamine, through direct or indirect stimulation of these systems, is responsible for and causes pleasure and hedonia (Salamone & Correa, 2012). Moreover, dopamine has been known for years as “the neurotransmitter responsible for pleasure” and is considered the mediator for pleasure. One reason for this is that dopamine neurons are triggered by pleasurable stimuli, ranging from foods, sex, and drugs to social and cognitive feedback. In animal experiments, when dopamine was blocked, it was observed that all stimuli leading to reward lost their rewarding properties and became “undesirable,” which further led to the test subjects' realization that they were no longer “liked” (Peciña, Smith & Berridge, 2006; Smith, Mahler, Peciña, & Berridge, 2010). Other approaches and studies have argued that the release

of dopamine in the shell of the nucleus accumbens is not the cause but the effect of reward, followed by habituation and return to balance (homeostasis), leading to a decrease in dopamine as a product of learning. For example, in the case of rewarding food, a person eats food that is tasty for him; a lot of dopamine is released leading to a feeling of pleasure; then habituation occurs, and accordingly, a decrease in dopamine release (and its cleansing from the synaptic space), so that the person no longer feels the same pleasure as he did from the first bite (Chiara & Bassareo, 2006).

These traditional approaches are giving way to a newer approach that sees dopamine as responsible for motivation in reward processes (Salamone & Correa, 2012). Since the 1990s, a different trend and approach has arisen, discussing the lack of dopamine mediation for pleasure, which in the following decade has led to many studies in the field that crystallized and supported this different approach and theory (Berridge & Robinson, 2016). The prevailing incentive salience hypothesis sees the reward process as consisting of two separate brain systems that mediate “wanting” and “liking” (Berridge & Robinson, 1998). The opioid system is necessary for “liking” (Weinschenk, 2012), and the dopamine system is necessary for the incentive of the “wanting,” and, it is important to emphasize, not of the “liking.” That is, dopamine mediates and is responsible for desire and motivation, the desire to seek and want, but not for pleasure, not for “liking.”

Ordinary wanting is a cognitive desire with a declarative goal. Nonetheless, the hypothesis refers to the “wanting” that is less related to cognitive goals and more related to reward cues, making the cues attention grabbing and attractive. And so, the cues manage, at the same time, to stimulate impulses and to provide motivation to achieve the reward (Berridge & Robinson, 2016). If so, the aforementioned neurotransmitter, DA, contributes to and assists in many processes and behaviors, and in particular plays a critical role in mediating the reward values of food, drink, sex, social reinforcers, drug abuse, and more (Salamone, Correa, Mingote, & Weber, 2003; Berridge & Robinson, 1998). Without the dopamine that leads a person to want, the person will not experience pleasure because he has no motivation and desire to achieve pleasure (Berridge & Robinson, 1998). That is, the effect of dopamine on pleasure is indirect. Numerous studies in the field have shown support and grounding for this approach. These include studies dealing with food and overeating, the motivation and incentive to appetite, and the deriving of pleasure from eating (Hardman, Herbert, Brunstrom, Munafò, & Rogers,

2012; Peciña, Smith, & Berridge, 2006). Studies have shown that dopamine is secreted at its peak before stimulation, before food itself, before pleasure, along with neural activity in the VTA, which is also at its peak before food and less present when food is in the mouth (Berridge & Robinson, 1998). In FMRI function tests, stimulation of dopaminergic regions in response to glucose was observed, and those regions did not respond when glucose was delivered and obtained.

Additional supportive studies have also been done on nicotine smoking, various drug use, odors, and more (Salamone & Correa, 2012). For example, in the use of drugs such as amphetamines, cocaine, and heroin, it has been found that the dopamine system works harder before drug use, when the animal or human “wants” the drug (Berridge & Robinson, 1998). People taking stimulant medications and drugs that cause the release of an increased amount of dopamine show an increase in the desire for the drug and not an increase in mood (Leyton, Casey, Delaney, Kolivakis, & Benkelfat, 2005). Therefore, dopamine is stronger when the user wants the drug and less salient when he is already taking, obtaining, and “loving” it (Berridge & Robinson, 1998).

Going the opposite way, dopamine depletion in laboratory studies, especially in mice, has demonstrated an effect on the decline in motivation for behavior, food search, overcoming obstacles, and dealing with stressors (Salamone et al., 2003). Blocking of dopamine led to a reduction in the willingness to make an effort to achieve behavior that would lead to drug use but did not reduce the behavior when the drug was available. That is, the impulse and motivation to search for the drug decreased, but the actual use and enjoyment of it did not change due to the lack of dopamine (Leyton et al., 2005). Even in cigarette smoking, results showed that dopamine depletion did not result in a decrease in enjoyment of the hedonic responses achieved (Salamone & Correa, 2012). In addition, suppression of dopamine function, under laboratory conditions, did not alter the ability of rats to make assessments of pleasure and hedonia, as in response to food taste. Dopamine suppression did not lead to a lack of learning of new pleasure relationships between conditioned and unconditioned stimulation, or, in other words, there was learning of what causes pleasure by classical conditioning,¹ which managed

¹ See the extensive literature on classical conditioning, also called pavlovian learning or associative learning, a term named after the Russian physiologist Ivan Petrovich Pavlov (1849-1936), a process in which a neutral (conditioned) stimulus that did not elicit a particular response in the past was attached to an unconditioned (natural) stimulus. This elicits an unconditioned (natural) response, and after several repetitions of their appearance in proximity, an associative relationship was created between the conditioned stimulus and the unconditioned stimulus, which provoked the unconditioned response itself,

to occur even without the presence of dopamine. The large-scale blocking of the dopamine pathways in animals has led to their disregard of food and many other rewards, to the point that they will not go out to eat and even reach death. They will eat artificially, motor functions continue to work as usual, but they will not aim for or seek to obtain food, even if it is available and not difficult to obtain (Berridge & Robinson, 1998).

In studies done on Parkinson's patients and in reports of people using drugs such as cocaine, amphetamines, etc., it was found that reactions and feelings of "liking" were not harmed, and that a decrease or increase in dopamine did not change the feeling of pleasure. If so, it seems that dopamine is indeed not directly necessary for the creation of normal pleasure and is not sufficient to enhance pleasure (Smith et al., 2010).

The second system, according to the incentive salience approach, is the opioid system. This is the system that is responsible for the pleasure, the hedonia, the "liking" (Berridge & Robinson, 2016; Weinschenk, 2012). This system includes a collection of interactive hedonic hotspots, common to feelings of pleasure and enjoyment of food, drugs, cultural and social pleasures, and more (Berridge & Robinson, 2016). "Hotspot" refers to a brain site where the pleasure mechanisms are sufficiently centralized together in one anatomical location to cause pleasure enhancement during neural activation, and as part of larger brain circuits and processes. For example, suppression of those hotspots lowers and does not even allow for feelings of hedonia and pleasure.

The hotspots are located in areas of the anterior limbic cortex and the nucleus accumbens (in the nuclear shell and the core); another spot is in the ventral pallidum (VP), and in the brainstem parabrachial nucleus. Nerve activation of these systems occurs through the interaction of various systems and neurotransmitters such as GABA, benzodiazepine systems, opioids in the brainstem, and ventral pallidal systems in the cerebral cortex, which form a limbic loop that presents a sequence of neurological processes, for a feeling of pleasure and hedonia (Peciña et al., 2006; Smith et al., 2010).

The hotspots are very small spots anatomically and very limited in neurochemical terms, which are easily disrupted. For example, it has been found that the hotspots responsible for pleasure (hedonic hotspots) exist in only about 10% of the

which after learning would be considered, according to Pavlov, a conditioned (unnatural) response (Nathan & Scobell, 2012; Miller, 1989 Zhang, Lu, Bi & Hu, 2019;).

area of the nucleus accumbens. This leaves 90% of the nucleus that lacks any ability to give or enhance pleasure, but yet, the desire, the “wanting,” is experienced. This may be why intense pleasures happen relatively little and rarely in life, compared to intense passions (Berridge & Robinson, 2016). Furthermore, as a result of the dopamine system being stronger than the opioid system, which means that the “wanting” is stronger than the “liking,” the desire for reward is stronger and greater than the reward itself (Weinschenk, 2012; Berridge & Robinson, 1998).

Although the dopamine and opioid systems are separate and operate on different neural bases, they appear together, complement each other, interact, and form part of the great and complex process of reward in human behaviors in general, and, of course, influence and play a major part in addiction. In the whole reward process, in order for a new incentive to become a genuine reward, actions or stimuli that cause a sense of pleasure lead to associative learning of the connections and correlation between natural events or the conditioned stimulus that preceded it. And the consequence is pleasure. Thus, in effect, an active hedonic activation occurs, or in other words, reward learning and the ability to predict future rewarding events is created, based on the same associative links. It is important to note that, to the same extent, learning can occur in the context of disgust or unpleasant feelings, leading to avoidance and distancing from the stimulus in the future.

Now, after the mind has made a neutral and meaningless representation for the object of desire to be interesting, wanted, attractive, attention grabbing, and for the rewarding process to be whole and complete, the desire and motivation to reach and achieve these events or what they represent is created (Berridge & Robinson, 1998). Therefore, when it comes to addiction, it does not seem to be necessarily related to satisfaction, pleasure, need, or withdrawal, as it is related to desire, to wanting. And what mainly causes addiction is actually the wanting and not the liking. Thus, addiction can also be behavioral and does not require the use of substances (Berridge & Robinson, 2016). For, in behavioral addiction, it is not a substance that is addictive but the behavior itself, which is perceived as natural. The behavior is what is rewarding; that is, it gives a sense of pleasure and makes a person want to do it again and again. And in the context of addiction, there is compulsion involved in wanting and seeking the reward, despite the negative consequences. In addition, and unlike with some of the addictive substances, which act directly and quickly on the reward system in the brain,

addictive behavior activates the reward systems gradually and over time (Montag & Reuter, 2017).

In order to understand the subject of addiction and the connection between types of addiction in more depth, it is necessary to be aware of and clarify a significant and critical characteristic of the brain, which is the brain's ability to be flexible, a feature called "brain plasticity." In the past, the brain was perceived as a static organ, but over time and with the advancement of medicine and technology, it has become clear that the organization of brain circuits is constantly changing as a function of experience, depending on the actions and behaviors of the person. Plasticity is associated, among other things, with changes and functions that include memory, learning, rehabilitation, addiction, and functioning. Plasticity is also greatly influenced by factors such as experiences before birth, after birth, learning, medications, drugs, hormones, puberty, aging, nutrition, disease, and stress. Changes in the brain affect behavior, and, vice versa, behavioral changes effect changes in the brain. For example, when a person learns to play a musical instrument, changes occur in the cells of the nervous system, and reorganization takes place. And if for some reason the changes do not happen, then learning will not occur. This knowledge is important for understanding normal and abnormal behaviors, as well as for designing treatments for psychological, neurological, and diverse behaviors and disorders, dependencies and addictions relevant here, including stroke and other neurological problems² (Kolb, Gibb, & Robinson, 2003). The feature of plasticity is significant in addiction of any kind, and is necessary in learning processes in general, and in particular in associative learning processes and the creation of strong memories, which affect those brain areas that process reinforcement and reward (Kauer & Malenka, 2007).

Before I discuss some behavioral addictions, and go into depth on smartphone addiction, I will deal a little bit more with the important comparison to drug addiction, since there are common clinical characteristics and components that overlap between addictions, and since the medical and public reference to substance addiction is firm and undisputed. Placing these side by side and presenting the connections and similarities can help strengthen the understanding of the vocabulary around behavioral

² For a visual understanding, I recommend watching the moving story of Jody Miller, who underwent surgery to remove an entire brain hemisphere, and thanks to the plasticity feature, has amazingly recovered. Jody Miller: the miracle story of "The Phenomenon of Neuroplasticity": <https://www.youtube.com/watch?v=rDTiZpPyqRk&t=239s>

addictions, including smartphone addiction, which occupy research volumes and are increasingly part of the public discourse.

The effects of drug abuse are diverse and can vary depending on the type of drug, and on the individual, who consumes them. At the same time, dopamine systems are involved and mediate for all the rewarding effects of drug abuse. The psychological, motor, and sensory changes that occur with drug use are mainly due to brain processes in which there is an increase, usually rapid, in the presence of various neurotransmitters, such as serotonin, norepinephrine, and dopamine, in the synaptic space of neurons in many areas of the central nervous system. For example, there is an increase in dopamine in the nucleus accumbens (Koob, 1992; Volkow et al., 2011; Ikemoto, 2007). As mentioned, the dopaminergic systems create arousal in anticipation of something- a stimulus, food, a sexual encounter, and also in anticipation of drugs. And when dopamine is blocked, expectations associated with reward delivery decline (Koob, 1992). In addition, drug addicts exhibit a poor presence of dopamine receptors in frontal brain regions involved in long-term addiction. These areas play a role in emotional control and decision-making functions, which influence and contribute to compulsion and loss of control in addiction, since the impairment is in biological-brain mechanisms, which are supposed to help control and promote the decision not to consume harmful substances or indulge in harmful behaviors (Volkow et al., 2011).

These processes of learning through reward work very hard in substance addictions. They are so strong that, despite knowing and understanding the negative and detrimental consequences of use, the addict is unable to stop and continues the behavior. Furthermore, even without the presence of the substance for a long period, for example in a rehab process, at the moment of re-exposure to the substance or a cue related to the substance, relapse can occur, i.e., reuse after a period without the substance (Montague, Hyman, & Cohen, 2004). The cues to the substance, to the object of addiction, are numerous and can be almost anything, from a picture of the substance, a video of a person using, odors, an experience associated with the substance, and so on. Therefore, the significant trigger, and the most difficult part for the addict, is neither the drug nor the associated pleasure; it is the cues, which secrete a lot of dopamine and cause “want.” This is one of the reasons that addicts remain vulnerable to the ongoing risk of relapse even after a significant period of avoidance of the object of addiction (Berridge & Robinson, 2016).

These characteristics of the functions of reward, learning, and plasticity change in substance addicts are present and affected in a similar and often identical manner in behavioral addictions. There are similar abnormalities in dopamine systems to those widely reported among people with drug use disorders (involving, for example, cocaine, marijuana, or alcohol), such as decreases in dopamine receptors and their release. Also, studies show that similar changes and anomalies can similarly affect patterns of behavioral addictions that do not involve chemical substances (Kim, Baik, Park, Kim, Choi, & Kim, 2011). An example is gambling addiction, pathological gambling, which, as mentioned, appears as an independent disorder in DSM-5. This addiction is associated with increased impulsivity and the same disturbances of the dopamine systems as in drug use (neurotransmitters and receptors) in activity, sensory, psychological and cognitive perceptions, and the increased and intense release of dopamine in anticipation of reward (American Psychiatric Association, 2013; Clark, Stokes, Wu, Michalczuk, Benecke, Watson, Egerton, Piccini, Nutt, Bowden-Jones, & Lingford-Hughes, 2012; Montague, Hyman, & Cohen, 2004; Kim et al., 2011; Chamberlain et al., 2016). Other important components in gambling addiction, which are later relevant in smartphone addiction as well, are uncertainty and loss of impulse control. Uncertainty refers to the inability to know when the reward for performing the behavior (the bet) is expected to arrive; it is considered a partial reinforcement and itself has strengthening and rewarding qualities. Uncertainty and expectation cause secretion of high levels of dopamine and strengthen reinforcement for the further behavior and addiction (Fiorillo, Tobler, & Schultz, 2003). In addition, the loss of control over the urge to perform the behavior, characteristic of behavioral addiction in general, is very prominent in pathological gambling and incorporates many negative functional consequences in many areas of the addict's life (Starcevic & Khazaal, 2017). The gambling, which is the uncontrollable repetitive act, is characterized by the potential to harm the interests of the gambler himself and the people around him (World Health Organization [WHO], 2018).

Gambling addiction is non-controversially a behavioral addiction, as is Internet gaming addiction, which I will discuss later (Starcevic & Khazaal, 2017; American Psychiatric Association, 2013). Additionally, there are other behaviors characterized by compulsion, lack of control, and obsession, which, although not independently identified in the diagnostic guides, do receive widespread public and academic attention

and reference as important addictions with negative consequences for the individual and the environment. The main ones include exercise addiction, a behavior that is characterized by excessive and compulsive exercise. This addiction is complex and controversial, whether it is a primary or secondary addiction for other purposes and disorders, such as eating disorders, anxiety, and depression. Another controversial addiction is hypersexual disorder or sex addiction, in which there is no agreement on whether it is a real addiction or an impulse disorder. It is mainly characterized by a disturbance in the sexual urge that is out of control, outweighing the consequences and damages that may be caused. It can manifest itself, for example, in problematic online and offline sexual behavior, or in sexual crime. Another behavioral addiction that receives research and sociological attention is compulsive buying, or shopping addiction, an addiction that refers to irresponsibility and an overwhelming urge to buy products that are not normally needed. Within the disorder, there is no sense or insight that excessive shopping has detrimental consequences that results in discontinuing further shopping (Starcevic & Khazaal, 2017). I have dealt a little with this addiction in the Introduction as one that is relevant and occupies a place in the social discourse in our consumerist society where the consumer buys all the time, anytime, and anywhere. This is buying behavior that becomes obsessive, is no longer just for the sake of buying the product, but also for the relentless search for the better, for happiness, and for the satisfaction of desire and hunger (Bauman, 2000).

These behavioral addictions, unlike smartphone addiction, are not technology based. In the case of smartphone addiction, the frame of reference should be technology addictions, that is, technology-based addictions, which share common diagnostic components and criteria. These include Internet gaming addiction and Internet addiction, a phenomenon that is also controversial but has been extensively researched for a long time. The similar frame of reference is mainly due to the fact that many of the applications and options offered in smartphones are web based, and without an Internet connection, the functional value of the smartphone decreases (Duke & Montag, 2017).

Technology addiction is defined as a behavioral, non-chemical addiction that includes the involvement and interaction of the person and the machine. This addiction is a subset of behavioral addiction that includes the six core components of behavioral addiction (Griffiths, 1996; see above). In technology addiction, the person can be

passive, as in watching TV, or they can be active, as in playing computer games. For the most part, technology can contain encouraging and empowering traits, which may contribute to promoting addictive tendencies (Pinna et al., 2015; Griffiths, 1996). For example, studies show that playing online games causes an increased release of dopamine during the game, and there is a difference between the release for a viewer of the game, compared to (increased) release in those who actively play themselves, especially in games that provide reward as part of the rules of the game (Kim et al., 2011). In addition, online games, especially those with multiple participants, can satisfy needs such as belonging, love, appreciation, and self-fulfillment at a higher level than offline games and television viewing (Montag & Reuter, 2017).

The DSM-5 defines Internet gaming addiction as a constant and repeated use of the Internet to engage in gaming, often with other players, leading to significant clinical harm or distress. The book provides nine criteria, and the subject must meet five or more of them over a twelve-month period. The criteria include:

1. Engaging in web games, where the person thinks about a previous game activity or expects to play the next game. Internet gaming is becoming the dominant activity in their daily life (the book qualifies that this disorder is different from online gambling, which is included under gambling disorder).
2. Exhibiting withdrawal symptoms when online games are taken away. Symptoms include irritability, anxiety, or sadness, but no physical signs of pharmacological withdrawal.
3. Tolerance - refers to the need to invest large and increasing amounts of time to engage in games.
4. Unsuccessful attempts to control game participation.
5. Loss of other pre-gaming interests, such as hobbies and recreation.
6. Continued excessive use despite the knowledge that it causes psychological problems.
7. Misleading family members, caregivers, or others regarding the amount of activity.
8. Use of web games to escape or ease a negative mood, such as feelings of helplessness, guilt, or anxiety.
9. Jeopardy or loss of significant relationships, job or educational opportunity, or career due to participating in web games (American Psychiatric Association, 2013; World Health Organization [WHO], 2018).

In this addiction, many basic similarities to substance addictions can be seen, in terms of tolerance, withdrawal, relapse, unsuccessful attempts to curtail or stop activity, and impairment of normal functioning. Internet gaming addiction is characterized by advanced loss of control, and people with this disorder continue to sit at the computer and engage in game activities while neglecting other activities. The book details eight to ten hours or more per day, and at least thirty hours per week, of online play activities, durations that can lead to long periods without food or sleep (American Psychiatric Association, 2013). This addiction has negative consequences, whose manifestations include but are not limited to: failure at school, loss of work, and breakdown of marriage. Compulsive play behavior tends to cancel out normal social, academic, and family activities (American Psychiatric Association, 2013; World Health Organization [WHO], 2018).

Excessive use of the Internet not involving network games, such as excessive use of social networks, viewing online pornography, etc., although not considered a diagnosis of addiction in the DSM-5 is often treated as such and referred to as an addiction in studies, as is smartphone addiction. In addition, experts do use the term “addiction” when a person is obsessed with a particular behavior that disrupts his daily activities and shows a pattern similar to substance dependence. This extension of the reference of addiction has also been done in the past with pathological gambling (Kwon, Kim, Cho, & Yang, 2013; Starcevic & Khazaal, 2017; Griffiths, 1996).

Technology in general, and the Internet in particular, do not addict everyone; this is a subjective situation. Besides pre-imperfection structures in the nervous system, such as low density of dopamine receptors, which can be unique in the addict (to substances and behaviors) (Kim et al., 2011), subjectivity here also stems from the difficulty in defining Internet use as an addiction and treating it as such, as excessive use can result from the comprehensive nature of the Internet and how it sustains a variety of areas of life, functions, and behaviors, such as promoting communication, work, games, social networks, shopping, and more, where the use is not necessarily addictive or pathological (Starcevic & Khazaal, 2017; Griffiths, 1996). This is also relevant in the context of smartphone addiction. Proper use of technology in general, and the Internet and smartphones in particular, has great implications and wonderful benefits. As I have discussed throughout the work, the smartphone is involved in and affects a variety of areas of life, such as personal matters, meeting communication needs

and maintaining relationships, areas of employment and productivity at work, meeting entertainment needs, games, and relieving boredom, the need to seek information and knowledge, and more (Tossell, Kortum, Shepard, Rahmati, & Zhong, 2015; Campbell, 2005; Duke & Montag, 2017; Shin, 2013; Billieux, Philippot, Schmid, Maurage, & Mol, 2014).

On the other hand, as with many technologies, improper or excessive use of a smartphone can lead to negative and damaging results and consequences, and even to addiction. At the same time, the reference to smartphone use as an addiction is complex, and there are controversies and doubts about it. Some say that the smartphone itself may not be the source of addiction, that it is merely the tool that allows access to addictive content, such as gambling, online games, etc. (Tossell et al., 2015). There is controversy over the use of the term “addiction,” which is labeled incorrect and exaggerated, and the use of softer terminology, such as “problematic smartphone use” or “problematic behavior,” is advocated (Panova & Carbonell, 2018). It is also asserted that the smartphone is more a means of satisfying an intense need for sociality, since human beings are social creatures, and perhaps the various uses actually stem from hyper-social and pro-social behaviors (Veissière & Stendel, 2018). And another suggestion arises, that it is indeed an addiction, but it may be part of the broader addiction to social networks (Kuss & Griffiths, 2017). Despite these legitimate questions and reflections, addiction and excessive reliance on the smartphone, for whatever reason, carry with them certain risks to human development and health, risks that can be emotional, physical, social, and psychological (Gupta, 2018). For high-accessibility and multiple web-based applications can lead to unique but common addictive behaviors (Montag & Reuter, 2017).

Unlike other technologies, smartphones comprise many things in one device: mobile phone, personal computer, indicator of identity and social status; they are sometimes perceived as a fashion item. Smartphones allow instant availability, in real time, and permanent Internet access and consequent access to all the appealing and problematic content of the Internet. They allow quick and easy access to the same social and media satisfactions as a computer does, the same entertainment needs, the satisfaction of information control and retrieval, the needs of self-management, coping mechanisms, and more, all in an accessible, fast, and routine way (Tossell et al., 2015; Lin et al., 2014; Rosen, 2004; Kwon et al., 2013; Bian & Leung, 2015). Also, thanks to

its mobility and ease of use, many people carry their smartphones with them on a daily basis, 24/7; it is in their hands wherever they go, in every interaction, social and interpersonal. This does not mean that the smartphone is in action all the time, but it is there, allowing for check-in and use at all times, and access to all that it offers is almost constant (Duke & Montag, 2017; Panova & Lleras, 2016).

So, while many of the smartphone apps and options are also present on the computer desktop, such as WhatsApp-Web, Facebook, and various games (Duke & Montag, 2017), thanks to the widespread and immediate availability of the smartphone, its use is preferable (Eum, Park, & Yim, 2016), and the more time users spend on the smartphone, the greater the risk of becoming addicted to it. Overuse can create a habit (Aljomaa, Qudah, Albursan, Bakhiet, & Abduljabbar, 2016).

As mentioned, the addiction to smartphones shares characteristics, criteria, and components that are also present in other addictions such as addiction to substances (Montag & Reuter, 2017), and the behavioral addictions I mentioned previously: gambling, Internet gaming, and Internet addiction (Lin et al., 2015; Duke & Montag, 2017). One of the problems in establishing the evidence for smartphone addiction is that most studies are based on subjective self-reporting using scales and questionnaires (Panova & Carbonell, 2018), and it has been found that users do not always know and are not always able to accurately assess their smartphone usage patterns (Montag & Reuter, 2017).

Despite this, over time, a lot of self-reported measurement scales have been invented and developed. Harris et al. identified seventy-eight validated scales (Harris et al., 2020), which are used in many studies dealing with smartphone addiction, most of which were originally converted from Internet addiction questionnaires (Mok, Choi, Kim, Choi, Lee, Ahn, Chou, & Song, 2014; Harris et al., 2020; Montag & Reuter, 2017; Tossell et al., 2015; Kwon et al., 2013; Şar, Ayas, & Horzum, 2015). Most scales were developed based on the DSM 4 & 5 criteria, and some were based on the six core components of Griffiths's addiction model (Harris et al., 2020).

While studying the various spheres connected to my dissertation topic, I found that the two questionnaires that seem to be most popular and widely used in the various studies are the Smartphone Addiction Scale (SAS) of Kwon et al., 2013, and the Smartphone Addiction Inventory (SPAI) of Lin et al., 2014. These are two quite similar

questionnaires; the main difference is in some of the components on which they are based. Lin is based on four components:

1. The Withdrawal component - as in DSM, occurs when blood or tissue concentrations of a substance decline in a person suffering from the results of prolonged use of the substance, but behavioral addicts do not suffer from these mechanisms. The withdrawal symptoms from the smartphone are more compatible with those of online game addicts.
2. The Tolerance component is also the same as in the DSM, and is the need for increasing use of the smartphone in order to achieve satisfaction.
3. Compulsive Behavior - refers to a symptom of lack of control. Lack of control involves an inability to stop, even when the user realizes that the use has negative consequences. The excessive and frequent use due to compulsion will lead to negative results, such as loss of productivity or poor social connections.
4. Functional Impairment - includes significant distress due to time consumption/waste and significant disruption of the person's normal routine, occupational and/or academic functioning and/or in normal social activities (Montag & Reuter, 2017; Chen, Weng, Su, Wu, & Yang, 2003; Lin et al., 2014).

Kwon, on the other hand, is based on the SAS questionnaire, with six components:

1. Daily-life disturbance - includes missing scheduled work, difficulty concentrating during class or work, suffering from dizziness or blurred vision, pain in the wrists or neck, and sleep disturbances. It is understandable that smartphones have already become a crucial part of the life of the smartphone user. This can result in difficulty concentrating on work due to inability to put the smartphone aside. Moreover, so much time is spent on the smartphone that the user may feel pain in the wrist, back of the eyes, head, etc.
2. Positive anticipation - an excited feeling and a decrease in tension while using the smartphone, in addition to a feeling of emptiness without the smartphone. It brings fun, relieves fatigue and worries, and makes the user feel safe.
3. Withdrawal - The user is impatient, feels disgusted, and cannot bear to be without the smartphone. The smartphone is on his mind all the time, even without using it; he does not give up using it and gets upset when he is disturbed while using it.
4. Cyberspace-oriented relationship - Includes feelings that the user's online relationships are more intimate than his relationships with his friends in real life.

There are feelings of loss of control when the smartphone is lost or unavailable for use, resulting in constant urgent checking of the smartphone. For the user, the world of smartphones is a real community or society made up of social networks, such as Facebook, Twitter, etc.

5. Overuse - refers to the uncontrolled use of the smartphone; the user prefers to perform searches using the smartphone rather than asking for help from other people, needs the smartphone to always be ready and so makes sure it is always charged, with a sense of urgency to use the smartphone again right after use.
6. Tolerance - refers to increasing use and inability to control use, despite repeated attempts to do so (Kwon et al., 2013).

These two scales present the quantitative result ranges of the component ratings: in SAS, the results range is from 48 to 288, and in SPAI, the result ranges are from 26 to 104. According to both, the higher the result, the more severe the smartphone addiction (Lin et al., 2014; Kwon et al., 2013). However, in no scale have standardized criteria of results been established that will allow for the comparison and determination of the levels of addiction and severity, as exist in substance addiction (Harris et al., 2020). Since smartphone addiction is not yet registered in the DSM, it is not possible to require a minimum of criteria and duration for the purpose of diagnosing the addiction. For example, in gambling addiction, the subject must meet four or more criteria for at least twelve months, or in online gaming addiction, as I mentioned, the subject must meet five or more criteria for at least twelve months (American Psychiatric Association, 2013).

Besides the components of the Kwon and Lin questionnaires, I have so far presented other relevant components and criteria for diagnosing addiction: the criteria in the DSM-5 for substance abuse and Internet gaming addiction, and the six components described by Griffiths for behavioral addictions. Some of the criteria and components, including those of Kwon and Lin, overlap and are similar in terms of their definition and interpretation; some explain similar phenomena but are expressed in different terms, and some are different and do not overlap at all. During the description and reference to the characteristics of the behavior and uses of the smartphone, I will try to address each of the components I have presented in a footnote.

Growing research in the field of smartphone addiction points to addiction components such as withdrawal when the smartphone is unavailable and out of the

reach of users (Duke & Montag, 2017). Withdrawal symptoms³ include negative moods, such as anxiety, sadness, signs of depression, and nervousness. Sometimes, emotional reactions after a period without the use of a smartphone can also be presented as craving reactions for checking and use (Montag & Reuter, 2017; Walsh et al., 2008; Emanuel, 2015). For example, people report upset and anxiety when they leave the house and find that they have left the smartphone at home, or report that they will panic if they lose it (Duke & Montag, 2017; Emanuel, 2015). Signs indicative of bodily withdrawal symptoms and the experience of negative emotions can compel the user to go back home and take it with them in order to stop the unpleasant feeling, since being away from it for too long seems unbearable (Duke & Montag, 2017). Another withdrawal symptom⁴ may be the “eye opener,” which exists in alcoholics and is also felt in nicotine addiction. This refers to the first drink of the morning that an alcoholic must have as soon as he gets up. In the smartphone context, this is the intense and uncontrollable urge to check the smartphone immediately after a sleep period during which it was not in use. This symptom can be mitigated in any situation where the phone has not been used for a long time for a variety of reasons, and the first thing to do when possible is to check the smartphone (Montag & Reuter, 2017).

In addition, use of the smartphone can affect the mood and lead to thrills for the user,⁵ for example when a call is received from a loved one or there are incoming messages and alerts that give a good feeling, excitement, and anticipation of the next message (Walsh et al., 2008; Sherman, Payton, Hernandez, Greenfield, & Dapretto, 2016; Weinschenk, 2018). Moreover, satisfaction or a pleasant mood can be achieved even after a certain behavior that helps to get rid of negative feelings like stress and distress. And so, using a smartphone, which sometimes relieves stress and anxiety, can lead to these positive feelings (Şar, Ayas, & Horzum, 2015).

The tolerance⁶ criterion, which, as stated, defines the need for increasing use of the smartphone in order to achieve satisfaction, is a criterion that actually emphasizes

³ This fits: Part of Criterion 4 (Pharmacological Criteria) in Substance Addiction in DSM-5, Criterion 2 in Internet Gaming Addiction in DSM-5, Component 4 in Griffiths Behavioral Addiction, Criterion 1 in Lin, Criterion 3 in Kwon.

⁴ Which also fits the impaired control criterion in DSM and similar components in the rest.

⁵ This fits: Criterion 8 in addiction to online games, Component 2 (mood modification) of Griffiths, and Component 2 (positive anticipation) in Kwon. In DSM, the feelings of pleasure and excitement are not included in the criteria, but are in the characteristics of the effects of the substances on the mood and the excitement they cause. Not found to match Lin's criterion.

⁶ This fits: Criterion 4 and Component 2 in substance addiction, Criterion 3 in Internet gaming addiction, Component 3 in Griffiths, Component 2 in Lin, Components 5 and 6 in Kwon.

the dilemma and controversy, and that tolerance and excessive use will not necessarily indicate behavioral addiction. This is because smartphones, like the Internet itself, have become socio-culturally ingrained in response to the growing needs of the social environment, work needs, and other areas of life and useful services, which are managed through the smartphone and the Internet, and perhaps this is the reason for the increasing use (Montag & Reuter, 2017; Lin et al., 2015). So although there are studies that do agree that overuse is an indicator of smartphone addiction (Aljomaa et al., 2016; Cha & Seo, 2018; Ding, Xu, Chen, & Xu, 2016; Pearson & Hussain, 2016; Herrero, Urueña, Torres, & Hidalgo, 2019), and although studies dealing with Internet addiction (as mentioned, many of the uses of smartphones are Internet based), show the excessive length of time spent on the Internet, it does cause a very large risk of addiction. It could be argued that smartphone addiction can be related, more or less, to the frequency of use and not necessarily to the duration of use, or in other words, to the number of times the user logs in and checks the smartphone, and not to the continuous time of use (Lin et al., 2015).

The reference to excessive use of smartphones has been found to be different between different studies and books. Some claim that the risks and adverse effects begin to increase with use of over two hours a day, and some claim excessive use within four to five hours per day, and others up to over ten hours of use per day (Lepp, 2015; Twenge, 2019; Kibona & Mgya, 2015; Emanuel, 2015; Twenge, 2017). Moreover, many of the users check their smartphone a lot and frequently (Duke & Montag, 2017); their hand constantly goes to the smartphone, even when nothing has happened (Alter, 2017), an urgent and brief inspection that happens every few minutes (Emanuel, 2015). And so oftentimes, the use of a smartphone becomes simply habitual. The habit of a quick and repeated inspection of the device and a quick look at information develops. It is an action that is repeated many times, with high-frequency, short-term checking, use of a limited number of applications, and most of the time centered around the same applications all the time. Thus, for some users, the habit can become automatic and out of control (Oulasvirta, Rattenbury, Ma, & Raita, 2012). The checks can take place even if no new alert was received or sound was heard and can happen when the user only thinks he has heard or imagines an alert sound, even though there was none (Emanuel, 2015). This is a typical mistake known as Phantom Phone Sensations (PPS), an interesting phenomenon, less researched but existing due to the increasing use of

smartphones. This is actually a false feeling, which causes a misconception that the smartphone is ringing, vibrating, or blinking. It takes place under the influence of age, excessive smartphone use, and social influences, such as high-value perception of popularity, expectation of feedback during online social interactions, and more. The phenomenon is related to brain plasticity, when in fact new connections are formed in response to changes in the environment. In young adults it is even more sensitive, probably because they are the main users of the smartphone and spend most time using it. The changes in the brain and the associative learning that leads to plastic changes in the brain cause misrepresentations of sensory stimuli in everything related to the perception of smartphone alerts, ringing, vibration, and messages. So, in fact, the user is on alert far beyond what is really needed, since much of the time it is actually a misperception (Eimler, Maafi, Pietrek, & Krämer, 2015).

For the high frequency of inputs, inspections, and uses of the smartphone in general that can lead to excessive use, there are consequences that disrupt the routine of daily life. Accordingly, this may lead to addictive components of dysfunction, poor control, loss of control, and excessive and obsessive behavior of users⁷ (Duke & Montag, 2017; Lin et al., 2015; Walsh et al., 2008; Billieux et al., 2014). For example, and as I dealt with in the Introduction, there is a decline in academic achievement and performance among high school students and college and university students, who exhibit poorer academic abilities because of the distracting effects of smartphones in class and lectures, the urge to use various apps for surfing on the Internet, and also due to the need for communication on social networks like Facebook, Twitter, WhatsApp, and Instagram (Kibona & Mgya, 2015; Mendoza, Pody, Lee, Kim, & McDonough, 2018; Darcin, Kose, Noyan, Nurmedov, & Dilbaz, 2016; Jacobsen & Forste, 2011; Chaudhury & Tripathy, 2018; Beland & Murphy, 2015; Salehan & Negahban, 2013; Vining, 2017). Compared to computer-based (mobile or stationary) Internet addiction, the uniqueness of the smartphone in its mobility and ease frees users from the heaviness and physical fixation of being on a computer and can help effect a slight reduction in the problem of dysfunction. But on the other hand, precisely because of its unique features, the smartphone exerts its influence all the time, everywhere, and in broad areas of life, so that the problems of dysfunction and the lack of control and

⁷ This fits: Criterion 1, 2 in substance addiction, Criterion 1, 4, 5, 9 in Internet gaming addiction, Component 1 in Griffiths, Component 4 in Lin, and 1, 4, 5 in Kwon.

presence may be even greater (Montag & Reuter, 2017). Moreover, open messages, updates, and ringtones can be distracting and cause stress and difficulties with attention and concentration, which interfere with the flow and progress of normal routine, leading to problems such as decreased productivity at work, in teamwork, impaired creativity, use during various cultural activities that impairs the cultural experience, and impaired perception of opportunities for moments of happiness (Duke & Montag, 2017; Twenge, 2017; Montag & Reuter, 2017; Darcin et al, 2016; Lin et al., 2015; Vining, 2017).

Furthermore, there are situations where smartphone use can also pose a real health hazard,⁸ such as sleep disorders, which I mentioned in the Introduction and in chapter 1, which occur as a result of increasing use at late hours, which can lead to cognitive failures during the day (Sansone, 2013; Lemola et al., 2015; Van Den Bulck, 2007; Thomée, 2011; Polos et al., 2015), and in the presence of the smartphone and its use while driving, which from the very expectation of future use, the expectation of incoming communications (call or message), is significantly related to the frequency of road accidents (O'Connor et al., 2013, 2017). The smartphone is distracting while driving, especially when there is a real preoccupation and it leads the user to write or read text messages, surf the Internet, and physically touch the device. These behaviors are correlated with and increase the risk of road accidents, despite the driver's knowledge of the dangers of use while driving (Duke & Montag, 2017; Lin et al., 2015; Sheffer, 2018; Montag & Reuter, 2017; Walsh et al., 2008; Darcin et al, 2016).

It seems, then, that the different uses of the smartphone meet the various components and criteria I have presented, and it seems that in general the smartphone is prominent and dominant in the routine of users' lives and has a sense of salience. The use of the smartphone is extensive, and users are with it all the time or at least plan to be with it all the time (Oulasvirta et al., 2012; Duke & Montag, 2017). The constant presence of the smartphone is already becoming part of the background, a background that can also affect the thoughts of the users and their sense of presence in physical situations in reality (Przybylski & Weinstein, 2013). If in the past there was a dead time, a boring time that the person had to deal with, today there is almost no such time, and access to the phone is easy and automatic (Duke & Montag, 2017).

⁸ This fits: Criterion 3 of the DSM of Dangerous Substance Use, and Criterion 6 for Internet Gaming Addiction, Component 5 for Griffiths, Component 3 for Lin, and Component 1 for Kwon.

All this does not appear or occur just like that, because as with substance abuse, not everyone who takes drugs necessarily becomes addicted to them (Berridge & Robinson, 2016), and if so, then the addiction does not happen immediately, or after a single use. To become addicted, additional components are needed, such as the user experience, learning and reward processes, and more (Kauer, & Malenka, 2007).

If I repeat for a moment what was said at the beginning of the chapter, the learning processes and rewards behaviors are involved and supported in part by neurotransmitters, with the main one being dopamine, as in learning signs that promote motivation to respond to stimuli and actions valued as rewards (Hauber, 2010), in reinforcement learning or learning through reinforcement, and learning that can eventually lead to reward-dependent learning (Montague, Hyman, & Cohen, 2004). Furthermore, the dopamine systems are important and involved in the link between stimulus and response and in assessing the value of the reward, that is, the weightings and evaluations of the positive versus negative consequences are made in the desire to seek the reward, and then it is decided whether to want it again or not (Urošević et al., 2015).

When the stimulus is “wanted,” the dopamine is secreted at high levels; then the “want” to achieve the “liking” is strong; that is, the dopamine is responsible for “wanting” the feeling of “liking,” which is very intense, and in fact the dopamine urge is stronger than the feeling itself (Berridge & Robinson, 1998, 2016). In addiction, the strong desire and urge to achieve the pleasure, the “liking,” involve feelings of loss of control, and in the learning process, after the associative connection between the stimulus and the response is formed, there is a reinforcer, which increases the chance of repeated response, that is, that the same behavior will happen again (Koob, 1992).

This is also the case with smartphone addiction: the various uses of the smartphone that evoke the reward systems lead to a learned association between the smartphone and what it provides. This leads to a desire and motivation for repeated use, and thanks to the fact that the smartphone is easy to use, portable, and available all the time, its use, which is the response, the behavior, can become intense, automatic, and uncontrollable. The behavior becomes a habit that is strengthened over and over again, a habit that is very difficult to break (Duke & Montag, 2017; Aljomaa et al., 2016; Oulasvirta et al., 2012).

Moreover, in the process of learning, if the conditioned stimulus itself is attractive enough to the person (or animal), then it can itself be used as a conditioned reinforcement and acquires the incentive salience (Berridge & Robinson, 1998). That is why, thanks to the many unique features it presents and thanks to its being a tool that meets so many and varied and satisfying needs immediately and easily, the smartphone can be coveted for its own sake and can be an incentive for desire and an object of addiction. This can be compared to a phenomenon from the world of drugs called “needle fixation.” This phenomenon has been described in the literature since 1929 and refers to a situation in which drug addicts make a kind of conversion from addiction to the substance itself to addiction to the injection and the needle. This is manifested in repeated pokes of the skin with or without the drug, and regardless of its expected effects. It gives rise to situations where addicts will inject frequently, even though they have not experienced any physical effect from the drug; for example, they can put different substances in the syringe, even sterile water. This addiction can occur with or without physical dependence; it is also known as compulsive needle use, and needle addicts are called “needle freaks,” who exhibit loss of control and attraction to the ritual itself; the act of injecting is strong enough in itself to cause reward and repetitive behavior. Although there is a lack of in-depth research in the field of needle fixation, this phenomenon does exist (Fraser, Hopwood, Treloar, & Brener, 2004; McBride, Pates, Arnold, & Ball, 2001; Pates, McBride, Ball, & Arnold, 2001; Blachly, 1971; Levine, 1974), and underscores the possibility of the tool, of the device, being itself a reinforcing stimulus for addiction.

Another important part of this loop phenomenon and the reinforcement of the addiction to smartphones lies in cues. The repeated use, as in the case of substance addicts in relapse conditions, occurs as a result of exposure to cues related to the drug experience, and this contributes to the persistence of the long-term addiction. Here, there is also a contribution from brain plasticity (Kauer & Malenka, 2007), because the brain responds according to the behavioral changes, which are maintained intensely and over time thanks to this response (Russo et al., 2010). Dopamine systems are particularly sensitive to cues that herald a reward to come. Then if there is a small and specific cue that indicates that something is about to happen, it immediately stimulates and increases the release of dopamine. For example, in the case of the smartphone, when there is a sound (auditory cue) or a flashing light (visual cue), which indicates

that an update is coming (a notification), it promotes and reinforces the addictive effect (Weinschenk, 2018). Therefore, it is not the reward itself that drives and activates the dopamine loop but the expectation of the reward (Weinschenk, 2018; Berridge & Robinson, 1998). However, the expectation is not always realized; there is not a reward in every smartphone use, and there is an element of uncertainty in the reward expectations, similar to what I mentioned in the case of gambling addiction.

The uncertainty in the expectation of reward is considered a partial reinforcement, when it is not clear when the feeling of pleasure, of hedonia, will be felt due to the performance of the behavior (Fiorillo, Tobler, & Schultz, 2003). For example, there is not a new alert every time the user checks the smartphone; sometimes it can be a phantom (Sauer et al, 2015), and even if there is something new, not every message or alert is important, or funny, or rewarding; there are alerts and messages that are irrelevant and unimportant, but the user does not know this and still keeps searching and checking. Therefore, just like a player on slot machines does not receive a reward every time, not every habitual interaction with the smartphone brings feedback and satisfaction of what the user was looking for; sometimes yes and sometimes no (Duke & Montag, 2017). Uncertainty and expectation involve the release of dopamine at very high levels (Fiorillo, Tobler, & Schultz, 2003). Therefore, when the dopamine, which appears before the reward, or rather, is released specifically when there is a strong enough hint reminiscent of the reward itself, such as alerts, messages, beeps, and flashes, which provide unexpected patterns, then the user is on constant alert and expectation, leading to habitual behaviors and usage patterns. These become strongly ingrained in the use of the smartphone, which increases the risk of addiction (Veissière & Stendel, 2018; Berridge & Robinson, 1998, 2016; Duke & Montag, 2017; Sauer et al., 2015).

Moreover, it takes a lot to reach satiety and satisfaction, and it is possible that satisfaction will never come either, because the dopamine system does not have a built-in satiety mechanism (Weinschenk, 2018). Therefore, when the reward has already appeared, that is, during the checking, use and search, when new information is revealed, a sense of reward is achieved, and a reinforcement for learning takes place for the user, then it is likely that the user will press the refresh button, or continue scrolling and searching to see if there are any further updates of new information that have not yet been viewed. In other words, immediately after the satisfaction and pleasure, the

user will continue searching and expecting to discover more new updates, looking for new rewards (Oulasvirta et al., 2012). For example, when a smartphone user opens an app he likes, the dopamine systems start working. Every image he watches, every headline he reads or links to feeds the loop, which gets stronger and makes him want more and more. And if there is no disconnection and the search does not stop, the user will enter a repeating loop of searches and will find himself on the smartphone more than he had planned to be (Weinschenk, 2018). This indicates lack of control, overuse, and the power of expectation versus the power of pleasure that fails to reach satisfaction.

These facts stand out, and these dimensions are further strengthened, in the face of the need for communication and community, which include the need to discover and know what is new with others (Oulasvirta et al., 2012), and the need to be connected and available to others. The smartphone is a platform for satisfying these needs, especially through many applications that are characterized by the ability to send alerts, beep, and make sounds, in order to make the user think that someone is looking for him, or that there is a new social event happening right now (Veissière & Stendel, 2018). As a result, distancing or unavailability on the part of users can lead, in some cases, to different levels of unpleasant sensations, which give rise to two interesting phenomena, which, although not clinically-medically diagnosed, are gaining in research and popularity in public discourse. One of these is “nomophobia” – “no mobile phone phobia,” which is considered a modern disorder and describes discomfort or anxiety caused as a result of the unavailability and inaccessibility of mobile technological communications, with the main one being the smartphone (King, Valença, Silva, Baczynski, Carvalho, & Nardi, 2013; Harris et al., 2020; Bragazzi & Del Puente, 2014; Yildirim & Correia, 2015; Yildirim, Sumuer, Adnan, & Yildirim, 2016; Farooqui, Pore, & Gothankar, 2018; Mendoza et al., 2018). The other is the “FOMO” phenomenon – “fear of missing out,” a feeling that perhaps others are currently enjoying rewarding experiences and the individual is missing out on them. FOMO is characterized by a desire to stay constantly connected with what others are doing. Therefore, for those who are afraid to miss out, the use of social networks such as Facebook, Twitter, etc., is very attractive (Przybylski, Murayama, Dehaan, & Gladwell, 2013; Harris et al., 2020; Gupta, 2018). These two phenomena emphasize the dependence on the smartphone and can lead to increased and impulsive use, overuse of social networks through it, and

these can pose a risk of addiction (Harris et al., 2020), and predict addiction, especially among young adults (Salehan & Negahban, 2013).

Social, online, or physical activity activates the reward systems (Veissière & Stendel, 2018). Accordingly, the use of social networks leads to increased activity of the reward areas, and there is even a similarity in dopamine function to that of drug addicts, for example, in the increased secretion of dopamine in the striatum and activation of the nucleus accumbens, which can lead to addiction. This is reflected, for example, in the fact that sharing personal information via smartphone on social media or via text messages increases dopamine secretion. High frequency of use of the social network, posting a status on Facebook or tweeting on Twitter, can increase activity on the accumbens. The “like” as on Facebook and Instagram, a button built by experts, is designed to touch on psychological components as a measure of social feedback that helps build the relationship between friends, but at some point, it can become a component of dependence and addiction that affects dopamine secretion (Montag, Markowitz, Andone, Lachmann, Trenda, Eibes, Kolb, Weber, & Markett, 2017; Stjernfelt & Lauritzen, 2020; Macit, 2018; Meshi, Morawetz & Heekeren, 2013; Gupta, 2018).

Aside from the learning processes and neural rewards, social networks also emphasize the social and media aspect of smartphone addiction. Today, social networks are a dominant form of human communication where sharing and discussion are paramount, with no limitations of time and space (Macit, 2018). They provide a wide range of information, from personal information to social, news, and global information; they provide easy and real-time access to a wealth of information about activities, events, and many user discussions (Przybylski et al., 2013).

The social network has become the driving force for new forms of social and individual relations, new identities, and the emergence of a new global cultural environment (Macit, 2018). It can help build personal and social identity, for example through the feedback and responses received from a number of different channels, and from a number of colleagues in the same online environment. In addition, it is an environment in which community and personal connections can be strengthened through updates and reports (Gil de Zúñiga, Jung, & Valenzuela, 2012). On social networks, behavioral display is possible, and it is reinforced through “likes” as well as quantifiable comments and feedback (Sherman et al., 2016). Users can present

themselves however they want; they can edit, download, and add whatever they want; and thanks to smartphones, they can also do so quickly and easily, all of which is intended to make them look good in the eyes of others (Gupta, 2018).

It seems, then, that in many ways, personal and social gains in social networks are positive and emphasize opportunities and connections between people (Przybylski et al., 2013). Despite this, the use and consumption of social networks is significantly and excessively increased by being done through the smartphone, as part of its role as a device for satisfying social and communications needs. Moreover, the larger the social network, that is, the more friends and followers there are, the more use there is, which increases the possibility of addiction; this is more likely than when the smartphone is used for other Internet purposes and for phone calls (Salehan & Negahban, 2013; Ahn, Wijaya, & Esmero, 2014; Darcin et al., 2016).

This phenomenon is even more pronounced in people suffering from social anxiety, since social anxiety often results in avoidance of real-time connections. So, while virtualization can sometimes alleviate the fears and anxieties of showing sympathetic physical signs (physiological arousal symptoms), which are characteristic of social anxiety, and smartphone communication allows one to feel free and behave without experiencing stress, excessive use of these patterns increases the use of smartphones and social networks so that the risk of addiction is even higher (Darcin et al., 2016).

A population vulnerable to smartphone addiction, given the increasing use of the smartphone on social networks, is the youth. Like many people, youth use information and communication technologies (ICT) on a daily basis for various purposes (Salehan & Negahban, 2013). But among the youth, especially the current generation that are considered digital natives, a generation born into smartphone technology, the risk of becoming addicted to technology, and to smartphones in particular, is greater (Kibona & Mgaya, 2015). The use of smartphones plays an integral part in their lives and has become more like a device for communication; its use has replaced many traditional devices, and it is a tool for simple actions and tasks throughout the day (Walsh, White, & Young, 2008; Aljomaa et al, 2016). Teens use smartphones for long hours during the day, and many of them exhibit device dependence and obsessive use, which may be due to a number of reasons including imitation, social pride, the desire to keep up with fashion, the desire to exploit one's

free time, to search for emotional relationships through various apps, to seek out interests and entertainment, apps, and games (Aljomaa et al., 2016). In addition, the addiction and overuse can also result from stressors typical of adolescence. These include pressure from the family, social pressure from the peer group, and also pressure from the school that raises its demands at this age (Eum, Park, & Yim, 2016). Thus, many times the smartphone is found to be comforting and reduces stress during periods of anxiety and distress (Panova & Lleras, 2016). In these moments, it is easy and tempting to turn to the available, accessible, and attractive smartphone, which will ease the stress. Youth surf on the Internet and on social networks, play games, and more, all as a means of escape, even if just for a flash (Eum, Park, & Yim, 2016). And as mentioned, even a quick glance can set off an ongoing cycle of uncontrolled use and searching (Weinschenk, 2012).

Furthermore, brain activity at this age does not work in favor of youth in the context of smartphone addiction. At this age the reward areas, cortical areas associated with emotional processing functions, risk-taking behaviors, and more, undergo significant changes and reorganization, affecting behaviors, age-specific moods, and an increased desire to spend time in the presence of a peer group (Sherman et al., 2016; Galvan, 2010). This leads, for example, to behaviors driven by increased reward-seeking behavior, and it leads to sensitivity and overestimation of rewards due to increased release of dopamine in dopaminergic reward areas (Galvan, 2010). Additionally, the experience of positive feedback from one's peers may serve as a powerful motivator for overuse, as well as feedback on text or other information, and of course on images, like the "selfie," which have gained importance and supreme value on social media. All of these experiences involve dopaminergic circuits, such as increased activation in the nucleus accumbens, that can lead to over-motivation in use.

These features are appropriate and integrate with the characteristics of the age of youth as a significant and critical period in cognitive and social developments (Sherman et al., 2016), where the needs for communication and connection with others are dominant (Salehan & Negahban, 2013). The need for social comparison, the need for feedback and social approval from the environment and the peer group, the need for external visibility and self-presentation are ingrained but are reinforced, for example, in social networks that have become popular and dominant among youth (Sherman et al., 2016), and are most often accessed through smartphones (Salehan & Negahban,

2013). In addition, when an adolescent sees his peer group using smartphones so intensively, this raises the possibility of his own increasing use in a manner similar to the use in behavioral addiction (Walsh, White, Cox, & Young, 2011).

But do youth, and smartphone users in general, have a chance not to overuse smartphones and increase the risk of addiction? Is the user independent? Does the mode of use depend only on the user? In the information age, where there is an abundance of information in almost every conceivable field, smartphones are the main device for communicating and searching for information such as news, updates, and more, whether via the Internet and online sites or social networks (Newman, Fletcher, Kalogeropoulos, & Nielsen, 2019). The main and most valuable resource is the user's attention. The "attention economy" is nothing new. As early as the 1970s, television channels understood this and acted in accordance with the viewer's attention when it came to commercials and sales. But on the web, this is much more significant, as it involves elements of addiction and personalization of the marketing content.

The technology giants compete for the attention of consumers, the limited resource of users, which has led to an unfair and unequal situation where the individual user faces the best programmers and organizational psychologists there are, who constantly develop and update complex computer engineering designs with sophisticated algorithms, using custom data. Everything is designed to predict how a person will use and respond to the various temptations, to hijack his consciousness and create dependency, so that he will spend as long as possible in the online world. For example, Google has set up marketing and advertising platforms based on user typing, as has Facebook, which controls huge databases, thanks to users' shares and likes (Stjernfelt & Lauritzen, 2020). Moreover, Facebook, Instagram, and many other smartphone apps have been built and designed to grab users' attention, with the goal of creating obsessive use. YouTube or Netflix, for example, automatically switch to the next episode or content; Tinder encourages users to keep swiping in search of a better option, and so on. All of this is designed to keep the user on the same platform for as long as possible, making it difficult for users to moderate usage (Alter, 2017).

Smartphone addiction is undoubtedly a major issue of concern to many, in the public discourse, in the world of research and academia, and also in the world of marketing and technology, which has an economic interest. By way of magazine

articles, the public discourse deals a lot with smartphone addiction and social experiment. These include articles with tips for proper use, detox, and reduction in use (Shtain, 2015; Solomon, 2014; Odem, 2017, 2018; Coughlan, 2019; D'Amore, 2019; Hall, 2020). There are treatments for smartphone addiction and its harmful effects in daily life, sensory therapies, and therapies that combine art, music, dance, movement, and drama (Eum, Park, & Yim, 2016). Moreover, more and more rehab centers are being set up and opened to deal with many psychological disorders such as trauma, depression, etc., and are adding rehabilitation programs and a place to host smartphone addicts to their treatment basket. They offer solutions, for example, through recommendations for self-care, treatment through personal meetings, and a call center. Examples include the reSTART center in Seattle, and other institutes in the US, as well as in Brazil, Thailand, and other places (<https://www.institutodelete.com/home>; <https://dararehab.com/>; <https://www.recoveryranchpa.com/>; <https://www.psychguides.com>).

Many countries have long taken seriously the negative aspects of the phenomenon of increasing smartphone use and the possibility of becoming addicted to them and have taken action, for example, by legislation and the ban on the use of smartphones while driving (Harris et al., 2020; O'Connor et al., 2013, 2017), and restrictions and prohibitions in schools, about which I wrote in chapter 1 (Trucano, 2015; AFP, 2018; Murray, 2014). Southeast Asian countries have led a series of research initiatives carried out by the government and health care providers, aimed at curbing and alleviating the addiction problems (Mok et al., 2014). Spain has recognized the phenomenon as a situation that restricts the freedom of users and prevents them from acting and expressing themselves freely in a similar way to the addictive effects of gambling and alcoholism (Stjernfelt & Lauritzen, 2020).

To sum up:

Although a postmodern culture contains many coexisting opinions and interpretations; although there is criticism of overmedicalization, and although the smartphone has many benefits, its increasing and excessive use is a burden and impacts the daily routine of users. As I have presented, it appears, based on all the criteria and components of substance abuse and behavioral addictions, that smartphone addiction does exist and that it is a phenomenon that should be taken seriously and addressed by

clinical and therapeutic means. Moreover, adjustments must be made in a manner uniquely tailored to youth and children as populations at increased risk of addiction, due to their being a generation that never knew a world without smartphones, so that their presence seems natural and ubiquitous. In this chapter, I have discussed many aspects of addiction situations, but just as there are varying levels of substance addiction from mild and moderate to severe, here too, in my opinion, it is necessary to set acceptable standards for degrees of addiction and examine whether the components of lack of control are merely an annoyance or if it is a serious addiction and disruption that jeopardizes the user's functioning in areas such as work, family, social life, and studies, as DSM distinguishes in other disorders and illnesses. These are things to be determined in the future, in the next version of the DSM, and accordingly also in the next version of the ICD.

At the same time, it is important to note in conclusion that the smartphone is a tremendous technology that has promoted and improved many things in the world on the personal, social, and global levels. This is the place to repeat Neil Postman's remarks from the Introduction: When technology enters culture, it will make changes and develop to its logical conclusion. The role of people in society is to understand what the purpose of a technology is and what it is intended to do (Postman, 1992).

5. The smartphone in the social reality of contemporary youth in the light of research

The type of research presented is both quantitative research (non-representative statistically) and qualitative research. It comprises a set of methods that combine features of sociological ethnographic research, field research, and comparative research. The techniques used are: questionnaire and individual in-depth interview (IDI).

The study began with construction of the quantitative questionnaire, which initially contained seventy-three questions. After a short pilot involving about four research participants to get an initial impression, the questionnaire was reduced to sixty questions, the wording was changed to first person, and some of the questions were rewritten into tables with “yes/no” answers, open-ended questions, statements on the Likert scale “agree” or “disagree,” and there were questions left as multiple-choice questions. To distribute the questionnaire, I used the online format of Google Forms.

I conducted another pilot by distributing the questionnaire on the social networks Facebook and WhatsApp. The pilot included 105 questionnaire responses, which were tested in statistical tests (Cronbach’s Alpha) for reliability. All questions were found to be reliable and valid for the research problems, except for those addressing two research hypotheses that dealt with sleep habits and self-esteem, for which the reliability of the questions was not found to be sufficient to answer the hypotheses. After intensive thought, I decided to stay with the current situation and answer those two research problems through the qualitative part, by expanding the questions in the IDI.

Regarding the statistical analyses in the quantitative part, I will note that in addition to Cronbach’s Alpha analysis, further analyses were conducted using an independent t-test, Spearman correlation, and One Way ANOVA. Importantly, the main research variables did not have a normal distribution (by Kolgorov-Smirnov test); thus, the analysis included a parametric test.

The IDI questions for the qualitative part of this work were constructed at the same time to complement the quantitative study. The interview initially included thirty questions, and after two pilots had also been done for the quantitative part, the questionnaire was expanded to thirty-eight questions, the order of the questions slightly

changed to try to maintain coherence and fluency in the interview, and several questions were combined into a single question.

Subsequently, a lot of time was invested in distribution, and in personal and general contact via social networks on the Internet, in order to obtain answers to the questionnaire while targeting the exact research population. The questionnaire aimed at Generation Y was distributed first, and after responses had been received from about 152 research participants, the questionnaire for the youth, Generation Z, was also distributed, which eventually included 537 research participants. The whole process of distributing and collecting the data took about four months.

As for the qualitative part, twenty Generation Y respondents were randomly sampled from the questionnaire responses. In the same way, thirty Generation Z respondents were randomly sampled from the questionnaire responses, for which the consent of one of the parents was obtained. The whole process of collecting and managing the data from the interviews took about three very intense months.

5.1 Research samples

The sample selection is a purposive sample and is composed of respondents from Generation Z (ages 15-18) and from Generation Y (ages 33-37). The sample of the research included 537 research participants from Generation Z and 152 research participants from Generation Y. The average age of the Generation Z respondents was 16.19 years (SD= 0.94), and the average age of the Generation Y respondents was 34.70 years (SD= 1.18).

The majority of both groups of respondents were females; research participants from Generation Z included 39.3% males versus 60.7% females, and in Generation Y 32.9% males responded compared to 67.1% females. There were significant differences between the groups with respect to area of residence: higher rates of the Generation Y sample live in the center of Israel (46%), while higher rates of the Generation Z sample live in the Shfela area (34%).

Table 1 presents the socio-demographic characteristics of the sample.

Table 1: Socio-demographic characteristics of the sample

<i>Characteristic</i>	Generation Z		Generation Y		<i>X</i>²
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	

Gender	Male	208	39.3%	50	32.9%	2.07
	Female	321	60.7%	102	67.1%	
Area of residence	North	48	9.0%	31	20.4%	71.54**
	Center	177	33.1%	70	46.1%	
	Shfela	181	33.9%	18	11.8%	
	South	122	22.8%	20	13.2%	
	Y"osh	6	1.1%	8	5.3%	
	Jerusalem	-	-	5	3.3%	

p<.05*, *p*<.01**

For the qualitative part, research participants who gave their consent to conduct the IDI interview were randomly sampled out of the research participants who had answered the quantitative questionnaire. For the Generation Z research participants, the consent of one of the parents was also obtained. Accordingly, the qualitative part included thirty research participants (fifteen males and fifteen females) from Generation Z and twenty research participants (ten males and ten females) from Generation Y. The average age of the Generation Z respondents was 16.57 years and the average age of the Generation Y respondents was 35.53 years. There were almost no differences between these groups by area of residence. Both samples live in the center of Israel: Generation Y 65%, and Generation Z, 63.3%.

The main problem that this work explores is: what are the characteristic features of the influence of smartphone use on the everyday life of contemporary youth in Israel? In order to answer this big and central question, several research problems were raised that I will address and discuss in this chapter. For some of the research problems, hypotheses were formed that would be confirmed or refuted based on the data collected in the quantitative questionnaire and the qualitative interviews. In order to present the data clearly and concisely, I have divided the research problems and the corresponding hypotheses into subchapters according to the following topics:

- 1. The smartphone in its general characteristics**
- 2. Sociality and smartphone use**
- 3. Effects of the smartphone in private use**
- 4. Self-esteem, popularity, and smartphone addiction**

5.2 The smartphone in its general characteristics

This first subchapter also serves as an introduction to the following subchapters. This subsection will deal with the research problems of the thesis, (1) concerning the specific and peculiar features characterizing the process of creating the smartphone culture in Israel, (2) how the smartphone culture is developing currently, and how this process affects the youth culture in Israel; (3) it also deals with the needs of youth that the smartphone cannot provide, and finally (4) it enumerates the main features of the smartphone as a “virtual friend” of the youth.

This subchapter will not raise research hypotheses, as will the following subchapters, as here I will touch on more introductory and general areas, designed to address research problems and provide a broader and in-depth picture of some youth’s attitudes about smartphones, smartphone use, and the place that the smartphone occupies in their lives and culture. As in the entire chapter, here too the findings will be presented with reference to the comparison group examined from Generation Y in this study.

(1&2) To address the first two problems regarding the specific and peculiar features that characterize the creation of the smartphone culture in Israel and how this culture is developing currently, and how this process affects the youth culture in Israel, the research participants were asked several questions both in the quantitative questionnaire and in the qualitative in-depth interview (IDI). First, the research participants were asked two questions about the age at which they first received a smartphone.

Table 2 presents the distribution of answers.

Table 2: Distribution of frequencies of the age of receiving a smartphone

		Generation Z		Generation Y		X^2
		<i>N</i>	%	<i>N</i>	%	
I got my first smartphone at age	8-10	238	44.6%	1	0.7%	566.64**
	11-13	282	52.8%	7	4.6%	
	14+	14	2.6%	144	94.7%	
In my opinion, a person in Israel gets his first smartphone at age	8-10	435	82.4%	102	67.1%	21.93**
	11-13	84	15.9%	39	25.7%	
	14+	9	1.7%	11	7.2%	

$p < .01^{**}$

The statistics indicate that the majority of the Generation Z sample got their first smartphone between the ages of 11-13 (53%). The majority of the Generation Y sample got their first smartphone above the age of 14 (95%). There were significant differences between the samples of Generations Z and Y in the age they got their first smartphone. Higher rates of research participants among the sample of Generation Z reported that they got their first smartphone between the ages of 8-10 and 11-13 in comparison to Generation Y, of which the majority of research participants got their first smartphone above the age of 14 (95%).

Accordingly, higher rates of research participants among the sample from Generation Z reported that they think that a person in Israel gets his first smartphone at the age of 8-10 (82%) in comparison to Generation Y (67%).

Next, the research participants were asked to report their daily use of the smartphone. Table 3 presents the distribution of answers.

Table 3: Distribution of frequencies of smartphone use (N=686)

<i>Daily use</i>	Generation Z		Generation Y		<i>X²</i>
	n=534	%	n=152	%	
Up to 1 hour	12	2.2%	6	3.9%	12.53**
1-5 hours	371	69.5%	110	72.4%	
6-10 hours	147	27.5%	30	19.7%	
10+ hours	4	0.7%	6	3.9%	

p<.01**

The statistics indicate that the majority of research participants (approximately 70% of the sample from both groups) report a daily use of the smartphone of 1-5 hours. There were significant differences between the groups in their smartphone use: higher rates of the sample from Generation Z report a use of 6-10 hours a day (27.5%) in comparison to Generation Y (20%).

Next, the research participants were asked to report whether any of their friends do not have a smartphone. Table 4 presents the distribution of answers.

Table 4: Distribution of friends who do not have a smartphone (N=686)

	Generation	Generation Y
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		Z				X²
		n=534	%	n=152	%	
Does any of your friends not have a smartphone?	False	492	92.2%	111	72.5%	40.6
	True	42	7.8%	41	27.5%	

p<.001*

The statistics indicate that the majority of both samples reported that it is not true that any of their friends don't have a smartphone (92.2%-72.5%). There were significant differences between the samples from Generations Z and Y. Higher rates among the sample of Generation Z (92.2%) in comparison to Generation Y (72.5%) report that none of their friends are without smartphones.

In question number 15, the research participants were asked to report whether they had seen or experienced cyberbullying. Table 5 presents the distribution of answers.

Table 5: Distribution of witnessing or experience of cyberbullying (N=686)

		Generation Z		Generation Y		X²
		n=535	%	n=151	%	
		Have you ever seen or experienced cyberbullying?	False	284	53%	
	True	251	47%	56	37%	

p<.05*

The statistics indicate that the majority of both samples reported that they had not seen or experienced cyberbullying (53%-63%). There were no significant differences between the samples from Generations Z and Y.

An important statistic that will accompany the continuation of this chapter is the duration of use of the smartphone, where it was found that the youth use the smartphone for a longer time during the day compared to Generation Y: The youth reported use times of 1-5 hours per day, 69.5% (N = 371), compared to 72.4% (N = 110) in the comparison group (Gen Y). However, the figure that emphasizes the high usage time is

a period of 6-10 hours a day, representing 27.5% (N = 147) of the youth compared to 19.7% (N = 30) of the Generation Y respondents.

In the **qualitative** part of this research work, and to deal with the first two research problems (a and b outlined above), a number of questions were asked in the IDI interviews. The answers obtained were partly consistent with the findings in the quantitative questionnaire. The questions were intended to deepen examination of the characteristics of smartphone use among the youth, and thereby to create a picture of the culture and mindset of smartphone use in Israel. Question 1¹ was intended to discover what the main uses of the research participants' smartphones are. Here are some quotations from the interviews: *“Most social networks, Instagram, TikTok, WhatsApp, and play a little sometimes”* (S.Y., female, 15 years old). Another participant said, *“Umm either Instagram, YouTube, or WhatsApp, and play games once in a while”* (T.V., male, 16 years old). One said, *“First thing WhatsApp; it’s the most useful tool for me; Instagram, YouTube, music via Spotify, watching series, playing games, downloading other games every week because I get to exhaustion pretty fast”* (N.N., male, 18 years old); another answer was similar: *“On Instagram, looking at photos and stories, Tiktok and WhatsApp, videos and WhatsApp, talking to my friends about what they are doing today. And I do it by the screen time I have in a week and it’s about 6-7 hours a day. Everyone is like that, and there are some who spend even more time”* (N.Z., female, 18 years old).

Also, for the comparison group (Gen. Y) it was found that the smartphone is dominant and used for many operations. Their answers revealed similarities and differences as compared to the situation for the youth: *“Usually WhatsApp, in the browser, on Facebook, mainly news sites, and other interesting things that enrich me, that expand my knowledge”* (E.R., male, 37 years old). Another participant said, *“WhatsApp, Facebook, shopping, news sites to keep up to date”* (A.G., female, 33 years old). One said, *“I’m on Facebook, LinkedIn, WhatsApp, YouTube; there’s a work program called Slack, emails, schedules, and porn. No games”* (N.H., male, 37 years old); and *“Umm uses for all kinds of needs, social networks like: Facebook, LinkedIn and WhatsApp. Emails and things related to work, reading news, sometimes gambling”* (A.I., male, 36 years old).

¹ Question 1: What do you do with your smartphone when you are alone?

Question 2² was mainly intended to elicit the rules of behavior and cultural norms accepted by the research participants regarding smartphone etiquette, and in addition, to understand how they acquired the knowledge and understanding of this behavior. The answers were varied: *“I think from society and growing up along with it; for example, when I was little, I would write and do everything the same way, for example, the way I wrote on WhatsApp was how I wrote on Instagram, and slowly when I grew up and saw what people do and how people use it, so it also comes to me and I learn from it”* (Y.F., female, 15 years old). Another participant said: *“Ummm, you know, it’s something that’s acquired over time, and you develop it. After using it for a long time, it’s a habit”* (N.N., male, 18 years old). And another said, *“Oh ah lol, also by how I see how people around me behave. If I see certain reactions after him then I can know what most people did”* (H.Y., female, 15 years old). Other research participants said: *“Ummm I think it’s just like that, social conventions, you just know it; I’ve been on the phone for many years and slowly you learn it over time”* (N.B., male, 15 years old). Answers like: *“Ummm I know, because they talk to us about it at school; my parents also say things and teach me”* (F.F., female, 17 years old). And, *“You see what other people do and you learn while doing; it’s like you ‘take it on board’”* (Y.E., male, 17 years old).

The answers from the Generation Y sample presented similar data to do with learning from experience and on the go: *“While talking to people. Usually it’s during routine activities, while on the move”* (A.B., female, 36 years old). But there were a few who also reported more informed learning for some of the actions: *“I learned the norms while experimenting and imitating, and in the social networks mainly on LinkedIn mainly in learning about the subject because it is a very professional network, so you read about it, I went to a workshop, read blogs”* (A.I., male, 36 years old). In addition, there were answers that drew a parallel between the real world and the online, virtual world: *“It seems to me that it’s such codes of ethics, codes of social behavior; if I’m in the work forum then I’ll be very polite and formal and if I’m in my family’s WhatsApp then I’m more liberated and direct”* (S.R., female, 33 years old). And, *“I have no such rules; I’m like I am in real life. Behaving the same. If you call me, I*

² Question 2: What are the norms; what is acceptable social behavior; what is permitted and what is forbidden when using a smartphone (for example, do you reply to a message right away or when you want to? Do you always answer a phone call? Do you click “like” even when you do not like the post?

answer; if I cannot, I call back later; I do not intentionally filter; as I behave in life, in reality this is how I behave with the phone” (I.R., male, 36 years old).

(3) In order to address the third research problem which deals with needs that the smartphone cannot provide for the youth, two open-ended questions were asked in a questionnaire that called for free-text response. In question 56, the respondents were asked to complete an open-ended statement as to what application they would like to invent to address an unmet need. This question was answered by 46% (N=537) of the respondents. The main answers to the statement *“I would like an app to be invented that will make _____”* was: Food. Some wrote that nothing new could be invented, with answers like: *“Ummm the truth is I do not think there is anything it does not have. It provides everything”* (M.U., male, 18 years old). Other answers were: *“an app that will create happiness,”* an app that will create free time; many answers dealt with school help such as: an app that will collect matriculation exams from previous years by itself, help with homework, help with private study, and provide test summaries. Other common answers were: an app that would make money for them, massage, camera upgrades like X-rays, an app that would find out when people were lying, an app for world peace, and an app that would organize their room. It was interesting to find many answers expressing the desire for an app that would restrict and prevent them from using the smartphone without the ability to override it.

In the Generation Y, 54% (N=152) of the respondents answered this question, and the answers were more related to their contemporary cultural world, for example: apps to help with household chores, such as: an app that will prepare dinner, wash dishes, do laundry, and clean the house. And there were similar answers from the youth; there were those who wanted an app that would give them a massage, and there were those who expressed a desire for apps that would reduce the need to use a smartphone.

In question 57, respondents (Gen Z) were asked to complete an open-ended statement on what they liked most about their smartphone. To this question, 59.5% (N=537) of the respondents responded, and the main answers to the statement *“The thing I like most about my smartphone _____”* were: ability to post on favorite social networks: WhatsApp, Instagram, TikTok. Many also indicated the camera, the ability to communicate and talk to friends, the ability to be available, the games and porn, and there were many respondents who wrote: *“everything.”*

In the comparison group (Gen Y), 66.4% (N=152) of the respondents answered this question. The answers frequently mentioned the camera and its quality, and the fact that the smartphone allows them to document and photograph their children. In addition, many responded that they like the quick access to information and the Internet; a few, like the youth, mentioned the social networks WhatsApp and Facebook.

Finally, as part of engaging with this research problem (3), the research participants were asked about moments of boredom. Although this question deals with a specific research problem, one can also draw general conclusions about the lifestyle and culture of the youth in Israel today. In question number 52, the research participants were asked what they would do in a moment of boredom.

Table 6 presents the distribution of answers.

Table 6: Distribution of frequencies of acting in a moment of boredom (N=670)

<i>In a moment of boredom, I:</i>	Generation Z		Generation Y		X²
	<i>n=524</i>	<i>%</i>	<i>n=146</i>	<i>%</i>	
Stare at the sky	18	3.4%	3	2.1%	18.69**
Pick up the smartphone	376	71.8%	132	90.4%	
Look for someone to talk to	99	18.9%	6	4.1%	
Other	31	5.9%	5	3.4%	

p<.01**

The statistics indicate that the majority of both samples reported that in a moment of boredom they would pick up the smartphone (72%-90%). There were significant differences between the samples of Generations Z and Y in what they would do in a moment of boredom. Higher rates among the sample of Generation Y (90%) would pick up the smartphone in comparison to Generation Z (72%).

In the IDI interview, question 34³ is the same as the question in the quantitative questionnaire. The answers were more extreme than in the quantitative questionnaire. Almost all the Generation Z respondents answered that they have many moments of boredom and that in these moments, the first thing they do is pick up the phone: *“Yeah. And then, yeah, I’m on the phone. Sucks, but I’m bored a lot”* (M.U., male, 18 years old). There were more such answers: *“Yes, a lot. Then I’m on Instagram, calling a*

³ Question 34: Do you feel bored occasionally? When? Why? And if you are bored, what do you do?

friend on video calls, watching a lot of TikTok, switching between apps” (R.E., female, 17 years old). And, *“Yes. A lot, and then I’m on the phone; some people eat when they’re bored, lol, I’m on the phone”* (M.M., female, 15 years old).

The answers in the comparison group (Gen Y) were similar to the findings in the quantitative questionnaire and show that although the Generation Y respondents experience fewer moments of boredom, when there are such, the smartphone is the first recourse to alleviate their boredom: *“Ummm yes, then I’m straight to the phone, obviously. It’s the easiest”* (M.L., female, 35 years old). Another said: *“Very rarely. Rare. Then I’m straight to the phone”* (A.I., male, 36 years old).

Question 33⁴ is intended to deal with the research problem directly, and to find out what needs the smartphone is not yet meeting for the research participants. The answers were varied, so I will divide them into three. Many of the respondents answered that the smartphone simply provides everything: *“I think it satisfies most of the needs there are – fitness, gaming, a lot of things, lol, there is an app for everything; there is nothing I can think of that is missing”* (N.B., male, 15 years old). At the same time, most of the answers revolved around the emotions and physical components of the interaction: *“Aaaa ... maybe it cannot replace this thing - the person standing in front of you, cannot exchange his feelings, body language, cannot exchange face to face. It will not succeed no matter what”* (M.D., male, 18 years old). Others said: *“Ahh a real encounter I think, it will never be able to deliver”* (Y.F., female, 15 years old). And *“The need of the hahahaha ... of human touch, it is a need that it will never provide”* (F.P., female, 17 years old), and *“I think it does not provide the right communication, the production of sufficient information that good for a person, for example to understand emotion in messages”* (F.S., female, 15 years old). Finally, and although this is an answer that occurred just a few times, it is an appropriate reflection on the current generation and the digital world and refers to the need for reliable information and the difficulty in finding the truth: *“Ummm maybe the need, umm like it can be found but it’s hard: verified information, information that is really true. So, I think the need to find the truth”* (A.Z., female, 18 years old); *“Ummm I would say maybe ummm some sort of filtering to information that is 100% trusted; just go in and see what’s really true. Because the information today is not always reliable”* (Z.Y., female, 17 years old).

⁴ Question 33: The smartphone offers many applications and meets many of people’s needs. But what need is still missing for you to be satisfied by the smartphone?

In the Generation Y group, all responses dealt with touch and physical and interpersonal interactions, including, for example, warmth and love: *“Ummm I think it will never replace face-to-face communication”* (Y.A., female, 36 years old); answers like *“Ummm everything related to emotion, something you cannot escape from through the smartphone. You can keep in touch thanks to the smartphone, but it is not really a tool that allows introspection; on the contrary, it even causes distortion in this matter”* (Y.M., female, 35 years old), and in short, and correctly, *“Warmth and love”* (H.I., female, 34 years old).

(4) For the fourth and final research problem in this subchapter, which deals with the main characteristics of the smartphone as a virtual friend of the youth, question 35⁵ was asked in the IDI interview. This is a question that aims to complete the picture and understanding regarding the research participants’ view of the smartphone as a device that is different from other devices, and how it is so significant and sometimes seems to have the features of a “virtual friend.” The answers received included: *“All its benefits, its accessibility, the things it offers, anything, like, that brings you closer to it, and it not only ummm brings you closer to the phone, to the device, it gives you more options; it brings you closer to your friends too, allows you to talk to them; there are games if you like, options to play sports if you like. Everything”* (F.P., female, 17 years old). Another answer was, *“It’s constantly accessible, constantly on us, and a lot of things can be done with it. And probably because we use it all day, it connects us to it”* (N.S., male, 18 years old). More interesting answers were, *“Ummm you can take it anywhere, it’s easy to carry and not heavy, it’s full of things for communication and games that you can amuse yourself with, and it’s like right next to you, it’s like it’s connected to you”* (R.E., female, 17 years old), and *“Because everyone has their own phone, like, it’s yours privately and you put things in it that you want, and for example, TV is something for everyone, and let’s say it goes with you everywhere and you connect to it”* (S.Y., female, 15 years old). More answers mentioned human qualities: *“You can find almost anything in it, in any area of interest it can provide. It can do everything, and ummm, and we learned to trust it”* (F.F., female, 17 years old). Other interesting answers included, *“It seems to me because it is with us all the time, it then becomes a part of us. It has a lot of things and personal details in it”* (H.N., male, 15 years old),

⁵ Question 35: What is the advantage of the smartphone over other devices? What are its characteristics that allow it to be your virtual friend and meaningful to you, compared to other devices?

and *“In my opinion because it’s small and convenient to carry anywhere, just anywhere, and here it’s like my best friend who goes with me. It’s like something that talks in my pocket that can help me all the time”* (M.D., male, 18 years old), and finally, *“A smartphone is something you’re really, really connected to. It’s very sentimental, just think about the pictures; it’s all our moments, it’s your private exhibition; on WhatsApp it’s laughs and your correspondences; on Instagram it’s your pictures, contacts; everything is personal, and it’s yours. That’s why it’s very difficult for me to give my phone to other people. It’s my personal and private thing. In addition to everything, it is small, compact, personal, and mine”* (Y.Z., male, 17 years old).

Generation Y research participants also noted the salient advantages of mobility, the easy access to infinite information, and the needs it manages to provide, but without mentioning an emotional connection: *“It’s small, compact, it goes with you everywhere. It’s accessible, it connects me to other people, so virtually you can do anything through it, from booking a trip abroad, booking anything you want to at home, you can do anything with it”* (I.R., male, 36 years old), and *“Ummm first of all, ummm everything is easy, accessible, available in it, everything is terribly available in it; it has everything, it is all together. It is just the complete package, camera, newspaper, information, communication with friends, everything everything”* (Y.M., female, 35 years old). Others said: *“Connecting to the world and mobility. In the end they took one device that gave you the ability to communicate and get information from whoever you want and when you want. And everything is portable, accessible and easy. Today it’s like a cripple stick”* (S.Z., male, 35 years old); and, *“Listen, it’s portable, it’s light, it’s easy to operate. I’d rather do things with it than with other things”* (H.I., female, 34 years old).

There was one interviewee who mentioned the smartphone as a “virtual friend” but also knew how to emphasize that there is no deep connection here and that it’s just a means: *“Ummm it has the people I love ... lol ... like, through it I can communicate with the people I love, who are not present with me. In a sense it is a virtual friend. But it is a friend, kind of like, I have no deep connection to it, as an object It’s something that serves me; it’s a means”* (A.G., female, 33 years old).

5.2.1 Conclusions:

In evaluating the responses to the two research problems (1&2) dealing respectively with the specific and peculiar features that characterize the process of creating the smartphone culture in Israel, and how the smartphone culture is developing nowadays and how this process affects the youth culture in Israel, the clear conclusion is that the smartphone occupies a central and dominant place in the daily life of the youth in Israel. This starts with the age of receiving the smartphone, which among the youth was at an earlier age (11-13) compared to Generation Y (14+), and these data are to be perceived as normative, in light of the respondents' perception that the age at which a person in Israel gets his first smartphone is 8-10 (82.4%).

Moreover, an important statistic that sheds light on the rest of the chapter is that the youth use the smartphone more than the Generation Y by a clear margin. It is important to note here that in the next subchapter, dealing with smartphones and society, I will present a similar figure in response to the IDI interview question about the research participants' assessment of the duration of their engagement with social networks using the smartphone. The data are consistent with the findings now presented from the questionnaire and show even more radical differences in the use times of the youth compared to Generation Y, with the tendency of the youth to spend more time on social networks.

The dominance and centrality of the smartphone in the daily life and culture of the youth can be verified and deduced from their answers to a number of additional questions. As an example, the absolute majority (92.2%; N=534) of the youth respondents do not know anyone in their peer group who does not have a smartphone, whereas in Generation Y, the figure is lower (72.5%; N=152). This difference underlines the ubiquitous presence of the smartphone in the culture and lives of the youth.

In addition, the answers to the question that dealt with smartphone use reveal that the smartphone is used for almost everything: it is used to communicate with the world, both by communicating with friends via WhatsApp and by viewing content from around the world on social networks such as YouTube and Instagram. In addition, many of them play games and use smartphones for educational purposes. The smartphone is similarly predominant for both groups as a means to engage in social media, with the difference that Facebook is central for Generation Y, compared to Instagram for the

youth. Whereas the youth use the smartphone for school needs, Generation Y uses it for work needs – this is basically the same need but representing a different phase of life. The main usage differences found are the use of the smartphone by Generation Y (but not so much Generation Z) for news updates, and the fact that Generation Y respondents hardly use game apps.

Further conclusions can be drawn about the way in which the smartphone culture develops among the youth thanks to the vast experience they have using the smartphone from a young age; they learn everything about how to use it over time. Some spoke of the impact of school education and parents on their use habits and etiquette, and some learn from the social environment.

From the comparison group (Gen Y), a generation that was exposed to the smartphone at a later age than Generation Z, one can also draw conclusions about cultural developments. Their answers contained reference to experience and learning while on the move. But here, there were also answers that were unheard of among the youth, which touched on the connection and matching between behavior in physical reality and online, virtual behavior. This reveals something about the dominance of the virtual world among youth, a topic I will deal with later.

From the data designed to address the next research problem (c) that deals with the needs of the youth that the smartphone cannot provide, it was found that for some of the youth, the smartphone meets and satisfies all needs: their response was “*there is already everything*” when they were asked to think about an app they would like to be invented. This was also backed up by examining moments of boredom, since most respondents (72%; N=524) reported picking up the smartphone in a moment of boredom, and moreover, the youth research participants report that boredom is a common experience, and that the smartphone is the primary recourse in these moments of boredom. The question of what they like the most about their smartphone elicits that the smartphone is perfect in the eyes of some of the youth, with their response of “*everything*” and “*it has everything*”.

However, this conclusion is not sweeping and absolute in view of further findings and answers. The direct question about what the smartphone is unable to provide yielded answers regarding the lack of satisfaction of emotional and physical needs in smartphone interactions. This is also backed up by the open-ended question that elicited responses referencing the smartphone’s inability to satisfy the need for

food, happiness, and physical things like massage, money, and keeping one's room tidy. So, in conclusion on this research problem, it was found that the smartphone is undoubtedly dominant and central in the lives of the youth and meets many of their needs, but it fails to satisfy everything, with an emphasis on its failure to fulfill physical and emotional needs.

If so, from the data collected dealing with this set of research problems (1, 2, & 3), it can be concluded that the smartphone has many functional features. One can list all the conspicuous features of the smartphone mentioned in the youth's fascinating answers characterizing it as a personal, portable, easily accessible device that allows for communication with the world. In addition, many of them talked about an emotional connection to it, a real connection, as if to a living creature. They speak of having it (or "him," as the smartphone is masculine in Hebrew) all the time, everywhere; they say that they learn to trust it, they have a connection to it, and it contains and preserves all of their details, pictures, and memorable moments.

This information also contributes to the conclusions regarding research problem (4) that deals with the smartphone's ability to serve as a "virtual friend." It is more prominent for the youth in this aspect in comparison to Generation Y. However, the Generation Y respondents also noted its functional and unique capabilities, compared to other devices, with respect to its mobility, access to information, ease of use, and fulfillment of the need for communication. But unlike the youth, they did not speak of or demonstrate a relationship with and emotional connection to the smartphone.

To summarize, this subchapter is unique and slightly different from those that follow. In this subchapter, I addressed and discussed the research problems that deal with the culture of the youth, the culture of smartphone use among the youth in Israel, the needs that the smartphone provides and does not provide, and its characteristics as a "virtual friend." These research problems were not hypothesized as will be the case for the detailed research problems presented later in the chapter. This subchapter provided insight into the personal and cultural world of the youth in Israel, and in addition, made it possible to understand and draw conclusions about the dominance and centrality of the smartphone device in the daily life of the youth, also thanks to comparison with the older group, Generation Y. These conclusions and understandings are important for the further investigation and presentation of the data in this chapter.

5.3 Sociality and smartphone use

The second subchapter is titled “sociality and smartphone use” because I will discuss six research problems here related to communication and the youth society. These research problems address (5) how the smartphone influences the motivation of youth to make face-to-face interactions, (6) how smartphone use changes the interaction patterns among youth and between youth and other people, and (7) what the increasing use of the smartphone does to the ability to recognize facial expressions for youth. I will also discuss the influence (8) of digital media use via the smartphone on youth social involvement and (9) how smartphone culture affects intimate relationships among the youth. Finally, (10) I address how the smartphone affects the youth’s courage to express an opinion.

(5) In order to deal with the first problem –how the smartphone influences the motivation of youth to make face-to-face interactions –, the motivation for face-to-face interaction was computed by the mean of items 22-25. The answers were on a Likert scale between 1 and 5 (1 = not at all, 5 = every day/very important). Cronbach’s Alpha was found to be $\alpha = 0.80$ in the general sample ($\alpha = 0.81$ in the Generation Y sample and $\alpha = 0.75$ in the Generation Z sample). Higher scores indicate a higher motivation for face-to-face interaction.

Table 7 presents descriptive statistics of the motivation for face-to-face interaction measures as well as the differences between groups in these measures. The differences in motivation for face-to-face interaction were examined by an independent t-test analysis.

Table 7: The differences in motivation for face-to-face interaction by research groups (N = 661)

Measure	Generation Z n=512		Generation Y n=149		t
	M	SD	M	SD	
Frequency of meeting friends	3.92	0.91	2.80	0.97	12.89**
Try to initiate face-to-face meetings	3.61	1.04	2.63	0.92	10.31**
Would like to meet friends face to face	4.32	0.72	3.38	0.98	12.77**
Importance of initiating face-to-face meetings	4.58	0.60	4.45	0.68	2.20*

General scale: motivation for face-to-face interaction	4.12	0.64	3.33	0.74	12.95**
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p<.01**, *p*<.05*

The motivation for face-to-face interaction was generally medium-high among the general sample (mean of 3-4 on a scale of 1-5). There were significant differences between the samples of Generations Z and Y in all of the measures of motivation for face-to-face interaction. The Generation Z sample report significantly higher motivation for face-to-face interaction in comparison to Generation Y.

(5&6) It is important to note that the quantitative part did not directly examine the second research problem (6), which deals with how smartphone use changes the interaction patterns among the youth, and between youth and other people. However, the qualitative part did examine both the first and the second research problem, via the IDI interviews through questions 6 and 9. In question 6⁶, I was interested to learn how social meetings are organized nowadays. It was found that almost all research participants, from both generations, organize meetings by using the WhatsApp app, which is very popular in Israel: *“WhatsApp 99% of the time”* (S.Z., male, 35 years old). Individuals from Generation Z reported that they also organize face-to-face meetings during school hours: *“Mostly on WhatsApp, but also sometimes at school, if we meet then it can already be determined”* (F.P., female, 17 years old), and a few Generation Y research participants reported that they sometimes arrange meetings by phone-call: *“Talk on the phone or on WhatsApp and schedule”* (M.L., female, 35 years old).

In addition, I was interested to know whether the research participants are the ones who initiate the social meetings, through question number 9⁷. It was found that most of the Generation Z research participants are the ones who initiate the social meetings, despite the intensive use of the smartphone: *“Yes I’m trying to initiate. It’s important to me”* (N.S., male, 18 years old); others said: *“Yeah ... lol ... full, all the time”* (M.M., female, 15 years old). And, *“Ummm I’m one of those people who tries to initiate”* (Z.Y., female, 17 years old). At the same time, there were Generation Y research participants who reported that in the past they used to initiate social meetings, but over time, and probably due to the routine of adult life, they no longer did so as

⁶ Question 6: How do you organize a social meeting?

⁷ Question 9: Are you a person who initiates social meetings?

much as they would want to: *“Sometimes yes, in the past more. In the last year much less. Listen, there is a lot of pressure at work; no time, I am with the family more, and I generally have a lot of tasks”* (O.S., male, 36 years old). There were more answers like: *“Ummm in recent years no, but I used to be more like that. More a matter of free time and stamina* (S.Z., male, 35 years old), and *“Yes, but today I am much less so than in the past, there is not as much energy as before”* (Y.S., male, 37 years old).

For the research problem (5) that deals with how the smartphone influences the motivation of youth to make face-to-face interactions, it was hypothesized that the more the youth use the smartphone, the less motivation they have to engage in face-to-face interactions. In order to examine this hypothesis, a Spearman correlation analysis was performed. The results showed there was no significant relationship between smartphone use and the motivation for face-to-face interaction among the sample from Generation Z ($r_s = -0.04, p > 0.05$), or among the sample from Generation Y ($r_s = 0.14, p > 0.05$).

In the qualitative part, in the IDI interviews, a match was found for the quantitative questionnaire, where similar conclusions were reached. It was found that the youth are motivated and make efforts to initiate and meet. These results indicate that the hypothesis that the more young people use smartphones, the less motivated they are to engage in face-to-face interactions has not been verified positively.

(7) The next research problem, dealing with the effects of smartphones on the ability to recognize facial expressions, was examined using the quantitative questionnaire only. This variable was measured by question 26, which presented four pictures. The research participants were asked to identify the emotion expressed in each figure. A right answer was coded as 1, and a wrong answer was coded as 0. The ability to recognize facial expressions was computed by the sum of answers on a scale of 0-4. Higher scores indicate higher ability to recognize facial expressions. Cronbach’s Alpha was found to be $\alpha = 0.54$ in the general sample ($\alpha = 0.52$ in the Generation Y sample and $\alpha = 0.58$ in the Generation Z sample).

The research participants were asked to identify the emotion being expressed in four images of faces. Table 8 presents the distribution of answers.

Table 8: Distribution of right identification of emotions (N = 689)

	Generation Z	Generation Y
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<i>Right identification</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>X²</i>
Nervous	443	82.3%	134	88.2%	2.92
Joyful	469	87.2%	131	86.2%	0.10
Apathetic	149	27.7%	60	39.5%	7.78**
Skeptical	215	40.0%	76	50.0%	4.89*

p<.01**, *p*<.05*

The statistics indicate that the majority of research participants in both samples recognized the emotions of nervousness and joy correctly (82%-87%). Approximately half of the sample of both groups recognized the emotion of skepticism correctly (40%-50%). However, the majority of research participants in both samples did not recognize the emotion of apathy (only 28%-39% were right).

There were significant differences between the samples from Generations Z and Y in the right identification of the emotions of apathy and skepticism expressed in the figures (2 out of 4 figures). Higher rates of research participants among the sample from Generation Y correctly identified these emotions in comparison to the sample from Generation Z.

Table 9 presents the differences in the total score of the right identification of emotions within the research groups. The differences were examined by an independent t-test analysis.

Table 9: The differences in the total score of the right identification of emotions by research groups (N = 689)

	Generation Z		Generation Y		t
	n=537		n=152		
	M	SD	M	SD	
Ability to recognize facial expressions	2.37	1.06	2.63	1.13	-2.67**

p<.01**

The ability to recognize facial expressions was generally medium (mean of 2.3-2.6 on a scale of 1-4). There were significant differences between the samples from

Generations Z and Y in the total score of the right identification of emotions. The ability to recognize facial expressions was significantly higher among the sample from Generation Y in comparison to Generation Z.

For this research problem, it was hypothesized that the increasing use of smartphones leads to lack of ability to recognize facial expressions among the youth. In order to examine this hypothesis, a Spearman correlation analysis was performed.

The results showed there was no significant relationship between smartphone use and the ability to recognize facial expressions among the sample from Generation Z ($r_s = -0.04$, $p > 0.05$), or among the sample from Generation Y ($r_s = -0.01$, $p > 0.05$). These results indicate that the hypothesis that the increasing use of smartphones leads to lack of ability to recognize facial expressions has not been verified.

(8) In order to examine and discuss the following research problems, which deal with the impact of digital media use via smartphone on youth social involvement and the effects of smartphones on intimate relationships among youth, a number of questions were posed in the quantitative questionnaire, and several questions in the qualitative IDI. I will note that this research problem is so broad and central that the questions from both parts (quantitative and qualitative) dealt with more than just the second research problem (6). They also address the research problem dealing with how smartphone culture affects intimate relationships among the youth (2.e), and parts of the research problem dealing with how the smartphone affects the youth's courage to express an opinion (10).

Therefore, for this research problems, three main variables were examined: (i) social engagement, (ii) virtual social engagement, and (iii) social interaction.

(8.i) In the questionnaire, social engagement was measured by items 9-10. The answers were on a scale of 0 = not true and 1 = true. Cronbach's Alpha was found to be $\alpha = 0.56$ in the general sample ($\alpha = 0.62$ in the Generation Y sample and $\alpha = 0.54$ in the Generation Z sample). The social engagement score was computed by the sum of items. Higher scores indicate higher support for the attitude that the smartphone fulfills the need for social interaction. The variable "virtual social engagement" was measured by questions 37-39, which elicit the number of friends/groups within the social networks, as well as their perceived importance (question 41), whose answers were on a Likert scale between 1-5 (1 = not at all important, 5 = very important). Social

interaction was measured in the first part of the questionnaire by items 6-7 and 19-20. The answers were on a scale of 0 = not true and 1 = true. Due to lower scores of Cronbach's Alpha, these items were analyzed separately. Additionally, there were a few other items related to social interaction in questions 21 and 47-49, and these items were analyzed separately as well.

To get the results for the variable "social engagement," the research participants were asked two questions that relate to social engagement. Table 10 presents the distribution of answers.

Table 10: Distribution of social engagement aspects (N=687)

<i>Social engagement</i>		Generation Z		Generation Y		<i>X</i> ²
		<i>n</i> =535	%	<i>n</i> =152	%	
A group conversation in one of the social networks on the smartphone is considered a social meeting	False	498	93.1%	137	90.1%	1.47
	True	37	6.9%	15	9.9%	
A group conversation in one of the social networks on the smartphone meets my need for a social meeting	False	481	89.9%	132	86.8%	1.15
	True	54	10.1%	20	13.2%	

The statistics indicate that the majority of both samples reported that it is not true that a group conversation in one of the social networks accessed via the smartphone is considered a social meeting, nor that it meets the need for a social meeting (89%-93%). There were significant differences between the samples from Generations Z and Y in their attitudes that the smartphone fulfills the need for social engagement.

(8.ii) To obtain the results for the variable "virtual social engagement," the research participants were asked to report on the number of friends/groups in their social networks, as well as their perceived importance. Table 11 presents the distribution of answers.

Table 11: Distribution of the variable "virtual social engagement"

<i>Social network</i>		Generation Z		Generation Y		<i>X</i> ²
		<i>N</i>	%	<i>N</i>	%	
WhatsApp groups	1-30	251	47.9%	137	91.3%	91.72**
	31-100	179	34.2%	13	8.7%	

	100+	94	17.9%	-	-	
Instagram followers	0	41	7.8%	74	50.7%	241.42**
	1-30	14	2.7%	24	16.4%	
	31-100	37	7.1%	23	15.8%	
	100+	432	82.4%	25	17.1%	
Facebook friends	0	217	42.0%	7	4.7%	112.45**
	1-30	73	14.1%	10	6.7%	
	31-100	75	14.5%	21	14.1%	
	100+	152	29.4%	111	74.5%	

p<.01**

The statistics indicate that higher rates of research participants among the sample from Generation Z reported that they have over thirty WhatsApp groups (52%) in comparison to Generation Y (9%). The majority of the Generation Y sample reported that they have 1-30 WhatsApp groups (91%). Similarly, higher rates of research participants among the sample from Generation Z reported that they have over 100 Instagram followers (82%) in comparison to Generation Y (17%). The majority of the Generation Y sample reported that they have no Instagram followers at all (50%). These differences were significant.

However, higher rates of research participants among the sample from Generation Y reported that they have over 100 Facebook friends (74%) in comparison to Generation Z (29%). The majority of the Generation Z sample reported that they have no Facebook friends. These findings indicate significant differences between the samples from Generations Z and Y in their level of virtual social engagement.

Next, the research participants were asked what is the importance of the number of members in the social networks.

Table 12: Distribution of the importance of members in social networks by research groups (N = 680)

Importance of members in social networks	Generation Z		Generation Y		<i>X</i> ²
	n=530		n =150		
	<i>N</i>	%	<i>N</i>	%	

Very important	22	4.2%	3	2%	27.6
Important	70	13.2%	11	7.3%	
Medium importance	125	23.6%	20	13.3%	
Not so important	197	37.2%	54	36%	
Not important at all	116	21.9%	62	41.3%	

p<.001**

The distribution of the data in percentages shows that most of the youth treat members of social networks as not so important. At the same time, it can be seen that for Generation Z, the importance of members on social networks is slightly more important compared to Generation Y, who do not consider members on social networks important at all, and this difference is found to be completely clear.

The differences were examined by an independent t-test analysis.

Table 13: The differences in the importance of members in social networks by research groups (N = 677)

	Generation Z n=530		Generation Y n=147		t
	M	SD	M	SD	
Importance of members in social networks	2.41	1.09	1.93	1.01	4.81**

p<.01**

The importance of members in social networks was generally medium-low (mean of 1.9-2.4 on a scale of 1-5). There were significant differences between the samples from Generations Z and Y in the perceived importance of the number of members in the social networks. The importance of the number of members in the social networks was significantly higher among the sample from Generation Z in comparison to Generation Y.

(8.iii) To get the results for the variable “social interaction,” the research participants were asked several questions that relate to social interaction. Table 14 presents the distribution of answers.

Table 14: Distribution of social interaction aspects

<i>Social interaction</i>		Generation Z		Generation Y		<i>X</i> ²
		<i>N</i>	%	<i>N</i>	%	
It happened to me once that I called or sent a text message to someone next to me or with me in the same room	False	146	27.4%	38	25.0%	0.34
	True	387	72.6%	114	75.0%	
It happened to me once that I found myself investing time in writing a message/email/recording a voice message instead of actually calling the person	False	60	11.2%	4	2.6%	10.32**
	True	475	88.8%	148	97.4%	
While with a spouse, I would upload a photo of us together	False	301	57.0%	115	75.7%	17.28**
	True	227	43.0%	37	24.3%	
It happens that I use a smartphone while I am alone with my spouse	False	277	53.2%	12	7.9%	98.43**
	True	244	46.8%	140	92.1%	

p<.01**

The statistics indicate that the majority of both samples reported that it happened to them once that they called or sent a text message to someone next to them or with them in the same room (72%-75%).

The majority of both samples reported that it happened to them once that they found themselves investing time in writing a message/email/recording a voice message instead of actually calling the person. However, higher rates among the sample from Generation Y (97%) agreed in comparison to Generation Z (88%). This difference was significant.

The majority of both samples reported that it is not true that while with a spouse, they would upload a photo of them together (57%-75%). However, higher rates among the sample from Generation Z (43%) agreed in comparison to Generation Y (24%). This difference was significant.

The majority of Generation Y agreed it happens that they use a smartphone while alone with their spouse (92%), while the majority of Generation Z did not agree (53%). This difference was significant.

Next, the research participants were asked what is the easiest way for them to convey a message. Table 15 presents the distribution of answers.

Table 15: Distribution of frequencies of the easiest way to convey a message (N=683)

<i>The easiest way to convey a message</i>	Generation Z		Generation Y		X²
	n=533	%	n=150	%	
Speak up	258	48.4%	43	28.7%	18.69**
Send text message	240	45.0%	95	63.3%	
Record a voice message	35	6.6%	12	8.0%	

p<.01**

There were significant differences between the samples from Generations Z and Y as to the easiest way for them to convey a message. Higher rates among the sample from Generation Z (48%) would speak up in comparison to Generation Y (28%). Accordingly, higher rates among the sample from Generation Y (63%) would send a text message in comparison to Generation Z (45%).

Next, the research participants were asked how they would prefer to tell someone how they feel or think about them. Table 16 presents the distribution of answers.

Table 16: Distribution of frequencies of interaction preferences

		Generation Z		Generation Y		X²
		N	%	N	%	
I prefer to tell someone what I feel about him (positive or negative) by	Phone call	14	2.8%	21	14.4%	44.61**
	Text message	80	15.8%	40	27.4%	
	Face to face	405	80.2%	84	57.5%	
	Other	6	1.2%	1	0.7%	
I prefer to tell someone what I think about him (positive or negative) by	Phone call	19	3.8%	17	11.7%	18.69**
	Text message	80	15.9%	48	33.1%	
	Face to face	397	78.9%	80	55.2%	
	Other	7	1.4%	-	-	

p<.01**

The statistics indicate that the majority of both samples reported they would prefer to tell someone how they feel or think about them face to face (55%-80%). However, there were significant differences between the samples from Generations Z and Y in the way they would prefer to tell someone how they feel or think about them. Higher rates among the sample from Generation Z (79%-80%) would prefer the option of face to face in comparison to Generation Y (55-57%).

In the qualitative section of the IDI interviews, the research problems which deal with the impact of digital media use via smartphone on youth social involvement and the effects of smartphones on intimate relationships among youth were examined using a number of key questions.

For the first variable in the research problem dealing with social involvement, social engagement (i), questions 4, 8 + 7 were examined in IDI. These questions made it possible to deepen understanding of the research problem through the interview conversation. Question 4⁸ examined what is considered a social meeting for the research participants. The answers were interesting and emphasized the physicality of the meeting: *“Ummm is to be with people I define as friends, but not necessarily, as any people, and to have some kind of communication with them. But it has to be real, not Zoom for example”* (H.Y., female, 15 years old). There were other similar answers as well: *“Social meetings are considered meetings with everyone, face-to-face interactions, seeing them, going out with them. It’s really important to me”* (Y.Z., male, 17 years old); *“It’s sitting with friends and having fun with friends. For example, in Zoom or WhatsApp it’s a social interaction but it’s not a social meeting”* (Z.Y., female, 17 years old). Others said, *“I’m not a person who likes too many people around me; five to six friends is enough, and going to the sea together, or other small things. The main thing is that we meet”* (G.B., female, 17 years old), and *“A person-to-person meeting. Not in a phone call. In a physical meeting you see the face, facial expressions, movements, reactions; you see how he feels. On the phone you do not see it, and it is different, you understand?”* (T.V., male, 16 years old) Another one said, *“When I meet people physically, I can’t stand talking on the phone. Not even on WhatsApp. Meeting face to face, in the reality”* (M.U., male, 18 years old).

However, it was found that for some Generation Z research participants, an online meeting can also be considered a social meeting. But this is not ideal, and the

⁸ Question 4: What is a social meeting in your opinion?

preference is for a physical meeting, and less for an online meeting using platforms such as Zoom or WhatsApp: *“Meeting friends, going to places, meeting at home. It can also be a video meeting, but it does not replace it. It is less fun”* (Y.D., female, 15 years old). And *“Ummm a meeting with my friends. Suppose a meeting on Zoom or WhatsApp is also considered, but it’s not fun. I prefer face to face, I do not like to record messages or videos. I like to meet physically”* (N.B., male, 15 years old). Others said: *“A social encounter is being with friends, having fun and that. And Zoom and such, it is possible, but it’s not ideal. It’s not exactly a meeting, it is more an ‘exchange things’ with each other”* (H.N., male, 15 years old). Another said, *“Just meet, sit with friends. Zoom is a little less personal, and I prefer to do it physically. But if that’s what’s possible at the moment, then it can be nice”* (F.F., female, 17 years old). And *“Social gathering, it can be anything, for example, in class or being outside. Even in Zoom or WhatsApp it is considered but it is less ideal. Nice option but I prefer not to”* (F.S., female, 15 years old).

For Generation Y, in comparison, a social meeting is more clearly and decisively physical: *“Sit with friends somewhere, face to face”* (A.B., female, 36 years old); others said, *“Physically meet people”* (T.K., female, 35 years old), and *“A meeting is necessarily a face-to-face meeting; otherwise, I do not define it as a ‘social meeting,’ because it should be a meeting (sc. in person). With close people who set a time for it in advance, who devote time to it and make time for it. A meeting for example in Zoom? It’s very difficult for me”* (Y.M., female, 35 years old). And, *“It’s even, it’s any encounter with other people, with mothers from kindergarten, with one friend, with friends when coming with children or without children; it’s a meeting. Even at work, meeting people at work can be a social meeting. And let’s say online it is, yes, but less powerful, I guess it’s hard for me to actually call it a meeting, it’s like a social discourse but not a meeting”* (M.S., female, 34 years old); another said, *“Ummm a social meeting – this interview is also a social meeting; we are sitting here talking, and it is a social meeting. And for example, the social network does not count; it must be physical and not virtual”* (I.R., male, 36 years old); the next one mentions direct communication: *“Being in the same space, direct, direct communication. When you talk and there is eye contact, you see body language”* (A.G., female, 33 years old).

Following the quantitative questionnaire, question 7⁹ in the IDI was intended to gain an in-depth understanding of the data obtained in the questionnaire, and indeed the same trend was found. That is, most respondents reported that an online meeting is not a substitute for a physical meeting. For Generation Z: *“Ummm no, no. Cannot. I can talk to them (friends) for hours on the phone, but I still want to see them”* (A.Z., female, 18 years old), and *“No. It’s nice to talk to people on WhatsApp, but there’s no substitute for face-to-face communication”* (N.N., male, 18 years old). Others answers were clearer and more direct: *“No. Because I prefer face to face; if there is no choice then I talk to friends who live let’s say far away. But it does not satisfy me. Like, there is always a need for the physical interaction, the longing does not stop after a call on WhatsApp let’s say”* (M.M., female, 15 years old). Another respondent said, *“No. WhatsApp and such is just the means by which things can be conveyed. I will document with it, even in school assignments. But it’s not a substitute”* (G.B., female, 17 years old); and another said, *“Ummm I think not. I can talk for hours with a friend over the phone, and it’s still not the same, it does not replace it. I will miss the physical meeting”* (R.E., female, 17 years old).

The same goes for Generation Y: *“It provides communication, but it is not a substitute for a meeting. Sharp and smooth. Look, in the everyday atmosphere and routine there is no chance of meeting all the time, then the phone answers some of the need to meet but it will never be a substitute”* (Y.A., female, 36 years old). Others said: *“Unequivocally no. It’s something that even bothers me: the phone can compensate a bit and it also does not reach levels of conversation that dig into physical interaction, and a phone conversation is stronger than a WhatsApp conversation. But it’s not the same as a physical encounter; it’s not something that will compensate for a meeting and will achieve the same effect as sitting face to face”* (Y.S., male, 37 years old). Another said, *“No. Absolutely not. And I’ll explain to you, because it’s not a good enough way to get a direct answer from a person. For example, I’m sending you a message and not sure you will answer me now, and if we meet then you will surely answer me. As if there is immediate feedback that the phone does not have”* (A.Y., male, 37 years old); and *“No. There is no substitute for physical interaction. It’s virtual life; it’s not like meeting the person, seeing him, talking to him; it feels different. You*

⁹ Question 7: Does communication via the smartphone provide the need for contact with a friend as a substitute for a physical encounter?

cannot compare a group talking on WhatsApp versus sit and drink beer and talk. We may talk about the same topics, but it will not be as real as in a face-to-face meeting. Listen, there is never any pressure to meet friends, but I always prefer to meet them face to face” (I.R., male, 36 years old).

At the same time, there were Generation Y respondents who felt that an online meeting could satisfy the need for a physical meeting, at least in part and temporarily: *“Not so for a meeting, but it satisfies the daily need. And given the pace of life as it is now, if I was in high school and had more free time, I do not see myself doing anything with the phone and not going to the park or anything else physical. It is more for maintenance” (Y.M., female, 35 years old).* Others answers were: *“Ummm in writing certainly not, I always prefer to call and talk, and sometimes in a phone call because of a busy schedule for example. So, I can replace the physical meeting with a long phone call let’s say, because I know how hard it is to meet physically” (L.L., female, 36 years old); “The online meeting is partly satisfying, as if it could be a nice moment at that instant. But if it’s a person I have a deep acquaintance with, then I will aspire to meet with them. With most people, I will aspire to meet with them face to face. But yes, there may be a situation where I will not really have to meet them again, physically” (A.B., female, 36 years old); another said, “Wow, at the moment I have my own family, so it’s a replacement but not completely. It’s hard for me to answer, because on the one hand yes and on the other hand, I really want to meet face to face. Like, I’m missing it, and it rarely happens, so in the meantime, the smartphone satisfies the need for meeting, no doubt. It’s easier on the phone, but when I go out with friends physically it’s a lot more fun” (N.H., male, 37 years old).*

Finally, through Question 8¹⁰, I wanted to find out and understand what is important in the eyes of the research participants: for a face-to-face social meeting with friends; what is the importance of interpersonal communication in general, and what distinguishes it from online (electronic) communication. The findings were similar in their trend, both among the research participants in general and between the generations. In Generation Z, answers were given such as *“Ummm it’s a certain intimacy you can expose yourself and the person in front of you to. The conversation is closer, and another difference is the attention; for example, in an online meeting I can*

¹⁰ Question 8: What is the importance of meeting face to face with friends in general? And the importance of interpersonal communication? What is the difference between interpersonal communication and e-communication?

do a lot of other things at the same time, and when I am with the person, I want to be present to him and with him” (D.Z., female, 18 years old). Other answers were, “When you have a meeting with a person face to face and not in front of a screen then you can see him, hug him; it’s not the same thing” (F.P., female, 17 years old); “Very important; you can understand the sensitivity and emotion of the person you are talking to. On the phone it’s not like that; you cannot understand him. And face to face you can see his body language and facial expressions; it’s like, cannot replace” (F.S., female, 15 years old). Others said, “It’s important to the communication, that we do not become robots. Unlike the 5-6-7-year-olds who are wow, they are on screens all day, cannot develop a conversation. I think they are completely screwed up, this generation. In face-to-face communication you see facial expressions and hear a tone of voice. For example, on WhatsApp, people may think I’m angry and I’m not at all. And that can lead to many conflicts. It’s hard to express on WhatsApp” (N.Z., female, 18 years old). Also, “Yes, very much, because it’s a release like that. You’re all in the meeting, with everyone; you do not pay attention and deal with other things. You are connected with friends, and not through the screens. It’s significant, there is a very big difference, like, you can see facial expressions and such. And like, through the screen you cannot see anything and it’s less fun” (R.E., female, 17 years old). Another said, “Important. Very important; over the phone it’s not really a meeting; you can understand but you cannot see expressions and also like, talk, fill in gaps but you cannot hug or feel. On WhatsApp, let’s say, or online in general, you do not see the comments and it is as if missing. Face to face is really much better. Face to face is how you get to know people, understand the environment. On the phone it is possible, but less so” (M.M., female, 15 years old). And in a short sentence: “Love between friends passes physically and not virtually” (S.Y., female, 15 years old).

The comparison group (Gen Y) said: *“There is a meeting in the eyes, you see each other, body language, and it’s really important” (T.K., female, 35 years old), and “Ummm it’s to me the real connection, the interpersonal connection, that produces a real personal relationship involving friends, rather than a colleague from work or a distant acquaintance. It’s really friendships, a deep connection, which should be unmediated, in my opinion. And online communication, on the phone, it makes it hard for me to connect to a person, and to know what is happening to him in the deep and authentic issues” (Y.M., female, 35 years old); also, “Highest (importance). Because*

there are all kinds of behaviors that are seen in a physical encounter. For example, in job interviews, there is a non-verbal language that can only be seen in a physical encounter. It's still not the same, and you cannot identify and come up with all sorts of expressions” (N.H., male, 37 years old); “Ummm first of all it's physical, you see physically; a friend who has changed has not changed (in a virtual interaction), white hairs; on WhatsApp it is not reflected. And that's it. It is interpersonal communication to sit and be with friends, to sit and see each other, to look into the eyes. For example, on Zoom, I do not feel it is a substitute; on Zoom you cannot smell, for example, I'm just saying” (E.R., male, 37 years old). Others said, “The importance is high, but unfortunately it does not happen much; the schedule is tight, and then the communication is mostly on the phone and you meet once in ... the difference is first of all meeting face to face is a statement that it is important to me, you are connected with the person; I made time to be with him; and online it's not like that, you can do more things, the kids are interfering. It's not the same thing” (Y.A., female, 36 years old), and another said, “Ummm there is something in the interaction that is physical, ummm in the same room, that creates a certain closeness that the world of screens and digital communication is unable to replace. That is, in the end, you never are, there is still no technology that allows you to see the person fully and be impressed by his body language clearly and his non-verbal language. And this is the most important thing in physical communication” (A.I., male, 36 years old).

The second variable, virtual social engagement (ii), was examined through question number 23¹¹, which was designed to understand in depth the importance to youth of the number of members in the social network. Similarly to the questionnaire, most of the youth claimed that it doesn't matter: *“Not something particularly critical. It's not a measure of happiness, not critical in my eyes, and it does not matter to me. I do not know how many followers I have, for example” (F.P., female, 17 years old), and “It doesn't matter. I really do not care, and it does not matter” (N.S., male, 18 years old). More answers were, “Followers – for me it does not seem important, not for me anyway” (H.N., male, 15 years old); Another said, “lol ... does not matter at all; I do not deal with it” (Y.O., male, 16 years old). In addition, there were respondents who noted that in the past, members on social media had meant something to them, but as*

¹¹ Question 23: What is the importance of the number of members on social networks? And why is that important to you?

they got older the importance decreased: *“For me it used to be a matter of really major importance, but I slowly realized that it’s nothing and should not be a big deal. And today I do not make a story out of it”* (S.Y., female, 15 years old); *“Honestly, it used to be important to me, but that was about two or three years ago, and then I said to myself it’s shit and nonsense, ‘what’s going to happen?’, ‘Oh oh and I will not have followers,’ it’s nonsense”* (M.D., male, 18 years old). Another said, *“Ummm ... the truth is that I once remember, when I had a low number of followers it bothered me, but with time and age, the enthusiasm goes down and that does not mean that the importance is less, but at the moment it is less interesting to me”* (Y.Z., male, 17 years old).

Similar results were also obtained in interviews with the Generation Y research participants. For most respondents, the number of members in the social networks does not matter. However, in some of the interviews, another option was raised: *“Ummm very important, yes. But I will say something else. I see it professionally, I see social networks as something professional; I do not bring up personal things about me or thoughts and such; everything I write and bring up is related to my field of occupation, and as a whole, the more friends you have, the more influential you are in your field and because of that, quantity (members) is important to me”* (A.I., male, 36 years old). Other similar answers were, *“No no, it depends where. On LinkedIn it matters, because it’s your professional career, but on Facebook it does not matter at all.”* (N.H., male, 37 years old); *“It doesn’t matter. Maybe just for business needs, but other than that it doesn’t matter”* (I.R., male, 36 years old), as well as, *“On a personal level for me it’s not important, but I do think it’s really important for those who want to be independent for marketing purposes”* (O.S., male, 36 years old).

The third variable, social interaction (iii), is examined through the research problem discussing social involvement, but here, this variable is also discussed in part; the next research problem (9) deals with the effects of the smartphone on intimate relationships among youth. Both issues were examined in the IDI interview through questions 5, 10, 11, 12, 13, 15, 16, and 17.

Still, as for the research problem dealing with social involvement, question 5¹² is designed to acquire an in-depth understanding of what happens during the social encounter, what is done during the social interaction. The answers were mostly the

¹² Question 5: What do you do during a social meeting?

same, both between research participants and between the generations. For Generation Z, in social gatherings they most often talk, have “laughs,” eat, and play together: *“Talk, eat, watch movies”* (F.F., female, 17 years old); *“Eat, watch a game, talk all kinds”* (N.B., male, 15 years old); *“Watching a movie, going out, meeting at each other’s houses, laughing, ordering food”* (Y.Z., male, 17 years old). Another said, *“Talk, eat, smoke, I do not ... yes?! Talk and tell jokes about each other. Funny”* (N.Z., female, 18 years old). And sometimes they use the smartphone as part of the meeting: *“Sitting, talking, laughing, doing TikTok together. Having fun”* (O.N., male, 18 years old); *“On the phone ... lol ... sitting talking, having fun with each other. And also, sometimes being on, and using the phone, there’s nothing to do”* (Z.Y., female, 17 years old). There were more answers that express negative feelings related to the presence of the smartphone, like: *“Sitting together and drinking, and I’m most annoyed when someone takes out their smartphone”* (M.D., male, 18 years old), as well as, *“When you meet with the smartphone, it really annoys me. Like, be on the phone at home, why do it when we are together? I always say stop, because otherwise why did we meet?”* (M.M., female, 15 years old).

In the comparison group (Gen Y), the smartphone is not involved, and they usually talk, laugh, and share updates and experiences during their meetings: *“Ummm a place to catch up on what’s going on in each other’s lives, vent feelings, laugh, share experiences”* (Y.M., female, 35 years old); *“Mostly seeing each other, conveying experiences from the time, from the time we did not meet, and then from there it flows, memories and laughter”* (E.R., male, 37 years old).

As part of addressing and understanding the research problem, in question 10¹³, similar answers were found both among the youth and in comparison, among Generation Y. Most youth respondents said that a situation in which they would talk to a person and not look at him throughout the conversation did not happen and would not happen in the future: *“Ummm no, I’m not capable of doing that”* (R.E., female, 17 years old); *“I do not think so, it’s weird; it’s part of communication, you know”* (O.N., male, 18 years old); *“It’s very important to make eye contact and interact with the person you’re talking to”* (F.S., female, 15 years old). Another said, *“I think not, and if so then I do not remember, but I do not believe it will happen to me because I try to make eye*

¹³ Question 10: Have you ever had a conversation with a person and did not look at him in the whole conversation?

contact and be interested” (A.Z., female, 18 years old). The same answers were given by Generation Y: *“No. There is no such thing”* (Y.M., female, 35 years old); *“No. There is no such situation”* (M.L., female, 35 years old); *“Ummm I do not think so; I always try to look into the eyes”* (A.Y., male, 37 years old).

However, there were some youths who reported that such a situation definitely happened to them and would happen in the future: *“Yes, I think it has happened, in situations that are not always pleasant to look at. So yes, I believe it has happened; it seems to everyone it has happened”* (G.B., female, 17 years old); *“I never look at people, cannot make eye contact; it’s embarrassing”* (Y.O., male, 16 years old); *“Ummm yes unequivocally, it happens to me; it’s hard to make eye contact; it’s embarrassing”* (Y.F., female, 15 years old). And so, in the comparison sample (Gen Y): *“Ummm yes, the truth is, it’s happened to me a few times at work. But it’s just, you know, it’s situations where I’m busy, or I have no patience, or I’m on the computer and not looking”* (I.R., male, 36 years old). And *“Ummm probably not, but maybe yes, because I had to be focused on something very important at work and I was with the phone and not looking. But it’s because of work”* (O.S., male, 36 years old); *“It can happen in such a situation that I am half an hour on the phone so I do not look at anyone”* (S.Z., male, 35 years old).

Now, for an in-depth and comprehensive examination of the research problems, three questions were asked regarding the research participants’ feelings (presence, concentration and enjoyment) when they use the smartphone while they are physically interacting socially. The first question, question 11¹⁴, examines the research participants’ sense of presence when using a smartphone while physically socially interacting. Across the board, the youth expressed meaningful sentences that highlighted their physical absence: *“Ummm you may be less present, as if you are disconnected, when you are on the phone”* (N.B., male, 15 years old). Others said, *“It (presence) goes down, obviously, because I’m less connected to what’s going on outside. I’m with myself in my own world”* (H.N., male, 15 years old), and *“You, like, disconnect, you’re not in place, you do not hear what’s out there”* (M.U., male, 18 years old); *“Ummm disappears, it’s just you’re not taking part anymore; there’s a meeting and you’re actually coming out of it to really do something else”* (Y.F., female, 15 years old); *“Ummm it’s terribly taking me away from the event; I kind of disconnect*

¹⁴ Question 11: What happens to your presence in a situation or event when you use the smartphone?

from where I am, and my presence actually goes down; they won't notice me" (R.E., female, 17 years old).

The findings from the comparison group (Gen Y) were similar to those from the youth: *"I disappear; I cannot do both. For me it's this or that or that. In a meeting, I literally turn the phone on its face; I'm unable to do both"* (T.K., female, 35 years old); *"I am unequivocally not there, even if I do not consciously notice it"* (Y.S., male, 37 years old). The next participant actually spoke about a difficulty in his personal life and the process he went through to change his smartphone usage habits: *"Less noticeable (presence); I'm aware of that, no doubt. It's like it's a price I sometimes pay, both on a personal and family level. But today I did a process with myself so I feel more balanced. I can say that for a long period of about a year, I notice that I'm in a social situation, and I try to be in the 'here and now' and not spill over into other things that are happening around me, meaning the phone, right on the level that I will not answer the phone from work"* (O.S., male, 36 years old). More similar answers included, *"I think there's something very absorbing about the phone; I feel like you're not in the same place in space, you're in a different place, whether it's on WhatsApp or one site or another, you're like being in, and not in. Your ability to be in two situations at once is nonexistent, and I feel empty, because I'm neither here nor there"* (A.G., female, 33 years old), and, *"Unequivocally, I'm not there"* (S.Z., male, 35 years old).

Question number 12¹⁵ examined the research participants' sense of concentration when using a smartphone while they are physically socially interacting. The results were identical among the participant groups. The youth reported that they were unable to concentrate when using the smartphone: *"No. I think not, because it distracts and changes the thread of thought and feeling, and I prefer without"* (F.S., female, 15 years old); others said, *"When I'm on the phone I'm all inside; I can be there for hours and not notice what's going on"* (M.D., male, 18 years old), and *"Absolutely not. The phone takes you"* (T.V., male, 16 years old); *"If I'm talking to someone then I'm with him. And my presence with the phone is hard for me because I cannot concentrate on more than one thing"* (Y.D., female, 15 years old).

In the comparison group (Gen Y), most but not all research participants reported an inability to concentrate: *"Very difficult. Very difficult for me. Very difficult"* (A.B.,

¹⁵ Question 12: Do you manage to concentrate when you use a smartphone while you are in a physical social interaction?

female, 36 years old); *“Ummm not so much (concentrating); it’s distracting”* (H.I., female, 34 years old). The next participant describes how brief phone checking during a work session diverts attention from what is happening: *“I lose concentration. Let’s say it happened to me that I’m at work in a work session, phone with me; if I allow myself to look at the phone for a second, it becomes a two-hour session, yes?! Even peeking at a picture or message, I unequivocally lose attention; even if it’s for a second, I lose concentration in conversation”* (Y.S., male, 37 years old). Another answer was *“No, no, I cannot concentrate on other things, and I think it’s a kind of escape from the situation”* (N.H., male, 37 years old). And some said otherwise: *“I can concentrate; it does not always work together but I do manage to write a message and hear my daughter, for example”* (Y.A., female, 36 years old), and, *“Yes, I succeed. For example, driving ... lol ... yes, yes, I can do things at the same time. Let’s say today at work, I typed up a candidate’s file on the computer while I was texting in between with a friend”* (A.G., female, 33 years old).

Finally, question 13¹⁶ was designed to test research participants’ ability to enjoy what is happening around them while using a smartphone during physically interaction. In a direct continuation of questions 11 and 12, the trend is the same for the youth, who reported that they are unable to enjoy the social situation that exists around them in the physical space while using a smartphone: *“No, I can’t enjoy it. I also often feel like I miss out when I open the phone, because I constantly feel like I’m missing more moments (in a real-life meeting), and it really sucks”* (D.Z., female, 18 years old); other answers were, *“Less fun; I may be able to listen, but I’m less part of the conversation and do not enjoy it”* (O.N., male, 18 years old); *“No. Fail, unequivocally fail to enjoy”* (M.D., male, 18 years old); *“No. Because I’m disconnected; if let’s say they’re laughing at something then I’m immediately, ‘What was that? What were you laughing at?’ Because I’m disconnected; I was not there”* (N.Z., female, 18 years old).

In the comparison group (Gen Y) as well, the answers were mostly similar and continue the line whereby the use of a smartphone steals attention and draws the participant out of the situation: *“Absolutely not, if I’m on the phone I just disappear from the physical space. Completely”* (T.K., female, 35 years old); *“No, simply no”* (Y.M., female, 35 years old). The next interviewee is a young mother who described a situation that was not easy for her: *“Ummm not in full connection; I am not completely*

¹⁶ Question 13: Do you manage to enjoy what is going on around you when you’re on your smartphone?

connected. It put me behind a screen. It happened a few days ago; my baby said something that sounded like 'dad' for the first time, and I was not there; it was as if I was right next to her, but I did not hear it. And my husband said to me 'Did you hear that ???' And I'm next to her, but I did not hear it" (A.G., female, 33 years old). But here too, there were answers that show a difference between the generations: *"I believe less so, but I seem to be able to hear and absorb the environment, but less, no doubt"* (M.S., female, 34 years old); *"I can enjoy but at half power"* (S.R., female, 33 years old). One said, *"No doubt it's sometimes limiting, but ummm, I feel I can enjoy, even if I'm with the phone at that moment, in a situation"* (O.S., male, 36 years old); *"Yes, I can enjoy"* (S.C., male, 37 years old).

In order to examine the research problem (9) that deals with the effects of the smartphone on the intimate relationships among the youth, and further to the questions from the questionnaire in the quantitative part, which deal with the time spent with a spouse, question 17¹⁷ is designed to understand in depth the use of the smartphone during a couple's interaction. It is important to note that for some of the research participants, from both generations but certainly for most of the youth, this question required activation of the imagination, since at the time of the interview they had no partner, and therefore described their desires and aspiration as if they were in a relationship.

As in the quantitative questionnaire, it was also found in the interviews that among the youth the smartphone is present during couple interaction. At the same time, the desire and aspiration are that it will not be part of the meeting and the quality time shared: *"Ummm sometimes we see a series on the phone together, so yeah. It happens, but not much"* (O.N., male, 18 years old); *"I do not have a spouse, but if I had, then, ummm, it makes sense for the phone to be between us; I prefer not, but okay, if it happens then it's okay"* (M.U., male, 18 years old); *"My girlfriend and I, like, it happens that we're on the phone, like, each on our own phone. But, like, sometimes we see short videos together, but not anything special"* (Y.O., male, 16 years old). Other answers were similar: *"Ummm we do, but it's mostly something in common like being photographed, or for example, there is a game then we are together in the competition. But other than that, we try not to be on the smartphone when we are together"* (F.S.,

¹⁷ Question 17: What do you do when you and your spouse are alone? is using the smartphone (and not Shared activity) is one of the activities?

female, 15 years old), as well as, *“When I’m with my boyfriend, we try not to, but there are times we do things together with the phone, it totally happens”* (T.M., female, 16 years old). There is the impression that an effort is made for reduced presence of the smartphone during the meeting: *“The phone is not so much there when we are together. But sometimes yes, maybe we show each other something, a picture or a video. But we try not to”* (D.Z., female, 18 years old); *“I do not have a girlfriend, but if I had then I think it’s a bit hypocritical to say that no one should touch the phone throughout the meeting, but yes I wish it would not be used and that it would not be a major part of the meeting”* (N.N., male, 18 years old); *“I’m not in a relationship, but if I was, then less. I prefer without the phone, hope not”* (N.S., male, 18 years old); *“I’m not in a relationship, but if I was, then yes. but like, that too will have a limit, because I can’t stand it too much; watching a movie or something is fine”* (G.B., female, 17 years old).

Similar to the findings of the questionnaire, so here too, it was found that the Generation Y research participants did not engage in joint activities with the smartphone to hand, but it is undoubtedly present during the couple interaction; that is, the couple are together but each separately with their smartphone: *“Yes absolutely. I do not always like it, but it happens. It seems strange to me a lot of times, that we are together but not together, and busy in other worlds. And sometimes I stop it but sometimes not because I also do it”* (A.B., female, 36 years old); *“Unfortunately, many times the phone is in the picture when me and my husband are together. I do not like it but yes, because work today mixes with our private life. I really want to be together just us, and work during the day, because the phone goes everywhere and it is often difficult to separate work from home. We try, but it’s hard I admit”* (Y.M., female, 35 years old); *“I hate it, and there is almost nothing that I can do. It’s the source of a lot of quarrels between me and my husband. Although after a full day with the kids and work then you want to be with yourself and with the phone”* (M.S., female, 34 years old). Others said, *“Yeah, yeah, and then we’re not really together; we’re just next to each other, and that’s not good. And it can also be a situation where you watch something on the phone together”* (N.H., male, 37 years old). Another said, *“Yes. The truth is that sometimes we use it together, and also occasionally, when sitting at home, or even at a cafe or another place. And there will always be someone who will take out the phone and check if anyone has been looking for us. Well, to update for a moment, it’s okay,*

but if I see her with it a lot, I remark to her that it's not appropriate" (E.R., male, 37 years old).

Finally, similar findings came from the IDI interviews, where this variable was examined by questions 15 and 16. In question 15¹⁸, most of the youth answered in a manner consistent with the results of the questionnaire, because they see much importance and value in face-to-face feedback, thanks largely to the ability to express what they want to say in a complete, holistic way: *"Face to face. Ummm I will not do it on the phone. I do not do it, because it is less significant in my eyes"* (G.B., female, 17 years old); *"I think that it is actually (the way) face to face, although sometimes things are easy over the phone. Because it's not embarrassing. But face to face I can explain myself, and he will understand me. It can be conveyed in a nicer way, and on the phone, your tone is not always understood"* (N.B., male, 15 years old); *"Ummm unequivocally face to face. First of all, you can take the person aside and talk to him and tell him like person to person, develop a serious conversation, and without hurting him. Because in WhatsApp, when you type you do not know exactly what that person's feeling is because maybe he is angry and maybe not. And face to face you can better know what he thinks and feels"* (F.S., female, 15 years old). Likewise, *"Face to face 100% and without a doubt at all, because when I tell a person like that, I can read him, his body language and see his reaction, and thus direct my words so that he is not harmed, for example"* (Z.Y., female, 17 years old). And so, through feelings: *"Also, face to face. Because in the end you want to express emotion, so you must have him hear your voice and see you"* (F.S., female, 15 years old); *"Face to Face, clearly"* (Y.D., female, 15 years old).

At the same time, there were those who were undecided on how to convey feedback and saw online feedback as a worthy option: *"Depends on who; if it's a close friend, then face to face, but if it's put online, like an article or something then write on the phone"* (T.V., male, 16 years old); other answers were, *"Ahhh I think through the phone; wait, two sides: if it's more negative feedback then I prefer not to be in front of the person, but sometimes I do prefer to be and deal with him face to face, to see if he gets it and that he gets what I say. Because in WhatsApp you don't always understand. In positive feedback - completely face to face. Sure"* (H.Y., female, 15 years old);

¹⁸ Question 15: How do you think it's easier to convey feedback (positive or negative): face to face or via smartphone? What do you usually do?

“Ummm a hard question ... lol ... I’ll tell you the truth: negative review on the phone because it’s hard to say face to face, but positive, face to face” (S.Y., female, 15 years old). Another answers was: *“Positive face-to-face feedback; negative feedback via smartphone”* (N.S., male, 18 years old). Others said, *“Ummm using the phone is easier, like saying things you would be ashamed of, or not wanting to hurt, and you’re like with a mask like that. But there are things that, if it’s important enough to me, then I do want to see the person’s face. In positive feedback it’s less critical, because you do want to see the face of the person you are flattering. But with negative feedback it’s heavier, so on the phone”* (Y.E., male, 17 years old); one said, *“Positive face to face; negative on the phone. Positive it’s fun: you can see his face, it’s cool you see the reaction you made him happy. But negative it’s really heartbreaking; I hurt maybe, so I prefer not to see the face. And on the phone, it gives me more time to formulate what I want to say. So, I prefer it without seeing his reaction”* (A.Z., female, 18 years old), and *“Ummm I prefer the phone because there is less, like, it’s less weird and when I pass criticism I prefer not to be seen when I do it”* (F.F., female, 17 years old). And so, through feelings: *“It’s actually over the phone. Sometimes I choose over the phone because I can be very upset about something like that, and using the phone, it will be much easier. It’s feelings, it’s something very exciting for me”* (G.B., female, 17 years old), and, *“Emotions are easier on the phone because one does not have to deal with the person’s reaction on his face”* (Y.F., female, 15 years old).

In comparison, the Generation Y research participants presented varied answers: *“Ummm ummm me personally, face to face”* (A.B., female, 36 years old); more answers were, *“Always face to face. Actually wait, I try to do the less good feedback face to face. Someone once told me, one of my managers, ‘Never run your feedback on the phone,’ because feedback must be sensitive without hurting; you cannot throw and go. You have to be sensitive. You have to feel it and you have to be sensitive”* (T.K., female, 35 years old), and *“Face to face. That’s how I think and that’s how I do. I always prefer face to face”* (M.S., female, 34 years old); others said, *“Ummm there is no answer here or here; I think the physical is very important, for example with friends/work/family; I think negative feedback should be face to face, and if it is positive, then let’s say at work then I can write and then be precise what I write. But family and friends are positive on the phone”* (L.L., female, 36 years old). However, there were research participants who thought differently: *“By phone, obviously. Like if*

I have to pass feedback, then in most situations I pass them on, I'll do it over the phone. 90% I transfer digitally, because it's just easier and more convenient" (A.I., male, 36 years old); *"Obviously on the phone, I do not see face to face and it's easier. And the truth is that I do it at work. Look, it's never easy to give feedback to a person, especially when it's negative, but on the phone it's just easier"* (H.I., female, 34 years old).

Question 16¹⁹ is a continuation of the previous question that tests the ease of expressing emotions, whether using the smartphone or face to face. Here too, most of the answers were that face to face is the preferred option: *"Ummm I do not think you can really express something over the phone, emotions; you cannot express facial expressions, or it is less effective when you do not see the person"* (F.F., female, 17 years old); another, *"Emotions? Face to face. I prefer to do it the physical way. For example, to hug my mom, and face to face takes up more space and meaning, than, for example, emojis"* (H.Y., female, 15 years old). There were also a few who thought differently and preferred the use of a smartphone: *"Also more convenient on the phone. Same thing"* (Y.E., male, 17 years old); *"On the phone it's easier. It gives a sense of security. Both positive and negative"* (N.S., male, 18 years old).

In the comparison group (Gen Y), most research participants preferred to express emotion in a face-to-face encounter: *"also frontal"* (A.B., female, 36 years old), or, *"No, face to face, it must be. It's not easier, but it will not be completed, and then you're not seeing who you are talking to; it will always be partial, and emotions should pass fully – everything"* (Y.M., female, 35 years old). At the same time, expressing emotions via the smartphone is a more plausible possibility: *"The truth is that today on the phone is easier, thanks to the emojis, and then you can send what you feel. I love it and connect to it. It's fun to send them and receive them"* (L.L., female, 36 years old), or *"Ummm WhatsApp, a message, there are emojis, a romantic message to my husband I wrote to him on WhatsApp for example"* (A.G., female, 33 years old), as well as, *"Wow ummm using the smartphone. There are emojis, and it's easy to think things over and then write"* (A.I., male, 36 years old).

For the research problem (8) that deals with the relationship between smartphone use and social involvement, the research hypothesis was raised that the

¹⁹ Question 16: How do you think it's easier to express feelings (positive or negative): face to face or via smartphone? What do you usually do?

more the youth use smartphones, the less they are socially involved. In order to examine this hypothesis a Spearman correlation analysis was performed.

The results are presented in table 17.

Table 17: Spearman correlations between smartphone use and social involvement

	Social involvement – general	WhatsApp friends	Instagram friends	Facebook friends	Friends reality	Importance friends social networks
Smartphone use Generation Z	.09*	.11*	.12*	.07	-.03	.08
Smartphone use Generation Y	.08	.02	.06	.03	-.01	.14

p<.01**, *p*<.05*

The results of the Spearman correlation show that among the sample from Generation Z there was a significant positive relationship between smartphone use and the general score of social engagement: higher smartphone use is correlated with higher support for the attitude that the smartphone fulfills the need for social involvement. Additionally, there were significant positive correlations between smartphone use and the number of WhatsApp and Instagram friends: higher smartphone use is correlated with higher numbers of friends on these social networks.

However, there were no significant correlations between smartphone use and social involvement measures among the sample from Generation Y.

Next, a Spearman correlation analysis was performed in order to examine the relationship between smartphone use and social interaction. The results are presented in table 18.

Table 18: Spearman correlations between smartphone use and social interaction

	Call/text someone in the room	Write/mail/text instead of calling	Upload photo while with spouse	Use smartphone while alone with spouse
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Smartphone use Generation Z	.19**	.07	.11**	.10*
Smartphone use Generation Y	.10	-.01	.08	.05

p<.01**, *p*<.05*

The results of the Spearman correlation show that among the sample from Generation Z there was a significant positive relationship between smartphone use and calling/texting someone next to them or with them in the same room: higher smartphone use is correlated with higher occurrence of this scenario.

Additionally, there were significant positive correlations between smartphone use and uploading a photo of one's spouse while together, and with the use of a smartphone while alone with one's spouse: higher smartphone use is correlated with higher occurrence of these scenarios. However, there were no significant relationships between smartphone use and social interaction measures among the sample from Generation Y.

These results indicate that the hypothesis that the more the youth use smartphones, the less they are socially involved was partially positively confirmed.

Despite this, an important statistic that falsifies the hypothesis is that youth would prefer to tell someone face to face how they feel about them (negative or positive feelings) in a sweeping and unequivocal way (80%), and that to almost the same extent (78.9%), youth would also prefer to express emotions face to face (positive or negative). These results falsify the hypothesis.

In the comparison group (Gen Y), it was found that although most of the respondents (57.5%) would prefer to tell another person how they feel about him face to face (positive/negative), their results are less extreme and absolute (27.4% would prefer a text message), as in the case of youth. The same goes for how they would prefer to tell someone what they think of them (positive/negative) (55% face to face, compared to 33.1% SMS). These differences reinforce the falsification of the hypothesis.

According to the qualitative IDI interviews, the research hypothesis highlighted a complex and ambiguous situation regarding the evaluation of the hypothesis as

positively confirmed or falsified. Thanks to the opportunity to go in depth as to the reasons for the chosen behavior, it was hard to make assumptions or to draw a single conclusion. With that said, in summarizing and evaluating the findings related to the three variables, in addition to the comparison conducted with the Generation Y answers, the research hypothesis that the more the youth use smartphones, the less they are socially involved, was falsified and refuted. Therefore, this falsification can be concluded by both the quantitative and the qualitative examinations.

(10) For the final research problem in this subchapter, which deals with the effects of smartphones on youth’s courage to express an opinion, a number of items were examined in the questionnaire and in IDI. In addition, parts of the answers collected in questions 15 and 16 of the IDI interview, which dealt with the previous research problem on social involvement, can be used to get a broader and more complete picture in answer to this research problem.

Fear of negative feedback was measured by question 18 (“I prefer to share feelings or thoughts through the smartphone because I have a fear of a negative reaction to what I will say”). The research participants were asked to report on fear of negative feedback.

Table 19 presents the distribution of answers.

Table 19: Distribution of Fear of negative feedback (N=683)

		Generation Z		Generation Y		X ²
		n=532	%	n=151	%	
I prefer to share feelings or thoughts through the smartphone because I have a fear of a negative reaction to what I will say.	False	410	77.1%	129	85.4%	4.94*
	True	122	22.9%	22	14.6%	

p<.05*

The statistics indicate that the majority of both samples reported no fear of negative feedback (77%-85%). However, there were significant differences between the samples from Generations Z and Y. Higher rates among the sample from Generation Z (23%) acknowledge fear of negative feedback in comparison to Generation Y (14%).

As stated, in the IDI the questions that responded to this hypothesis are those mentioned in the previous research problem: questions 15 and 16. In question 15, which asked whether it is easier to convey feedback (positive or negative) on the smartphone or face to face, the following answers were found: *“I think on the phone. Yes, on the phone. Negative is safe on the phone; positive it does not matter so much. I will not be ashamed or scared; I will not mind saying that. But when it is negative, I will have a hard time with their reaction”* (O.N., male, 18 years old). Another said, *“Ummm on the phone. Because it’s easier, you do not see the facial expression, whether he is hurt or not. That way you can also say a lot of things without being looked at. And for positive feedback then, it is better face to face”* (R.E., female, 17 years old), and, *“Face to face, like, uh, wait. Face to face negative review is harder; on the phone it’s easier to write a message; you got out of it cheaply”* (M.U., male, 18 years old).

The answers received in the comparison group (Gen Y) were: *“Ummm depends on what feedback, ummm it is not ideal but it is possible on the phone, if there is no emotion or something, if it is not cognitive or even professional then on the phone. Easy on the phone no doubt, allows emotional distance, then it is even more disconnected, and because it is easier; it’s not ideal, but it’s easier, and I can admit, I do it over the phone even though I like it less, but it’s the easy way out”* (Y.S., male, 37 years old); another said, *“Face to face. I’m sure it’s easier over the phone. If I have something to hide or it’s hard for me to deal with it then on the phone, but if it’s someone I’m closer to and comfortable with then face to face”* (S.R., female, 33 years old). It is important to note that answers of this kind were fewer in number.

As stated, although question 16 was intended to examine social involvement, it provided some understanding about how the respondents deal with expressing an opinion. The answers received from the youth when asked about the easier way for them to express emotions (positive or negative), whether using the smartphone or face to face, were: *“You know what? Maybe on the phone, because if it’s positive feedback I’d prefer face to face and letting them see what I think and feel. But in the negative, I think I do not want them to see how I feel, so I prefer on the phone”* (D.Z., female, 18 years old). Another said, *“Emotions, in fact, maybe yes on the phone, it’s easier. I’m less of a person who shares and says what I have inside, and on the phone it’s easier for me”* (N.B., male, 15 years old); *“Ummm here ummm I also think face to face, although there are times that it is precisely the fact that I am hiding behind the screen,*

so it gives me room to escape to deal with the situation. But in general, it seems to me, face to face" (Y.Z., male, 17 years old), as well as, "Emotions are easier on the phone because one does not have to deal with the person's reaction on his face" (Y.F., female, 15 years old).

For this research problem it was hypothesized that as a result of their use of smartphones, the youth have less courage to express an opinion because it can lead to negative face-to-face feedback. In order to examine this hypothesis, a Spearman correlation analysis was performed.

The results from the quantitative questionnaire, showed that among the sample from Generation Z, there was a significant positive relationship between smartphone use and the fear of negative face-to-face feedback: higher smartphone use is related to expressing fear of negative face-to-face feedback ($r_s = 0.25, p < 0.01$).

Among the sample from Generation Y, there was no significant correlation between smartphone use and the fear of negative face-to-face feedback. These results indicate that the hypothesis that because of using smartphones, the youth have less courage to express an opinion because it can lead to negative face-to-face feedback was partially positively confirmed.

Moreover, the same tendency is to be found in the qualitative part through the interviews. It was found and can be assumed from the responses that the youth feel more comfortable conveying positive feedback face to face, but will choose the smartphone to convey negative feedback, because expressing such a message is a much more difficult task for them, and it is easier for them to cope with it via the smartphone; the same is the case for expression of emotions via the smartphone.

In summary, the results of the quantitative and qualitative data were positively validating for the hypothesis, and therefore the hypothesis that because of using smartphones, the youth have less courage to express an opinion because it can lead to negative face-to-face feedback was confirmed.

5.3.1 Conclusions

For the first research problem (5), which discusses how the smartphone influences the motivation of youth to make face to face interactions, it has been hypothesized that the more the youth use the smartphone, the less motivation they have to engage in face-to-face interactions. From the quantitative part, it seems that there

was no significant relationship between smartphone use and the motivation for face-to-face interactions among the sample from Generation Z, or among the sample from Generation Y.

Furthermore, the same conclusions could be drawn from the qualitative part, where most respondents (Gen Z and Y) responded positively that they are the ones who initiate and strive to initiate face-to-face meetings. However, thanks to the responses of the comparison group (Gen Y), it was found that there is a certain decrease in the motivation to initiate meetings in this group, and the reason is not the increasing use of smartphones, but it is probably due to the daily routine that makes it less possible to initiate social meetings, both in practical terms and in terms of motivation and stamina for holding social meetings.

In addition, it appears that such meetings are organized and scheduled using the smartphone, on WhatsApp, in a fairly comprehensive way for both generations, with minor differences between the generations, whereby the social meetings in Generation Z are sometimes determined in a face-to-face encounter due to being in a common setting (at school), and in Generation Y, rarely, a social meeting may also be organized through a real phone call.

If so, it can be said on the basis of the quantitative and qualitative data that the hypothesis was refuted and no relationship was found between the amount of smartphone use and the motivation for making a face-to-face meeting, which was found to be very high both among youth and in the Generation Y respondents. Therefore, the hypothesis that the more young people use smartphones, the less motivated they are to engage in face-to-face interactions has not been verified positively.

For the second research problem (6) that deals with how the use of the smartphone changes the interaction patterns within the youth and between youth and other people, I will address this issue at the end of this section of conclusions.

In the same vein, for the next research problem (7) dealing with the effects of smartphones on the ability to recognize facial expressions, it was hypothesized that the increasing use of smartphones leads to lack of ability to recognize facial expressions among the youth. The results showed there was no significant relationship between smartphone use and the ability to recognize facial expressions among the sample from Generation Z, or among the sample from Generation Y. Therefore, the results do not verify positively the hypothesis.

The research problem (8) that deals with the influence of digital media use through the smartphone on youth social involvement is a very central and complex one. As stated, three main variables were examined: social engagement, virtual social engagement, and social interaction. In addition, the research hypothesis was raised that the more the youth use smartphones, the less they are socially involved.

In order to facilitate reading, I will present the conclusions first according to the division in order of the three variables, first the quantitative then the qualitative findings, and finally the conclusion regarding the hypothesis.

According to the quantitative part, in Generation Z, there was a significant positive relationship between smartphone use and the general score of social involvement; i.e., higher smartphone use is correlated with higher support among respondents for the attitude that the smartphone fulfills the need for social engagement.

Additionally, there were significant positive correlations between smartphone use and number of WhatsApp and Instagram friends; i.e., higher smartphone use is correlated with higher numbers of friends on these social networks. However, there were no significant relationships between smartphone use and social involvement measures among the sample from Generation Y.

In addition, within the youth sample, there was a significant positive relationship between smartphone use and calling/texting someone next to them or with them in the same room; i.e., higher smartphone use is correlated with higher occurrence of this scenario. Additionally, there were significant positive relationships between smartphone use and uploading a photo of one's spouse while together and the use of a smartphone while alone with one's spouse; i.e., higher smartphone use is correlated with higher occurrence of these scenarios. However, there were no significant relationships between smartphone use and social interaction measures among the sample from Generation Y.

These results from the quantitative questionnaire indicate that the hypothesis that the more the youth use smartphones, the less they are socially involved was partially positively confirmed.

Nevertheless, still based on the quantitative part, the findings which falsify the hypothesis reveal that youth would prefer to tell someone face to face how they feel about them (negative or positive feelings) in a sweeping and unequivocal way (80%), and that, to almost the same extent (78.9%), the youth would also prefer to express

emotions face to face (positive or negative). Moreover, in the comparison group (Gen Y), although most of the respondents (57.5%) would prefer to tell another person how they feel about them face to face (positive/negative), their responses were less extreme and absolute, as in the case of youth (27.4% would prefer a text message). The same goes for how they would prefer to tell someone what they think of them (positive/negative) (55% face to face, compared to 33.1% via SMS). These differences reinforce the falsification of the hypothesis.

This tendency to falsify the hypothesis continues even in the results from the qualitative part, which highlighted a complex and ambiguous situation regarding the evaluation of the hypothesis as positive or falsified.

First, it was important to provide an in-depth understanding of the worldview and position of youth regarding the physical and online social encounters respectively. It was found that for most research participants a “social meeting” is, first and foremost, a physical encounter, face to face²⁰. In addition, it was found that for most interviewees, an online meeting is not considered a social meeting, and if it is so considered, then it is viewed as less ideal and not fully satisfying the requirements for a social meeting. Such a meeting can sometimes only be considered as maintaining a relationship over time, mainly due to the need for contact, in a complete experience of communication that also includes non-verbal communication. In contrast, in the comparison group (Gen Y) the need for physical proximity in order for a social meeting to be considered as such was much clearer and more decisive.

Subsequently, in an attempt to delve deeper into some of the questions in the quantitative questionnaire dealing with this research problem (8), it was found that the online encounter via smartphone could not satisfy the need for social interaction. The same was to be found in most answers from Generation Y research participants, that there is no substitute for the physical interaction, and that the online interaction cannot satisfy the need for a physical social meeting. Interestingly, however, the comparison group (Gen Y) provided an additional explanation and gave more legitimacy to the online meeting, although not as a substitute for the physical meeting, but as a means of maintaining their relationships with friends, due to the intensity of other demands on their time at their stage of life.

²⁰ This interpretation is an important point to keep in mind in order to understand the data throughout the chapter.

Furthermore, a positive attitude and great appreciation were found for physical social interactions compared to online interactions. There is an emphasis, and this is also what distinguishes between physical and online interactions, on non-verbal communication, body language, and a sense of physical closeness, as having value and meaning for the interpersonal connection. The research participants from generation Y also provided similar answers and maintained the same trend as the youth.

To summarize these findings related to the social engagement variable, together with the data collected in the quantitative questionnaire, and in addition to the comparison conducted with Generation Y, it was found that despite the high use of smartphones, the youth are very socially involved; they see great importance in a social meeting, which is usually defined as a physical interaction. For them, the online meeting cannot be a substitute or satisfy the need for a social meeting, and this is mainly due to the need for physical contact, non-verbal language, and the holistic experience that the physical interaction allows. Therefore, these findings refuted the hypothesis and did not verify it positively.

In order to advance in evaluating the assessment of the hypothesis, a very important and critical goal of this research problem was to gain an idea and an understanding of the research participants' virtual world, which is the second variable. Similar to the results of the quantitative questionnaire, the interviews shed light on the research participants' online environment; the youth are involved and active on the social network Instagram, and the comparison group (Gen Y) are active and involved in Facebook. In addition, for both generations, the dominant social network is WhatsApp, which also serves as a means of communicating and maintaining social relationships²¹.

An interesting thing that can be said about these social networks and that perhaps expresses and reflects the respective characters of the generations examined, is that these social networks are fundamentally different from each other, with Instagram being a platform for displaying images, almost without text, while Facebook is a platform where you can display photos and post text in which you can express an opinion or position, engage in politics, discuss the news, and of course share personal information, both through words and through pictures.

²¹ This is also based on the answers obtained in questions 1 and 6 in the IDI presented earlier.

In addition, a similarity was found between the quantitative and qualitative part, regarding the importance for youth of numbers of members in social networks. It was found that the number of members of the social networks is usually not considered so important. In addition, there were a few who reported that at a young age the importance is greater, or in other words, that the higher the age, the lower the importance.

In the Generation Y sample too, answers were elicited reflecting the position that the number of members in the social networks does not matter. And as found in the quantitative questionnaire, for the youth, the number of members in the social networks is more important than it is for Generation Y, since the research participants in the comparison group (Gen Y) were much clearer and more determined about this lack of importance. This is despite the fact that, thanks to the interviews, there was room for an open dialogue that offered another possibility. A number of research participants from Generation Y explained that the importance of the number of members in the social networks depends on the goals, theirs or those of the individual who participates and initiates contact via the social network. That is, if the social networks are used for the private needs of sharing personal life issues, then that the number of members of social networks is of no importance. But if the use and activity of social networks is intended for business and economic purposes, such as promoting an independent business, then there is increased importance for the number of members of social networks. To summarize and conclude these findings, related to the virtual world of the research participants, it can be concluded that the hypothesis has been falsified here as well.

The results from the IDI interviews reveal a complex and ambiguous situation regarding the verification or falsification of the research hypothesis. According to the interviews regarding social interactions (the third variable), the content of social interactions and meetings involves talking, eating, laughing, and catching up. A not comprehensive but important difference regarding the involvement of the smartphone in social encounters was found in some of the youths' responses and not in the Generation Y sample responses. Not always, and not completely, and not in a dominant manner, the smartphone is there during social interaction, and according to some of the research participants it sometimes interferes and, for some, even causes anger. In the comparison group (Gen Y), the use of the smartphone did not increase in the context of a social meeting, but it did within couple interaction, as I will detail below.

For the hypothesis that the more the youth use the smartphone, the less they are socially involved, there was a relevant finding from question 10, regarding looking the interaction partner in the eye, that it is important for the youth to align their gaze during an interaction with another person, a response that gives less positive confirmation to the hypothesis.

On the other hand, however, a small proportion of the answers show that some youth respondents prefer not to look their interaction partner in the eye. These answers slightly positively confirm the hypothesis. And here there is a difference between the generations that may explain the existence of such a situation. For the youth, such a situation (not looking the partner in the eye) has happened and can happen in the future mainly due to a feeling of embarrassment. As for Generation Y, such a situation can result due to distraction by other occupations like working or using the smartphone during in-person interactions.

In addition, findings from three key questions designed to examine the social involvement of youth when they use the smartphone while engaged in other interactions back up and positively verify the research hypothesis. It was found unequivocally that when the youth are using the smartphone, they are not present, not focused, and do not enjoy the social interaction in which they are physically involved.

Moreover, there were slight differences in the answers that dealt with feelings of concentration and pleasure. Generation Y respondents mentioned that they manage to concentrate on other things, or can enjoy in-person interactions while they are using the smartphone, but without being fully attentive and present, which emphasizes the positive confirmation of the hypothesis.

I did not make a separate research hypothesis for the research problem dealing with how smartphone culture affects intimate relationships among the youth (9). However, the discussion of this research problem does examine the research hypothesis regarding social involvement. This being the case, it was found for the youth that the smartphone is present during a couple's joint activity, which positively confirms the hypothesis. However, some of the respondents indicated that they aspire to use the smartphone as little as possible during these interactions, and preferably not at all, which suggests that the research participants themselves believe that the smartphone negatively impacts their in-person interactions.

As for the comparison group (Gen Y), the presence of the smartphone when interacting as a couple is greater and more significant compared to among the youth, and it is not necessarily used as part of a joint activity; these are more scenarios in which each member of the couple is on their smartphone, separately, while physically together. Awareness of the issue was evident in the interviews, and one could hear criticism and negative feelings about the phenomenon through words and sentences like *“unfortunately,” “hate,” “I do not always like it,” “that’s not good,”* etc. These data from the comparison sample (Gen Y) are significant and can shed further light on the role of the smartphone in the lives of the youth, in particular the fact that even in an intimate interaction, the use of the smartphone is more natural and acceptable for them.

Finally, the results from the question of how it is easier to express feedback (positive or negative) and emotions (positive or negative), presented a complex and ambiguous picture, with most answers reducing positive confirmation for the hypothesis, and some increasing positive confirmation for the hypothesis. It was found, similarly to the quantitative part, that most youth would prefer to express their thoughts and feelings face to face. In the interviews, the reason was given that physical, complementary, holistic communication has value and meaning in conveying messages. Despite this, there were a number of responses that referred to the ease and of expressing feelings and thoughts towards another person via the smartphone and a preference for this mode of communication, which added positive confirmation to the hypothesis and pointed to an interesting explanation that positively confirm another hypothesis in this study which I will discuss below, regarding the courage or lack thereof to express an opinion due to fear of negative feedback.

The answers of the comparison group (Gen Y) added to the lack of clarity as to whether the hypothesis was verified or falsified, and were similar to the data obtained in the quantitative questionnaire. Answers were similar to those of the youth, with some seeing the providing of criticism and expression of emotions as something to be done face to face, but a greater number of responses reflected a view of the smartphone as a worthy, legitimate, and possible option for giving feedback or expressing emotions.

In conclusion, each of the variables measured through the quantitative and qualitative aspects of the research shed light on the world of youth and, through the comparison group, also about the world of Generation Y. It was found that each component provided different types of verification regarding the hypothesis and

revealed the complexity and diversity of the effects of smartphone use on the social involvement of youth in Israel. However, taken as a whole, the data falsified and refuted the research hypothesis that the more the youth use smartphones, the less they are socially involved.

For the research problem (10) which deals with the effect of smartphone use on youth's courage to express an opinion, it was hypothesized that as a result of their use of smartphones, the youth have less courage to express an opinion because it can lead to negative face-to-face feedback. The results from the quantitative questionnaire showed that among the sample from Generation Z there was a significant positive relationship between smartphone use and the fear of negative face-to-face feedback. And as if to emphasize this indication, among the sample from Generation Y there was no significant correlation between smartphone use and the fear of negative face-to-face feedback. These results indicate that this hypothesis was partially positively confirmed.

Similarly, and thanks to the greater depth provided by the IDI interviews, the factors confirming and verifying the hypothesis can be understood in a positive way. As noted, some of the answers in the interview were applied twice, both to the previous research hypothesis that dealt with social involvement, and also here to the discussion of courage to express an opinion that can lead to negative face-to-face feedback. The respondents' answers for actually promoted the falsification of the previous hypothesis, but here, thanks to the explanation of the reasons for the youth's behavior, it is possible to positively validate this current hypothesis.

The data showed that many of the research participants found it easy to convey positive feedback face to face, and that negative feedback would be more difficult for them. Therefore, most of them would choose the smartphone for the purpose of conveying negative messages, because it is more convenient and easier to cope with. The same was the case regarding the expression of emotions via the smartphone, which adds to the positive verification of the current hypothesis.

Similar answers were also found from Generation Y, but such answers were fewer compared to among the youth, which shows positive support for the hypothesis. Also, although expression of emotions via the smartphone exists as a worthy option for Generation Y, this choice is still not as significant and actualized as it is among the youth.

In conclusion, the findings from the quantitative and qualitative data validated positively the hypothesis, and therefore the hypothesis that due to their smartphone use, the youth have less courage to express an opinion because it can lead to negative face-to-face feedback, was positively confirmed.

Before proceeding to the next subchapter, there is an important point to do with one more research problem (6) that I wish to discuss. The second research problem in this subchapter deals with the effects of the smartphone on the interaction patterns, both among the youth generation themselves and with other people. Admittedly, no direct research hypothesis has been raised for this question, but it deals with a broad and substantive matter, which other research hypotheses have touched on in one way or another. Therefore, in summarizing this subchapter, it is also possible to conclude from the answers received that there are smartphone-mediated changes and effects on interaction patterns among the youth. This can be understood based on the fact that for some youth, meeting friends online can be considered a social meeting; it is true that this is not ideal, as stated, but it is something they are prepared to consider. Also, based on answers given by a small portion of the research participants, online communication can satisfy the need for a social meeting, and finally, the findings show that some youth prefer to convey messages, emotions, and feedback through the smartphone. With regard to patterns of communication with other people, from the responses to question 10, which dealt with direct eye contact, it seems that there are youths who avoid meeting their interlocutor's eye.

However, based on the data, this cannot be attributed to the effects of smartphone use. To summarize with respect to this research problem, it was found that there are changes and effects on youth communication patterns in comparison to Generation Y. Although the smartphone is not found to be responsible for this, it is undoubtedly salient and can be a substitute and preferred means for youth communication today.

5.4 Effects of the smartphone in private use

The third subchapter discusses four research problems that deal with what I called smartphone-mediated effects in private usage. The first research problem (11) deals with the impact of having a smartphone during class on the satisfaction of the youth student from the teacher, the lesson, and the course. The second research problem

(12) examines the effects of smartphone use on youth sleep behavior. A further research problem (13) deals with the influences of smartphone use on daily decision making among the youth and, finally, there is a research problem (14) that deals with how smartphone culture affects the independence of the youth.

(11) I examined the first research problem for this subchapter that deals with the impact of having a smartphone during class on the satisfaction of the youth student with the teacher, the lesson, and the course, through the questionnaire in the quantitative portion and through the IDI interview in the qualitative part. It is important to note that since the comparison group in this study, the Generation Y research participants, have not been students for several years, I wrote a footnote²² to the questionnaire in which I asked that in their answers to the questions they try to think of themselves as high school students.

Academic satisfaction with concurrent smartphone use was computed by the mean of items 30-32. The answers were on a scale of 0 = teacher forbids smartphone use and 1 = teacher agrees to its use. Cronbach's Alpha was found to be $\alpha = 0.82$ in the general sample ($\alpha = 0.88$ in the Generation Y sample and $\alpha = 0.80$ in the Generation Z sample). The academic satisfaction with concurrent smartphone use score was computed by the sum of items. Higher scores indicate higher levels of academic satisfaction with concurrent smartphone use.

Table 20 presents the distribution of answers in regard to the level of satisfaction when the teacher agrees to use of the smartphone during class.

Table20: Distribution of satisfaction levels when the teacher agrees to use of the smartphone during class (N = 689)

<i>Level of satisfaction when the teacher agrees to use of the smartphone during class from:</i>	Generation Z		Generation Y		X²
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
Teacher	306	58.6%	68	46.6%	6.71**
Lesson	311	59.6%	64	43.5%	11.98**
Course	264	52.0%	60	41.1%	5.36*

p<.01**, *p*<.05*

²² "Think about yourself as a high school student for a moment."

The statistics indicate that approximately half of the research participants in both samples (40%-60%) were more satisfied with the teacher, lesson, and course when the teacher agreed to use of the smartphone during class. There were significant differences between the samples from Generations Z and Y in their satisfaction levels when the teacher agreed that they could use the smartphone during class. Higher rates of research participants among the sample from Generation Z express satisfaction with the teacher, the lesson, and the course when the teacher agrees to use of the smartphone during class, in comparison to Generation Y.

Examination of this research problem in the qualitative section revealed a degree of inconsistency with the quantitative questionnaire. In the IDI interview, question 14²³ examined two things: the preference and appreciation toward teachers who agree to or forbid the use of a smartphone during the lesson, plus the interviewee's position regarding the possibility of being satisfied with something when the person is in place physically but not mentally. Most of the answers were in the same direction: *"During a lesson I would prefer a teacher who insists on being without the phone. Because I think in class you don't need the phone"* (H.Y., female, 15 years old); another one said, *"In class, I'm, right, I have to say we're very tough, but I think I like it, because it's important and it shows that they care. The only thing I would not want is for them to suspect me every time I move so they suspect I'm going to the phone in a bag or something; that's excessive. You don't have to follow every move; it hurts the teacher a little because maybe he is less focused"* (N.N., male, 18 years old). Other answers included: *"Those who disagree, I appreciate more. Because automatically I learn more, and I think teachers who turn a blind eye to it therefore care less about the students, their success, and their knowledge, and they just come, do their job, and go. Because if the student is with the phone, then he is not so much there"* (O.N., male, 18 years old); others said, *"I think those who are strict and do not agree with use of the phone at all. So, I prefer those who do not try to impress you because they ultimately want your best interests, that you study, and you are in school, so be there"* (F.S., female, 15 years old), as well as, *"More satisfied with teachers who are tougher; it gives me more limits, and it focuses me, because when there is no limit then I go to the phone and then I do not study"* (Y.E., male, 17 years old).

²³ Question 14: What would you prefer: that the teachers agree or disagree that you use the smartphone during the lesson? And who do you appreciate more, the teachers who allow or forbid it? And is it possible to be satisfied with something when you are in place physically, but not mentally?

The answers in the comparison group (Gen Y) accorded with the quantitative questionnaire, but differed from the youth interview responses: *“Listen, I prefer to be given freedom; I know what I’m doing, and the teacher, with all due respect, can let me use the phone and worst case, if something is not understood or clear then I complete it later. Not a big deal.”* (S.C., male, 37 years old), as well as *“Obviously the teachers who will agree. I do not like to have decisions made for me, even when I was a student. Although, wait, let’s think for a moment. The lesson itself will not do me any good, is it clear to you?! It’s like taking you somewhere else, and if I’m not there then I—I will not understand, and I will certainly not enjoy the lesson. So, it is important that he takes the temptation from me. But again, I will love the teacher who lets me use it more. Even though I know it is not good for me”* (A.I., male, 36 years old); another one said: *“I was satisfied and appreciated the teacher who allowed me the phone but had less appreciation for the course with the phone alongside, because I will not get anything from the lesson and the course. But at that moment I will be satisfied with the teacher when he gives me the candy I want. As a student, yes?!”* (I.R., male, 36 years old).

In the second part of the question, the answers were similar for both generations: you cannot be satisfied with something when you are in place physically but not mentally: *“No, it’s impossible. You’re not there”* (O.N., male, 18 years old). Another said, *“Ummm no, because you’re on the phone and then you’re not there, you are kind of disconnected”* (F.P., female, 17 years old). And, *“No, it’s impossible; when you’re on the phone you’re not there”* (N.B., male, 15 years old), and, *“No. You cannot really be satisfied”* (M.M., female, 15 years old). Generation Y research participants thought the same: *“No. You cannot, in my opinion, experience and really be there when your mental state is somewhere else; they should be together”* (Y.M., female, 35 years old).

For this research problem that deals with the impact of having a smartphone during class on the satisfaction of the youth student from the teacher, the lesson, and the course, it was hypothesized that if there is no smartphone use during class, they would derive more satisfaction from the teacher, the lesson, and the course. I will note that the quantitative data is in percentages, since the reference in the hypothesis is descriptive; that is, there is no relationship between any two variables, and therefore the answer lies in the distribution of percentages.

Table 21 presents the differences in the total score of academic satisfaction with concomitant smartphone use within the research groups. The differences were examined by an independent t-test analysis.

Table 21: The differences in levels of academic satisfaction with concomitant smartphone use by research groups (N = 677)

	Generation Z n=530		Generation Y n=147		t
	M	SD	M	SD	
Academic satisfaction with concomitant smartphone use	1.66	1.24	1.30	1.33	3.02**
					<i>p</i> <.01**

There were significant differences between the samples from Generations Z and Y in the total score of academic satisfaction with concomitant smartphone use. Academic satisfaction with concomitant smartphone use was significantly higher among the sample from Generation Z in comparison to Generation Y.

These statistics show that among the sample from Generation Z, the hypothesis that if there is no smartphone use during class, they would derive more satisfaction from the teacher, the lesson, and the course has not been verified positively.

However, the IDI questionnaire examined some of the components of the hypothesis, and the results and findings collected revealed a mismatch with the quantitative part. Therefore, according to the respondents' answers in the interviews, some of the assumptions of the hypothesis have been positively verified. Moreover, the answers from the Generation Y research participants strengthen the positive confirmation of some components of the hypothesis, thanks to the emphasis provided via the comparison.

In addition, the responses to the second part of the question, which showed agreement that it is impossible to be satisfied with something when one is physically present but mentally absent, can positively reinforce parts of the hypothesis. Therefore, according to the IDI answers, some of the components of the hypothesis can be verified positively.

(12) To address the research problem that deals the effects of smartphone use on youth sleep behaviour, which is one aspect of everyday smartphone use by the youth, a number of questions were asked in the questionnaire and in interviews regarding the connection between the smartphone and sleep behavior.

Smartphone use before sleep was measured by question 33 (“Before bedtime, I stop using my phone”) and question 34 (“while I’m sleeping my phone is too”). The research participants were asked to report on their habits in regard to their smartphone use before sleep.

Table 22 presents the distribution of answers.

Table 22: Distribution of smartphone use before sleep

<i>Question</i>		Generation Z		Generation Y		<i>X²</i>
		<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
Before bedtime, I stop using my phone.	Never	86	16.1%	17	11.4%	2.47
	1-5 min	220	41.3%	69	46.3%	
	6-30 min	155	29.1%	44	29.5%	
	31+	72	13.5%	19	12.8%	
While I’m sleeping my phone is too.	With me in bed	86	16.3%	14	9.4%	16.49**
	On a table next to me	377	71.3%	99	66.4%	
	Outside of the room	44	8.3%	28	18.8%	
	Turned off	22	4.2%	8	5.4%	

p<.01**

The statistics indicate that the majority of research participants in both samples (41%-46%) stop using the phone 1-5 minutes before bedtime. The majority of research participants in both samples (66%-71%) reported that the location of their phone while sleeping was on a table next to them.

There were significant differences between the samples from Generations Z and Y in the location of their phone while sleeping. Higher rates of research participants among the sample from Generation Z reported their phone is with them in bed (16%) in comparison to Generation Y (9%). Likewise, higher rates of research participants among the sample from Generation Y reported their phone is outside of the room (18.8%) in comparison to Generation Z (8%). However, there were no significant

differences between the samples as to the time at which they stop using the phone before bedtime.

In the qualitative part, similar data were found in the interviews. Questions 36, 19, 20, and 21 are intended to broaden and deepen the understanding regarding the habits of using a smartphone before bed.

Question 19²⁴ is intended to expand and acquire in-depth understanding regarding the location of the smartphone during sleep. The answers were the same. Most of the research participants from both generations sleep with the phone next to them, and it also serves as an alarm clock: *“It’s on flight mode and next to me because it’s the alarm clock”* (D.Z., female, 18 years old). Others said: *“I fall asleep with it. It is with me”* (Y.O., male, 16 years old); and, *“The phone is on the table; the table is far from the bed”* (F.S., female, 15 years old). In Generation Y, some of whom have spouses, only a single smartphone was kept in the room, and it also served as an alarm clock: *“It could be in the room as an alarm clock, just one phone in the room, either mine or my wife’s, and whoever takes it there changes it to flight mode”* (Y.S., male, 37 years old).

Question 20²⁵ is also intended to expand and deepen understanding of the habit of using a smartphone before bed. It was found that most teens engage with the phone just before they fall asleep: *“Until the last minute; it puts me to sleep”* (R.E., female, 17 years old). Many in the comparison group (Gen Y) also revealed that they use it until the last minute: *“I use it. I read Ynet (news site) and then fall asleep”* (L.L., female, 36 years old). However, a few of the research participants in Generation Y do take care to stop using the smartphone for a longer time before sleep, a figure that corresponds to the statistics in the questionnaire: *“About half an hour before bed, I play a little on the phone, leave it, and after about half an hour - forty minutes, I go to sleep”* (A.Y., male, 37 years old).

Question 21²⁶ is designed to assess the capability of research participants to change their behavior and sleep when the smartphone is away from them. From the answers, it appears that many of the research participants are capable and would have no problem doing so, but for convenience’s sake they are not interested in doing so: *“Able, yes. But I’m comfortable with it next to me”* (M.D., male, 18 years old). At the

²⁴ Question 19: Where is your smartphone during the night when you are sleeping?

²⁵ Question 20: Do you engage with or use your smartphone before you fall asleep?

²⁶ Question 21: Can you sleep when the smartphone is away from you, for example, in the next room?

same time, there were those who thought they were capable but that this would be a difficult and challenging task for them: *“I’ll have a hard time with it; I’m comfortable with it next to me. It’s also my alarm clock; I know it’s unhealthy when it’s next to me, but it’s comfortable for me”* (F.F., female, 17 years old).

In contrast, for a small part of the Generation Y sample, the challenge is less difficult and, in their opinion, they are able to keep the smartphone away during sleep: *“Yeah, I even like it, and I need to do it more”* (L.L., female, 36 years old). Some of the respondents said something a bit different: *“I can, but the ringer has to be on because I have to be available, both for work and for me personally. I want to be; it’s important to me”* (O.S., male, 36 years old).

Question 36²⁷ was intended to directly examine the sleep quality of the research participants according to their subjective self-evaluation. According to the answers, the majority of the research participants, both the youth and the comparison group (Gen Y), slept well and deeply. All the answers were similar to the following: *“I sleep really well”*; *“My sleep is deep; sometimes I get up to see what time it is.”*

For this research problem, it has been hypothesized that smartphone use before sleep time leads to bad sleep habits. It was found that the both the youth and the Generation Y research participants slept well and deeply. Small differences were found in Generation Y among those who were parents of small children and were forced to get up for their children in the middle of the night. However, no connection was found with the use of the smartphone. So, combining the responses from the quantitative questionnaire and the qualitative IDI, no relationship was found between the predominance of smartphone use before bed and during the night on the one hand and the quality of sleep on the other. Therefore, the research hypothesis was falsified and refuted.

(13) In order to address the research problem focused on the effects of smartphone use on youth decision-making, a number of questions were asked in the quantitative questionnaire and in the qualitative interviews.

In the questionnaire, decision-making was computed by the mean of items 58-60. The answers were on a scale of 1 = completely disagree to 5 = strongly agree. Cronbach’s Alpha was found to be $\alpha = 0.86$ in the general sample ($\alpha = 0.91$ in the

²⁷ Question 36: How is your sleep at night? (Good, deep, with breaks, weak.)

Generation Y sample and $\alpha = 0.84$ in the Generation Z sample). The decision-making score was computed by the average of items. Higher scores indicate higher levels of difficulty in decision-making. Question 49 was a separate question, measuring the frequency of using the smartphone for making decisions.

Table 23 presents descriptive statistics of the decision-making measures as well as the differences between groups in these measures. The differences were examined by an independent t-test analysis.

Table 23: The differences in difficulty in decision-making by research groups (N = 645)

Measure	Generation Z n=498		Generation Y n=147		t
	M	SD	M	SD	
It's hard for me to make decisions.	3.12	1.13	2.69	1.10	4.06**
It takes me a lot of time to make decisions.	3.27	1.14	2.86	1.15	3.74**
Making decisions makes me nervous.	3.12	1.28	2.65	1.05	4.09**
General scale: difficulty in decision-making	3.16	1.03	2.73	1.01	4.51**

p<.01**

The level of difficulty in decision-making was generally medium (mean of 2.6-3.2 on a scale of 1-5). There were significant differences between the samples of Generations Z and Y in the difficulty in decision-making. The difficulty in decision-making was significantly higher among the sample from Generation Z in comparison to Generation Y.

Additionally, the research participants were asked how often they use their smartphone for making decisions. Table 24 presents the distribution of answers.

Table 24: Distribution of frequency of the use of smartphone for decision-making (N=672)

Frequency	Generation Z n=524		Generation Y n=148		X ²
		%		%	
Not at all	176	33.6%	43	29.1%	6.64

Monthly	65	12.4%	21	14.2%
Every week	165	31.5%	37	25.0%
Every day	118	22.5%	47	31.8%

The statistics indicate that about a third of Generation Z (33%) do not use the smartphone for decision-making at all, and another third use the smartphone for decision-making every week (31%).

About a third of Generation Y (29%) said they do not use the smartphone for decision-making at all, and another third said they use the smartphone for decision-making every day (31%). There were no significant differences between the samples from Generation Z and Y in the frequency they use their smartphone for making decisions.

In the qualitative interviews, one of the questions (32)²⁸ was designed to deepen the understanding of the place that the smartphone occupies in the research participants' decision-making. The answers received were mostly the same: *"Yes, I can go to Google, get recommendations, information, even read things in groups on Facebook. Use the wisdom of the masses"* (D.Z., female, 18 years old). Others said, *"Ummm yes, when I need information when I'm going to make a decision, I go to Google or anything else. So yeah"* (F.F., female, 17 years old), as well as, *"Yeah sure. If I want to decide for example, what to buy, or what movie to order, and I do not know, then I read reviews, or for example, cake recipes. And I do it every day, yes"* (H.Y., female, 15 years old). Similar answers included: *"Yes. Sharp and smooth. With the phone I get a lot of information, for example if I want to understand something or want to meet someone, you see his behavior on the phone; you can learn a lot and then it helps you in all kinds of decisions"* (T.V., male, 16 years old); also, *"Yeah, really, yes. It offers me, let's say, two things, and I have to decide and act, and I wanted to do something else that I come up with myself, so in order for me to succeed then I need the phone to figure out if I could start something else. And really, even on a daily level, ordering food, and all sorts of other things like that"* (M.D., male, 18 years old).

For this research problem (13), it was hypothesized that the more intensively smartphones are used, the more difficult, protracted, and stressful daily decision-

²⁸ Question 32: Does the smartphone help you make decisions? Is the smartphone involved in your decision-making? How does the smartphone help you make decisions on a daily basis?

making becomes for the youth. In order to examine this hypothesis, a Spearman correlation analysis was performed. The results are presented in table 25.

Table 25: Spearman correlation between smartphone use and decision-making

	Difficulty in decision-making	Frequency of use for decision-making
Smartphone use Generation Z	.18**	.23**
Smartphone use Generation Y	.02	.06

p < .01**

The results of the Spearman correlation show that among the sample from Generation Z there was a significant positive relationship between smartphone use and difficulty in decision-making: higher smartphone use is related to higher levels of difficulty in decision-making ($r_s = 0.18$, $p < 0.01$). Additionally, there was a significant positive relationship between smartphone use in general and the frequency of using the smartphone for decision-making specifically: higher smartphone use is related to higher frequency of using the smartphone for decision-making ($r_s = 0.23$, $p < 0.01$).

Among the sample from Generation Y there was no significant relationship between smartphone use and difficulty in decision-making or the frequency of using the smartphone for decision-making. These results indicate that the hypothesis that the more intensively smartphones are used, the more difficult, protracted, and stressful daily decision-making becomes, was partially positively confirmed.

Although the qualitative part was more an examination of the research problem and touched less on the hypothesis verification, it can be concluded from the IDI interviews that the smartphone is in constant use and plays a significant part in the decision-making process, which can strengthen the same positive confirmation that came out for the hypothesis.

(14) The last research problem in this subchapter, which deals with the effect of smartphone culture on the independence of the youth, was examined by a number of questions in the quantitative questionnaire and by several questions in interviews.

The variable of “independent” was measured by question 54 (“I would learn a new technique by...”) and question 55 (“I will acquire new knowledge or learn something new by...”). The research participants were asked to report how they would learn a new technique, as well as how they would acquire new knowledge or learn something new.

Table 26 presents the distribution of answers.

Table 26: Distribution of the variable “independent” in respect to the physical world and the world of knowledge

		Generation Z		Generation Y		<i>X</i> ²
		<i>N</i>	%	<i>N</i>	%	
<i>Independent in the physical world</i>						
<i>Independent in the knowledge world</i>						
I would learn a new technique by	Searching the Internet - smartphone	327	64.5%	98	68.5%	2.81
	Try myself until I achieve it	27	5.3%	3	2.1%	
	Ask a person who understands	153	30.2%	42	29.4%	
I will acquire new knowledge or learn something new, by	Read online - smartphone	293	59.8%	84	58.7%	17.52**
	Read online - computer	87	17.8%	43	30.1%	
	Read a book about it	19	3.9%	6	4.2%	
	Ask a person who understands	91	18.6%	10	7.0%	

p<.01**

The majority of both samples reported that they would learn a new technique by searching the Internet on their smartphone (64%-68%). The majority of both samples also reported that they would get new knowledge or learn something new by reading online on their smartphone (58%-59%). However, higher rates among the sample from Generation Y (30%) said they would acquire new knowledge by reading online on a computer in comparison to Generation Z (18%). This difference was significant.

In order to complete the picture for this research problem, questions 29, 30, and 31 were asked in the qualitative part, designed to test hypothetical situations, responses, and the ability of youth to be independent without the smartphone.

Question 29²⁹ is designed to examine the feelings and behaviors of the research participants when they imagine a situation in which they are walking alone on the street without the smartphone. In the answers, the research participants' stress and anxiety levels were palpable: *"Ahhh wow, the first thing that comes to mind is that it's scary! And that's because if I walk down the street and something happens to me? Then I have no way to call someone and say something happened. In a situation like this? There is no such situation ... I'm always with it"* (G.B., female, 17 years old). Another said, *"Ummm more stressful, even considering calling someone to pass the time, it's stressful yes"* (N.N., male, 18 years old). Other answers included: *"I'll feel like I'm missing something; I would get lost, I'm sure"* (S.Y., female, 15 years old). Another said, *"Absolutely less safe than I am with my phone. And I would strive to go down central roads, and also not prolong the journey, and also try, if it is a road that I know people I know pass through, then I would try to join them"* (H.Y., female, 15 years old).

It was found that even in the comparison group (Gen Y), such a situation raises feelings of stress and anxiety: *"Lost!!! In the first second I'll feel that way, but I remember phone numbers by heart and I would call my husband or my parents to say I'm fine and I'm without the phone"* (M.S., female, 34 years old). And: *"I would feel that I am missing something. And I would return home to get it"* (S.C., male, 37 years old). At the same time and unlike the youth, there were a few who argued for a sense of liberation: *"Ummm on the one hand release, on the other hand it is helplessness, because it's as if being without a phone is a lack of communication to the world"* (H.I., female, 34 years old), and more emphatically, *"All right, I have no problem with that; on the contrary, because I work all the time on the phone, it's really nice for me that there is no phone; it's freedom"* (L.L., female, 36 years old). Others said: *"Free, that way I do not have to constantly check what is happening, if they are looking for me or if something has happened. Maybe at first, I will feel that something is missing, like a weapon in the army, and after a while you feel liberated"* (I.R., male, 36 years old), as well as, *"Ummm, the truth? I do not know, I would think to myself, it's like, liberating a bit, but I do not know, it's weird to think about it. I would miss it no doubt, but I can pass the time in thoughts"* (Y.S., male, 37 years old).

²⁹ Question 29: Describe how you would feel being alone on the street without your smartphone. What would you do in this situation?

Question 30³⁰ was designed to assess the research participants' ability to be without a smartphone in routine and everyday places, such as school (for youth) and work (for Generation Y). Here, too, the answers reinforced the picture of dependence on the device: *"No! Absolutely not, it's as if it is impossible! I need to be up to date, make phone calls, answer calls, and talk to people"* (N.Z., female, 18 years old); another said, *"No lol. In elementary school I really did not have to, but in high school it is a different world. In breaks and even in classes it is simply crazy and then I feel much more comfortable being with it"* (Y.Z., male, 17 years old). There were respondents who claimed they were capable of being without the smartphone but did not want to be: *"True yes, but I do not want to do it. There is no reason"* (N.B., male, 15 years old); also, *"Yes. But I do not want that because it helps me with many things"* (G.B., female, 17 years old).

A few members of the comparison group from Generation Y gave similar answers: *"No. Not able"* (Y.A., female, 36 years old), *"No!!!! It's terrible! And if I forget it, I'll go back to get it. I do not want to spend an entire day without the phone"* (S.Z., male, 35 years old). At the same time, two small differences could be heard in explaining this inability. First, the smartphone is a work tool and is therefore necessary for the purposes of routine work: *"No, like I said, it's like an organ for me. It's very hard for me to be without it, both because it's my actual tool, and also because I need to be up to date, I admit"* (Y.M., female, 35 years old); another said, *"No, not at all. Because I work with it"* (T.K., female, 35 years old). And *"No. Because it's a very important tool in my job. I'm a sales manager, and a lot of my day I'm on the phone all the time, talking to customers, suppliers, people looking for me. There's also my family and wife who need me"* (I.R., male, 36 years old). As shown by the end of this response, the second reason is the need to be available to the spouse and children if necessary: *"No. Because I work with it, know where people are, meetings, and to be able to call my wife, be available to the kids and my parents"* (N.H., male, 37 years old), as well as, *"Ummm again for the same reasons I said before, not so much, mostly because of my wife, that I want to be available for her. I want to feel that I am available"* (Y.S., male, 37 years old). And, *"A difficult question, because I have children and I have to be available all the time so that if there is a phone call from the kindergarten, that*

³⁰ Question 30: Can you go to school or work without your smartphone?

something might have happened. Then I cannot be without it, and I also use it at work. So, I would go back and get it” (M.S., female, 34 years old).

Question 31³¹ was a question that many of the research participants found amusing, but its purpose was to examine which three objects the research participants would take with them in an imaginary situation in which they get stuck on a desert island. In an unambiguous manner, the youth answered that they would take a smartphone with them, and some even thought ahead and added a charger: “Ummm I believe I’ll take the phone. What else? I do not know, and a charger! Just need to have somewhere to charge it” (O.N., male, 18 years old); another said, “Food, water, and my phone” (H.N., male, 15 years old); also, “I guess a phone, like, so wow... Well, phone, charger, and I think water too” (T.M., female, 16 years old). Others said: “It seems to me I will take water and food, then my phone” (N.Z., female, 18 years old). One respondent said, “Phone for sure, I want to call, and I would take ummm ... a charger ... and food” (M.U., male, 18 years old).

The comparison group (Gen Y) responded in a similar way and would have preferred to take a smartphone to the lonely island: “I would take the phone with me; listen, I do a lot of things with the phone — I read books, I work, talk to whoever I want, look for things” (A.B., female, 36 years old); another said, “Obviously my phone, because it has everything in it. Before I take food ... lol ... with the phone I can check how to make food out of sand; it really has everything in it” (A.G., female, 33 years old).

In order to examine the research problem (14), the hypothesis was raised that thanks to smartphone usage, the youth is more independent in the knowledge world but less independent in the physical world. In order to examine this hypothesis, a one-way ANOVA analysis was performed. The results are presented in table 27.

Table 27: The differences in smartphone use for learning a new technique

	By Internet on the smartphone		By trying		By asking another person		F
	M	SD	M	SD	M	SD	
Smartphone use - Generation Z	2.32	0.51	2.15	0.36	2.20	0.47	3.92*

³¹ Question 31: If you were stuck on a desert island, what are three things that you would take with you?

Smartphone use - Generation Y	2.31	0.59	2.00	0.00	2.12	0.55	1.79
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p<.05*

The results indicate that among the sample from Generation Z, there were significant differences in the level of smartphone use in how the youth choose to learn a new technique. The level of smartphone use in general was significantly higher among the youth that reported that they choose to learn a new technique through the Internet on the smartphone in comparison to those who said they would choose to learn a new technique by asking a person who understands it ($F(2,505) = 3.92, p < 0.05$). Among the sample from Generation Y, there were significant differences in the level of smartphone use in how the respondents choose to learn a new technique.

Next, the research participants were asked how they would acquire new knowledge or learn something new. The differences in smartphone use in how the research participants acquire new knowledge or learn something new were examined by an independent t-test analysis. The results are presented in table 28.

Table 28: The differences in smartphone use for acquiring new knowledge

	By Internet on the smartphone		Other ways		t
	M	SD	M	SD	
Smartphone use - Generation Z	2.34	0.51	2.22	0.48	2.68**
Smartphone use - Generation Y	2.32	0.58	2.16	0.57	1.68

p<.01**

The results indicate that among the sample from Generation Z there were significant differences in the level of smartphone use in how the research participants acquire new knowledge or learn something new. The level of smartphone use in general was significantly higher among the youth that reported that they choose to acquire new knowledge or learn something new by reading online on the smartphone, in comparison to those who said they choose other ways (read online on the computer; read a book about it; ask someone who understands and learn from him) ($t(500) = 2.68, p < 0.01$).

Among the sample from Generation Y, there were significant differences in the level of smartphone use in how the research participants acquire new knowledge or learn something new.

These results from the quantitative questionnaire indicate that the hypothesis that thanks to smartphone usage, the youth is more independent in the knowledge world but less independent in the physical world, was partially positively confirmed.

In the qualitative part, the questions did not directly examine the research hypothesis, at least not in terms of cause and effect. However, by examining the independence of the research participants from Generation Z, positive confirmation and approval were found for this research hypothesis.

5.4.1. Conclusions

For the research problem (11) that deals with the impact of having a smartphone during class on the satisfaction of the youth student from the teacher, the lesson, and the course, it was hypothesized that if there is no smartphone use during class, they would derive more satisfaction from the teacher, the lesson, and the course.

The conclusion to be drawn from the statistics part was that among the sample from Generation Z, the hypothesis was not positively verified, so that if there were no smartphone use during class, they would not derive more satisfaction from the teacher, the lesson, and the course.

On the other hand, the qualitative part examined some components of the hypothesis, and the results and findings revealed a discrepancy with the quantitative part. It can be concluded from responses in the IDI that the youth appreciate, prefer, and are satisfied when the teachers do not allow the use of the smartphone during the lesson, out of the feeling that the teachers who forbid its use care more; they take care of the students and see them for who they are. Moreover, the responses of the comparison group (the Generation Y research participants) serve to emphasize the discrepancy mentioned, since they replied that they would appreciate and be satisfied with teachers who let go and allow the use of the smartphone in class. Therefore, the qualitative part warrants the conclusion that some of the assumptions of the hypothesis can be positively verified.

Furthermore, the responses to the second part of the question positively reinforce parts of the hypothesis. They show that the research participants believe that

one cannot be satisfied with something when in a particular place physically but without being mentally present. Therefore, according to the IDI answers, the hypothesis can be verified.

However, given that the quantitative data matches the whole hypothesis, and the qualitative data matches just some components of the hypothesis, it can be summarized that the hypothesis was not positively verified.

For the research problem (12) that deals with the effects of youth sleep behavior, it was hypothesized that smartphone use before sleep time leads to bad sleep habits. However, in the responses from both samples, the youth and Generation Y, it was found that the research participants slept well and deeply, with a small difference in generation Y, among young parents who were forced to get up for their small children in the middle of the night, but with no connection to the use of the smartphone.

In addition, it was found that the respondents, both the youth and the comparison group (Gen Y), regularly use the smartphone before falling asleep; some research participants actually fall asleep with it, and some keep it in their room, away from them, with the smartphone switched to flight mode and serving as an alarm clock.

Furthermore, it was found that the smartphone's presence close by was mainly for reasons of convenience and habit, and most report that they would be able to put it further away from them if they were to receive such an instruction or request. It is important to note that some of the respondents from Generation Y reported a sense of fear of being away from the smartphone during sleep, due to the need for security and to be available for work and for relatives such as family.

To summarize, combining the responses from the quantitative questionnaire and the qualitative IDI, it was found that the smartphone occupies significant attention before falling asleep, both during use and with respect to its location during sleep, which is usually close by. But according to the responses, there was no relationship between the prevalence of smartphone use before bed and during the night on the one hand and the quality of sleep on the other. Therefore, the research hypothesis was falsified and refuted.

For the research problem (13) that deals with the effects of smartphone use on youth decision-making, it was hypothesized that the more intensively smartphones are

used, the more difficult, protracted, and stressful daily decision-making becomes for the youth. The results from the quantitative questionnaire showed that among the sample from Generation Z there was a significant positive relationship between smartphone use and difficulty in decision-making. Additionally, there was a significant positive relationship between smartphone use and the frequency of using the smartphone for decision-making. In comparison, among the sample from Generation Y there was no significant relationship between smartphone use and difficulty in decision-making or frequency of using the smartphone for decision-making.

These results indicate that the hypothesis that the more intensively smartphones are used, the more difficult, protracted, and stressful daily decision-making becomes, was partially positively confirmed.

Therefore, the responses from the IDI interview provide an in-depth look at the place of the smartphone in the decision-making of the youth when faced with a dilemma. The answers that came up in the interviews lead to the conclusion that the smartphone is in constant use and plays a significant part in the decision-making process as a source of information, a source of communication with relatives for consultation, and for access to social networks, where “the wisdom of the masses” can be exploited.

The qualitative part was more of an examination of the research problem and touched less on the hypothesis confirmation than in the quantitative part. Accordingly, it can be said that the smartphone also plays a significant role in the decision-making process of the youth, which, as mentioned, is more difficult for them compared to members of Generation Y. Therefore, the responses from the IDI can strengthen the same positive confirmation of the hypothesis.

In order to verify the research problem (14) that deals with the effect of smartphone culture on independence of the youth, the hypothesis was raised that thanks to smartphone usage, the youth is more independent in the knowledge world but less independent in the physical world. According to the quantitative part, the level of smartphone use in general was significantly higher among the youth that reported that they choose to learn a new technique through the Internet on the smartphone in comparison to those who said they would choose to learn a new technique by asking a person who understands it. The level of smartphone use in general was also

significantly higher among the youth that reported that they choose to acquire new knowledge or learn something new by reading online on the smartphone. These results indicate that the hypothesis was partially positively confirmed.

In the qualitative part, questions were asked to support and strengthen the positive validation of the hypothesis. The answers obtained in IDI complement the findings obtained in the quantitative questionnaire and present a situation in which the youth are less independent and more dependent on the smartphone, in light of the research participants' responses to hypothetical situations in which they had to manage without the smartphone. In the answers to the question where they had to imagine walking on the street alone, without the smartphone, their stress and the anxiety were palpable, which indicates anticipated distress and insecurity without the smartphone in a situation where they should in fact be able to be alone and independent.

Some of the answers from Generation Y research participants were similar to those of the youth, but there were also answers expressing liberation, a sense of freedom and independence without the smartphone, which reveals differences between the age groups and positively strengthens verification of the hypothesis.

The responses to the question about being able to go to school or work without the smartphone additionally reinforced the hypothesis. It was found that some of the youth research participants felt unable to do so, and some thought that they could, but would prefer not to do so.

A few of the answers from the Generation Y respondents were similar to the youths' answers, but the reasons for the inability or unwillingness to go to work without the smartphone are what makes the difference with the Generation Y respondents and thus can support the positive verification of the hypothesis. For many of them, the smartphone serves as a central work tool, and in addition, a major means of communication in situations where others will need them, for example their small children who depend on them, and therefore they cannot leave it at home.

The final question that dealt with the independence of the youth yielded responses that positively confirmed the hypothesis, when many of the youth chose a smartphone as one of three objects that they would take with them to a desert island.

One last indication that may shed light on the research hypothesis is the result of the previous question examining the significant position that the smartphone occupies in the youth decision-making process, where, as stated, it was found to be the

dominant tool for deliberation, information-seeking, and consultation. These findings can give an indication of the level of dependence of the youth on the smartphone and, accordingly, of their level of independence in general.

To summarize the examination of this hypothesis, that thanks to smartphone usage, the youth is more independent in the knowledge world but less independent in the physical world, it was found both by the quantitative questionnaire and based on the answers in the IDI interviews that the hypothesis can be positively assessed as confirmed.

5.5 Self-esteem, popularity, and smartphone addiction

In the final subchapter, I will examine three research problems. First, I will discuss smartphone addiction (15) and the indicators that can show and describe the level of the addiction and dependence on the smartphone among the youth. Then, (16) I will deal with the effects of the smartphone on self-esteem, and finally (17), I will examine the effects of using digital media via the smartphone on classroom popularity.

(15) To begin with, I will present the findings relevant for assessing smartphone addiction. It is important to note that smartphone addiction is further related to the two hypotheses suggested for the second and third research problems in this subchapter, which deal with self-esteem and with popularity in the classroom.

Smartphone addiction was assessed in the first part of the questionnaire through items 8, 11-14, and 16-17. The answers were on a scale of 0 = not true to 1 = true. Due to lower scores of Cronbach's Alpha, these items were analyzed separately.

In addition, items 44-45 also evaluated smartphone addiction. The answers were on a scale from 1 = never to 5 = always. Cronbach's Alpha was found to be $\alpha = 0.75$ in the overall sample ($\alpha = 0.79$ in the Generation Y sample and $\alpha = 0.74$ in the Generation Z sample). The smartphone addiction score was computed by the average of items. Higher scores indicate higher levels of smartphone addiction.

Finally, there were a few other items related to smartphone addiction: questions 35, 43, 46-48, and 53; these items were analyzed separately as well.

The research participants were asked to report on several habits that relate to smartphone addiction. Table 29 presents the distribution of answers.

Table 29: Distribution of smartphone addiction aspects

		Generation		Generation		χ^2
		Z		Y		
		N	%	N	%	
<i>Smartphone addiction</i>						
I check my smartphone in the middle of the night.	False	342	63.9%	108	71.1%	2.66
	True	193	36.1%	44	28.9%	
I would like to reduce the amount of time I'm busy with the smartphone.	False	124	23.2%	30	19.9%	0.74
	True	411	76.8%	121	80.1%	
I can't reduce the amount of time I'm busy with the smartphone	False	365	68.5%	93	61.2%	2.84
	True	168	31.5%	59	38.8%	
It has happened to me once that I have given up on a hobby/activity because I was busy on the smartphone.	False	400	74.9%	119	78.3%	0.73
	True	134	25.1%	33	21.7%	
My smartphone is always within reach.	False	108	20.2%	46	30.3%	6.84**
	True	426	79.8%	106	69.7%	
I have a name or nickname for my smartphone.	False	501	93.6%	147	97.4%	3.09
	True	34	6.4%	4	2.6%	
When I have a dilemma, I use my smartphone to make the decision.	False	279	53.2%	78	53.1%	0.01
	True	253	47.6%	69	46.9%	
When I am in the middle of something important and my smartphone rings/gets a message alert. I would:	Answer immediately	20	3.8%	8	5.5%	5.24
	Finish it, then answer	266	50.9%	87	59.6%	
	Just look to see who it is	237	45.3%	51	34.9%	
I check my smartphone phone	Every minute	167	33.3%	71	47.7%	12.80**
	Every 5 minutes	254	50.7%	53	35.6%	
	Once an hour	23	4.6%	5	3.4%	
	Other	57	11.4%	20	13.4%	
I like my smartphone	I do not like it - it's a device	153	30.0%	70	48.6%	17.50**
		153	30.0%	34	23.6%	
	Neither likes nor hates	204	40.0%	40	27.8%	

		Very much				
If my smartphone was got lost. I would feel	Anxiety	252	48.1%	61	41.2%	17.52**
	Sadness	98	18.7%	47	31.8%	
	Anxiety & sadness	123	23.5%	22	14.9%	
	I wouldn't care	43	8.2%	12	8.1%	
	Other	8	1.5%	6	4.1%	
						<i>p</i> <.01**

The statistics indicate that the majority of both samples do not check their smartphone in the middle of the night (63%-71%) and that they would like to reduce the time they are busy with the smartphone (76%-80%). The majority of both samples reported that it is not true that they cannot reduce the time they are busy with the smartphone (61%-68%).

The majority of both samples reported that it had not ever happened to them that they had given up on a hobby/activity because they were busy on the smartphone (74%-78%).

The majority of both samples reported that their smartphone was always within reach (69%-79%). There were significant differences between the samples from Generations Z and Y in this item: Higher rates among the sample from Generation Z (79%) agreed in comparison to Generation Y (69%).

The majority of both samples reported that they do not have a name or nickname for their smartphone (93%-97%). And about half of each sample reported that they use their smartphone to make the decision when they have a dilemma (46%-47%).

The majority of both samples (albeit a small majority) reported that when they are in the middle of something important and the smartphone rings/gets a message alert, they would finish what they are doing first and then answer (50%-59%).

The majority of the sample from Generation Y (48%) reported that they check their smartphone every minute, while the majority of the sample from Generation Z check their smartphone every five minutes (50%). This difference was significant.

The majority of the sample from Generation Y said they do not like their smartphone – it's a device (48%), while a small majority of the sample from Generation Z said they like their smartphone very much (40%). This difference was significant.

The majority of both samples reported that if their smartphone got lost, they would feel anxiety (41%-48%). The percentage of research participants who said that

they would not care was also similar in both samples (approximately 8%). However, higher rates among the sample from Generation Z (23%) said they would feel anxiety and sadness in comparison to Generation Y (15%). This difference was significant.

The differences in the smartphone-addiction scale were examined by an independent t-test analysis.

Table 30: The differences in smartphone addiction scale by research groups (N=661)

Measure	Generation Z n=512		Generation Y n=149		t
	M	SD	M	SD	
Sometimes I find myself using the smartphone more than I planned.	3.70	0.94	3.58	0.97	1.27
It happens to me that I lose a sense of time when I'm on the smartphone.	3.55	1.14	3.24	1.06	2.94**
General scale: smartphone addiction	3.62	0.93	3.41	0.92	2.40*

p<.05*

The level of smartphone addiction was generally medium (mean of 3.4-3.6 on a scale of 1-5). There were significant differences between the samples from Generations Z and Y in the general level of smartphone addiction. The sample from Generation Z report on significantly higher levels of smartphone addiction in comparison to Generation Y.

The research participants were asked whether they use the smartphone in any of a list of situations. Table 31 presents the distribution of answers (rates of “yes” answers).

Table 31: Distribution of the use of the smartphone in several situations (N=689)

Situations	Generation Z		Generation Y		X²
	N	%	N	%	
During mealtime	310	58.9%	91	61.1%	0.22
In the toilet	418	79.6%	119	79.9%	0.01
During conversation with another person	220	41.9%	66	44.3%	0.27

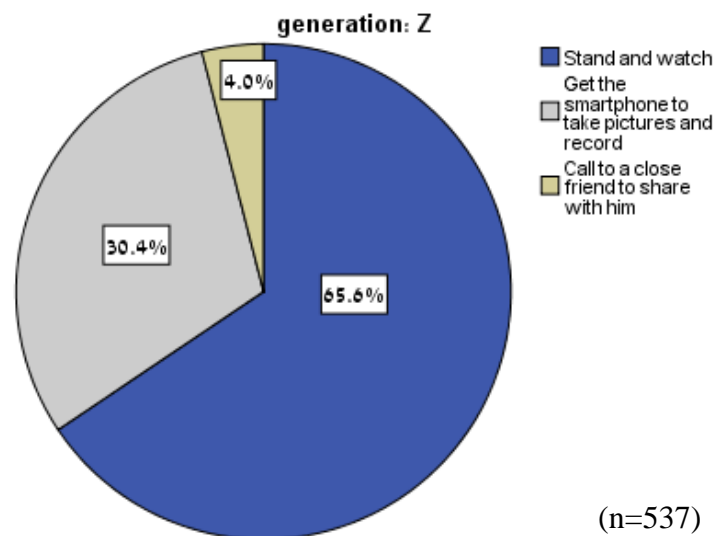
While watching TV	267	50.9%	85	57.0%	1.78
None of these	19	3.6%	4	2.7%	0.30

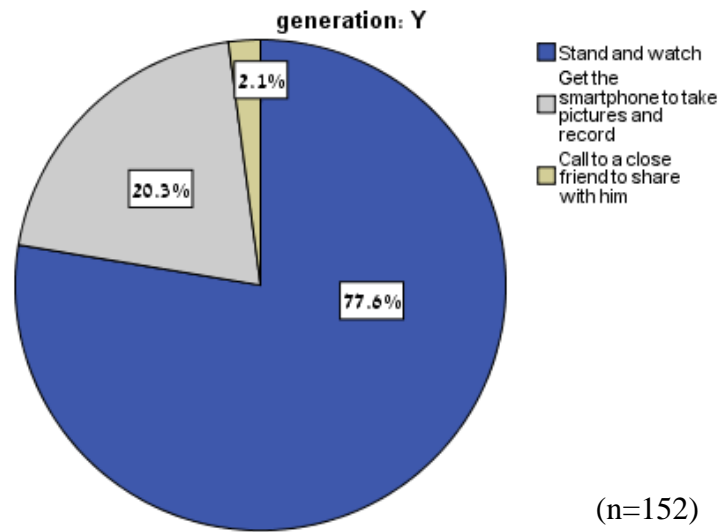
The statistics indicate that the majority of both samples do use their smartphone during mealtime (58%-61%), in the toilet (79%), and while watching TV (50%-57%). The majority of both samples reported that they do not use their smartphone during conversation with another person (41%-44% said they do).

There were no significant differences between the samples from Generations Z and Y in the distribution of smartphone use in these situations.

The research participants were asked, “When I see an unusual thing (such as an accident, an amazing view, a famous person), what is the first thing I’ll do?” Chart 1 presents the distribution of answers.

Chart 1: Distribution of the response to an unusual thing by generation (N=689)

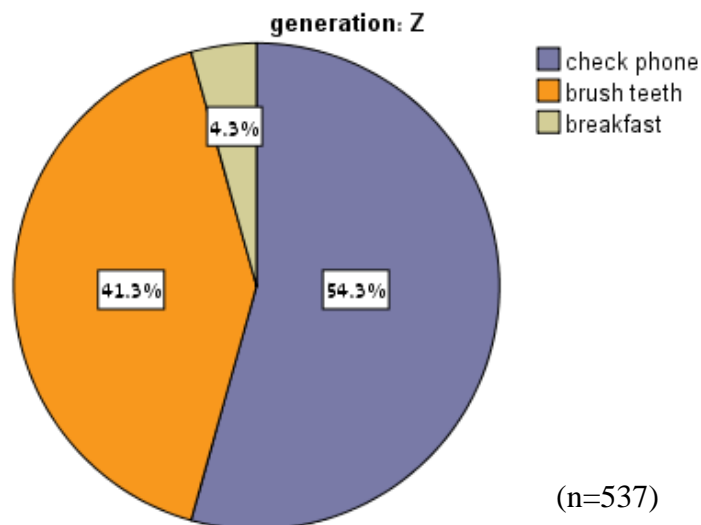


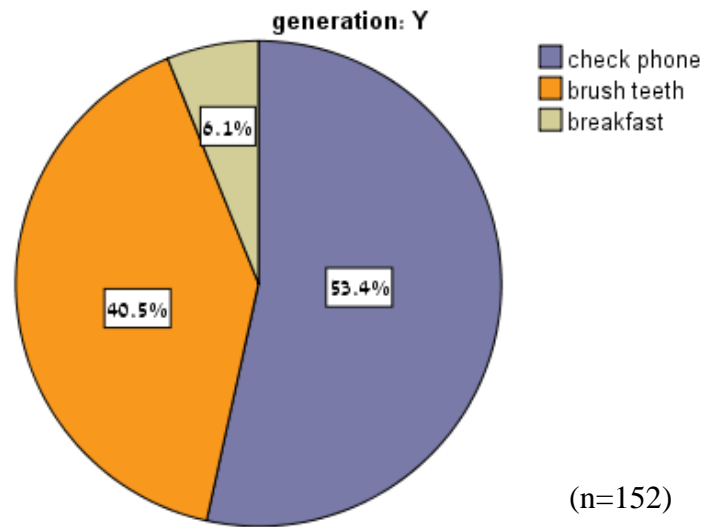


The statistics indicate that the majority of both samples would stand and watch when witnessing something unusual (65%-77%). However, there were significant differences between the samples from Generations Z and Y in the distribution of answers ($X^2(2) = 7.60, p < 0.05$). Higher rates among the sample from Generation Z said they would use their smartphone as an initial response when they see an unusual thing (30%) in comparison to Generation Y (20%).

Next, the research participants were asked, “The first thing I do in the morning is...” Chart 2 presents the distribution of answers.

Chart 2: Distribution of the first action in the morning by generation (N=689)





The statistics indicate that the majority of both samples check their smartphone as their first action in the morning (approximately 50%). There were no significant differences between the samples from Generations Z and Y in the distribution of answers ($X^2(2) = 0.71, p > 0.05$).

In the qualitative section of the IDI, several questions were posed to address the research problem dealing with smartphone addiction. Questions 18, 25, 26, 27, and 28 are designed to deepen understanding of the research participants' usage habits, to elicit their feelings about the length of use time and the urge to check the smartphone, their desire and ability to reduce smartphone usage times, and the feelings that arise in a situation, or imagining a situation, where the smartphone was lost.

Question 18³² is one in which most of the answers opened with a “wow” response: “*Wow, a lot, I noticed I do it a lot. And there is the app that checks and it is listed there; I do not remember right now, but I check the smartphone full time*” (D.Z., female, 18 years old); others said, “*Wow, full on, all the time, most of the time when I’m bored then it’s always open and I always see what’s new. I would like to stop it but it’s hard, I always come back to it, especially when I’m bored, and then I really have to do it*” (R.E., female, 17 years old). So too for the answers from Generation Y research participants: “*Wow, I check it full time. I cannot say exactly, but I check a lot. I want to see what message I received, what is happening, just because I’m stupid*” (A.B., female,

³² Question 18: How often do you check your smartphone? What makes you do that? What need does it meet for you?

36 years old); another answer was, *“Wow very intense, every quarter of an hour. I need to check if there is anything new, if they responded to a message I sent, also news reports”* (S.R., female, 33 years old).

The difference found between the groups for this question lies in the motivation for checking. For youth, the motivation is often boredom: *“Wow, full on, all the time; sometimes I just open it and just, on Instagram. It happens to me all the time that I just check it, just for no reason. And it’s usually because I’m bored, or I feel uncomfortable. It’s like an instinct by now”* (T.M., female, 16 years old). And as for the comparison group (Gen Y), the motivation is mainly for work: *“High frequency, once every five minutes. Look, the phone is my tool, and all my work is over the phone”* (T.K., female, 35 years old); another said, *“Wow, lots, wow, too much; it’s also a tool for me. The phone is used by me for so many things so its use is very frequent. And let’s say in one hour, I check the phone on average ummm I do not know what, fifteen times, maybe more. And it satisfies my work needs, is a tool, a tool to consume information, to communicate, I suppose. I answer pretty quickly when someone sends me a message, and I’m on it all the time. And I have, like, a certain task and I want to do, like, the ‘check’ sign, on it, and then you want to be on the phone all the time”* (A.I., male, 36 years old).

In question 25,³³ it was important to hear the research participants’ assessment regarding the amount of time they spend on social networks, since, as stated according to question number 1 in the IDI, which deals with the content of smartphone use, social networks are the main occupation of the youth on the smartphone. The responses received support the data presented in the first subchapter in which daily use was examined: *“About five to six hours, something like that”* (R.E., female, 17 years old); and another said, *“Wow, full on, like, wow, four to five hours a day, it seems to me”* (T.M., female, 16 years old). There were a few extreme reports of increased use: *“Ummm a day...mmmm sixteen hours, maybe even more. Most of the day I’m there. I’m not on the phone when I walk my dog or when I play the guitar, but the rest of the time I’m on the phone”* (Y.O., male, 16 years old); another respondent said: *“Ummm I’m a lot on the phone, in my opinion around six to ten hours, YouTube, WhatsApp, Instagram”* (M.M., female, 15 years old). Another participant said, *“Wow I was on it*

³³ Question 25: How long do you think you spend on social networks?

for twelve hours, and I'm really trying to quit and get down in time. Now sometimes it's between three hours and six-to-seven hours" (S.Y., female, 15 years old).

In the comparison group (Gen Y), fewer hours were spent on the smartphone than reported by the youth, but it was found that there is a similarity in the feeling and appreciation for how high the level of usage is: *"Wow, I don't know, but it's a lot"* (A.B., female, 36 years old); *"A lot. I'm on it a lot"* (Y.A., female, 36 years old). But when you quantify the number of hours, it is lower than among the youth: *"Cumulatively, two hours a day"* (S.R., female, 33 years old); *"Two to three hours a day. That's a lot, because it's a bit at work too"* (M.L., female, 35 years old); *"I do not know but if I guess, without counting work let's say, then I think two-three hours, do not know if it is a lot or a little"* (L.L., female, 36 years old). Another said, *"Great question. Three hours a day I think"* (S.Z., male, 35 years old).

Question 26³⁴ is intended to elicit the degree of desire to reduce the amount of time a smartphone is used, and immediately after that, question 27³⁵ completes the picture. In some interviews, there was a feeling of lack of separation between these questions because of the sequence of the conversation. Question 26 is intended to gain an understanding of the research participants' ability to reduce smartphone use, and how they would go about this. Responses included: *"I would like to reduce, but I'm at home a lot and I cannot keep myself busy for much of the day, and I can have a conversation with someone and during the conversation, be on Instagram, and like, I got used to sitting with someone and scrolling like the screen and looking at things"* (H.Y., female, 15 years old); another said, *"I would like to be on the phone as little as possible; it makes me feel bad sometimes"* (R.E., female, 17 years old). Similar responses were also heard in the comparison group (Gen Y): *"Yes! Always"* (A.B., female, 36 years old); *"Yes. I would like to, but it's an addiction"* (Y.A., female, 36 years old); *"Ummm yes, you know what? Yes, I would like to reduce and streamline it and focus it. It feels out of control to me currently; it can occupy you twenty-four hours. And I would like more control over my use"* (S.Z., male, 35 years old).

For question 27, which concerns the ability to reduce usage time, the answers obtained reveal a lack of control and inability to manage usage on the part of the youth: *"I'm not succeeding. I do not know what it depends on; it depends on me, I guess, but*

³⁴ Question 26: If you would like to reduce the time you are busy on the phone, why?

³⁵ Question 27: Are you able to reduce your phone time? What does this depend on?

it's hard for me" (H.Y., female, 15 years old); *"I have nothing to do so I cannot. I get bored a lot"* (M.U., male, 18 years old). The same goes for the comparison group (Gen Y): *"I do not think I can. Like, there is an ideal level to decide that I do not connect to Facebook during the day, but it is there; it is constantly in front of me; even if I connect to the phone just to make a call, and then I see twenty-three messages on Facebook or 300 messages on WhatsApp, then I have to open it, I have to; maybe someone is looking for me, someone needs me. It's there all the time; it's hard"* (A.G., female, 33 years old). But there were also answers from this group that show a higher level of control and awareness than among the youth: *"Depends on me, but again do not know if I want (to reduce) it, and if it's right for me"* (A.I., male, 36 years old); *"Able, yes, when I have enough other important things then I am less with it; it is on the side. I feel in control, but it's also because I avoid it; I do not intentionally download applications that I know I will become addicted to, such as Instagram and games, and that is how I consciously defend myself, because I know it draws me in"* (Y.M., female, 35 years old).

The last question, question 28,³⁶ was hypothetical; the research participants were asked to guess what their feelings would be if they suddenly discovered that their smartphone was lost. The answers from the interview matched data from the quantitative questionnaire with absolute consistency, and moreover the answers to this question were full of emotions and difficult feelings toward losing a precious object. There were those who compared it to the loss of an organ in their body, and there were those who felt a sense of loss of control and connection to the world: *"Wow lol wow, stress, really stress, wow I have a lot of things in it, conversations; it cost me a lot of money; it's stressful"* (Y.E., male, 17 years old); *"Wow, it's like losing an organ in your body. Probably everyone told you that, just like you lost an organ; it's awful! It's stressful no matter where it happens, it's hysteria, and it's part of the addiction. Again, I will not die from it, but for a long period of time, I have to know what's going on, on the web, on Instagram, on WhatsApp"* (Y.Z., male, 17 years old).

The same was the case for Generation Y: *"Helplessness, anxiety, stress, fear, apprehension. I am very dependent on it: communication with the world, management of work, talking about things related to the children; if something happens and I will not be available for the teacher... I depend on it 100%"* (S.R., female, 33 years old);

³⁶ Question 28: Try to describe your feeling if your phone suddenly got lost.

“Oh, it’s really unpleasant. Wow, not good. Wow, there is also a danger that someone stole it. Ummm feelings of frustration, helplessness. Because it has everything I need to communicate with the world. I must have a phone available, to talk to my husband, to be in touch with my mother, with the children’s kindergarten; it is impossible; I must be available” (A.B., female, 36 years old).

No hypothesis was raised for this research problem. However, this is a very important issue. The quantitative and qualitative parts both show, for both samples, that the smartphone is central and significant to the daily routine. Still, there are some differences that place the youth at higher levels of addiction to and dependence on the smartphone. This detail is very important for the continued presentation of the subchapter and its results.

(16) No questions were posed regarding the effects of the smartphone on self-esteem in the quantitative questionnaire. However, questions 3, 37, and 38 of the qualitative IDI interviews did relate to this research problem. Question 3³⁷ is intended to examine the participant’s self-perception as a social person. It was found that the vast majority of the research participants perceive themselves as social people, very much so, even. Most of the answers were just “yes,” and there were also slightly more extended answers like: *“Absolutely yes. Everywhere I went I always had a lot of friends; I manage to blend into my surroundings”* (M.D., male, 18 years old); *“Yes. It’s really easy for me to develop a conversation with someone I don’t know”* (F.S., female, 15 years old). In the comparison group (Gen Y) too, the answers all amounted to “yes.”

Question 37³⁸ aims to examine directly, and in a very subtle and minute way, the participant’s personal perception of his or her personal self-esteem. Here too, most of the respondents reported that they love themselves, and the answers amounted to “yes.” There were a few who responded that despite being aware of aspects of themselves that they like less, they work on themselves in order to be more satisfied with themselves: *“Ummm, most parts of myself, yes. I have undergone a great many changes in recent years, and I do love myself and accept myself”* (Y.E., male, 17 years old). One said: *“Ummm yes, I think so. I would work on some things, but I would not change things. So, I am satisfied with myself”* (H.Y., female, 15 years old).

³⁷ Question 3: Do you see yourself as a social person?

³⁸ Question 37: Do you love yourself? Who are you?

For Generation Y, the answers were similar; most of them amounted to “yes” or were positive answers that indicated a process of self-acceptance and self-actualization: *“Ummm yes. Obviously, there are things I work on to feel better. But overall, yes, I’m happy”* (O.S., male, 36 years old); *“Ummm I do love myself. It’s as if you always have those moments that are less satisfying, but I do at the end of the day”* (A.Y., male, 37 years old).

I included question 38³⁹ already in the first interview; it was a question that really preoccupied me, and I felt that it could be relevant to the research in general, to the theoretical material collected so far, and also specifically to understanding the research participants’ personal and social self-image. And the answers were fascinating: for the youth, the lack of any reaction to their online content is seen as a tough situation and, for some, also dramatic: *“Ummm embarrassing; it’s embarrassing. Very embarrassing. And once I even thought of deleting it, but then I said that if anyone sees I deleted it then it’s even more embarrassing”* (D.Z., female, 18 years old); *“It makes me feel uncomfortable, and I do not understand why people ignore messages, and I prefer people to respond quickly because otherwise I start to lose focus and not be able to concentrate on what I am doing”* (F.F., female, 17 years old); *“Very insulting. I’m hurt, my heart is contracting; why didn’t they respond? Why didn’t they answer? It stings”* (T.M., female, 16 years old).

For the comparison group (Gen Y), such a situation is also considered tough, but not dramatically so: *“It bothers me, I will not lie, but at the same time, it does not matter to me”* (M.L., female, 35 years old); *“True, sucks, but not the end of the world. Like, if it’s on Facebook, so it sucks yeah? But okay. And if it’s on WhatsApp then it’s more significant because it’s being presented to closer people”* (T.K., female, 35 years old).

For this research problem (16) it was hypothesized that the lower the self-esteem, the higher the possibility of smartphone addiction. But although it was previously concluded that the youth have higher levels of addiction to and dependence on the smartphone, the IDI responses dealing with self-esteem showed that all of the research participants, both youth and Generation Y, expressed a high level of positive

³⁹ Question 38: Describe the feeling when you send a message/share a post/upload a picture, or anything like that, and do not receive any response, like a ‘like,’ a heart sign, or any real response.

self-esteem. Therefore, the hypothesis that the lower the self-esteem, the higher the possibility of smartphone addiction was falsified and refuted.

(17) The research problem in this section deals with a very central area for the youth, and that is social popularity, and the effects of using digital media via the smartphone on classroom popularity. I tested two aspects of popularity in the quantitative questionnaire: popularity in the classroom, and popularity in the real world of youth. In addition, through the interview, it was important for me to examine and assess the importance of being popular to the research participants and to find out what role they think the smartphone plays in this popularity. Therefore, I have chosen to present the qualitative findings from the interviews first in this case, and then the quantitative findings from the questionnaire, in a departure from the order of presentation of results in the rest of this subchapter.

I examined the variable of classroom popularity using two questions (22 and 24) in the IDI interview. Question 22⁴⁰ aims to assess the importance of popularity to the participant. The answers revealed a diverse situation, in which only a few research participants considered it important to be popular in the classroom: *“Important, listen, it’s important that everyone loves you, very important”* (M.U., male, 18 years old); *“I do not know whether to define it as popular, but yes, it is important for me to have the same status as my friends, and to have as many friends and people who love me around me as possible”* (N.N., male, 18 years old). Others said: *“Ummm popular ... wow, it really depends, for me? It seems to me yes. It does matter, how many people talk to you and want to be with you”* (R.E., female, 17 years old); another said, *“Ummm quite important, because that’s how you feel more comfortable and you can do whatever you want”* (T.M., female, 16 years old).

However, most interviewees did not see the importance of popularity in the classroom, at least for themselves, but they did see the importance of popularity within their immediate circle of friends: *“I don’t care. What do I care? ... I have my friends, and that’s it”* (N.Z., female, 18 years old); *“Ummm not so important; it’s important to have friends, but being popular doesn’t matter”* (Y.O., male, 16 years old); *“The truth is that I used to attach great importance to it, in ninth grade let’s say, and then I realized that I’m not going to pursue other people’s acceptance, and whoever loves me loves*

⁴⁰ Question 22: How important is it to you to be popular in class?

me. And today in my eyes it no longer matters. But in my circle of friends, then it does matter” (Y.E., male, 17 years old); as well as, “Ummm I’m not really sure to be honest; it’s not necessary for me, and the truth is I’ve never been unpopular. Like, I’ve always been okay with everyone. I would not want to be in a situation where I do not have a place, but it is especially important to me that I have my group of friends, and with them I can be what I want and how I want” (A.Z., female, 18 years old). Finally, some respondents also argued that popularity is not important, but what is important is to be a good person: “I do not think it’s important; I think it’s more important to be a good person. Because if you have no values, and do not respect everyone and that ... then what is it worth if you are popular or not? That’s how I see it; if one is a good and pleasant person and you can talk to him” (F.S., female, 15 years old).

Similar answers came from the Generation Y research participants, who were asked the same question but with a slight change in wording addressing their popularity within their circle of friends and not in the classroom, since they are not classroom students. There were diverse answers, with some considering their popularity very important: “In my opinion, it is very important. I think it has always been important; maybe the definitions have changed over the years, but it is really important to feel accepted” (Y.S., male, 37 years old); “Very. At any age it is important to me. It is important to be loved and admired” (Y.M., female, 35 years old); “Important, important. To me it does give a sense of belonging, security” (M.L., female, 35 years old.); another said, “Very important. If my friends love me, it’s fun and makes me feel good” (S.Z., male, 35 years old). And some did not attach importance to it: “Ummm not so important, because my circle of friends loves me, so it does not matter if I am more popular than others. When we were children then maybe it was more important and you wanted to be cooler. But today I do what suits me” (L.L., female, 36 years old); “Today, when I have a family and so on, it is not so important to me” (N.H., male, 37 years old); “What am I, in high school? What is this question? ...Lol... it no longer works at our age. It does not matter” (S.R., female, 33 years old).

In question 24,⁴¹ I wanted to test whether, in the opinion of the research participants, the smartphone has importance or value as an aid to their popularity. Following the trend in the previous question, here too, a few of the youth saw the smartphone as helping with their popularity: “Ummm it helps; it’s important to have the

⁴¹ Question 24: How much does the smartphone help you become popular in class? In what ways?

connection on social networks for example; it helps to be updated” (Y.E., male, 17 years old). Some were ambivalent as to whether it helps with popularity, but conceded that it helps to be in contact: “Ummm I do not think so, maybe just to keep in touch with people” (N.B., male, 15 years old); “Does not help, in my opinion. It’s as if it helps to keep in touch but does not help in being acceptable or a good person” (F.S., female, 15 years old). But most teens do not see smartphones as influencing popularity or helping them to be popular: “I don’t think it’s related” (F.F., female, 17 years old); “It does not help, no no” (H.N., male, 15 years old).

For Generation Y research participants, there is an understanding that the smartphone is the main means of maintaining contact with their circle of friends and that that is why it is so important, rather than for helping them to be popular: “Yes, because I initiate social meetings through it” (T.K., female, 35 years old); “Ummm I believe so, ummm, because that’s the way to communicate, like, if it’s on WhatsApp, we’re very busy people, and if I could send a message and not have to pick up a phone call, it still creates the interaction and conversation, and you stay in the person’s consciousness, and then you manage to maintain your popularity with him” (M.S., female, 34 years old); “Yes, yes, we have a WhatsApp group, but it does not help with popularity; it is more to keep in touch with my friends” (N.H., male, 37 years old).

In the quantitative questionnaire, popularity in class was measured by question 36 (“I consider myself popular within the class”). The answers were on a Likert scale from 1-5 (1 = not at all; 5 = the most). And popularity in the real world was measured by question 40 (“The number of friends I have in reality is...”) and question 42 (“I feel more popular in...”).

The research participants were asked whether they consider themselves popular in their class. The difference between research groups was examined by an independent t-test analysis.

Table 32: The differences in perception of popularity in class by research groups (N = 677)

	Generation Z n=530		Generation Y n=147		t
	M	SD	M	SD	
Popularity in class	3.11	0.82	3.37	0.75	-3.40**

$p < .01^{**}$

Perceived popularity in class was generally medium (mean of 3-3.4 on a scale of 1-5). There were significant differences between the samples from Generations Z and Y in the perception of popularity in class. The perceived popularity in class was significantly higher among the sample from Generation Y in comparison to Generation Z.

The research participants were also asked to evaluate their level of popularity in the real world. Table 33 presents the distribution of answers.

Table 33: Distribution of perceived popularity in the real world

<i>Popularity</i>		Generation Z		Generation Y		χ^2
		<i>N</i>	%	<i>N</i>	%	
Number of friends in reality	0	3	0.6%	2	1.4%	19.18**
	1-30	254	48.4%	100	67.6%	
	31-100	204	38.9%	37	25.0%	
	100+	64	12.2%	9	6.1%	
I feel more popular in:	Social networks	67	12.7%	9	6.0%	17.44**
	Reality	292	55.2%	111	74.0%	
	No difference	170	32.1%	30	20.0%	

$p < .01^{**}$

The statistics indicate that the majority of both samples have 1-30 friends in reality (48%-67%). Additionally, the majority of both samples reported that they feel more popular in reality than on social media (55%-74%). There were significant differences between the samples from Generations Z and Y in their number of real-life friends. Higher rates of research participants among the sample from Generation Z reported that they have over 30 friends in reality (51%) in comparison to Generation Y (31%). However, higher rates of research participants among the sample from Generation Y reported that they feel more popular in reality (74%) in comparison to Generation Z (55%).

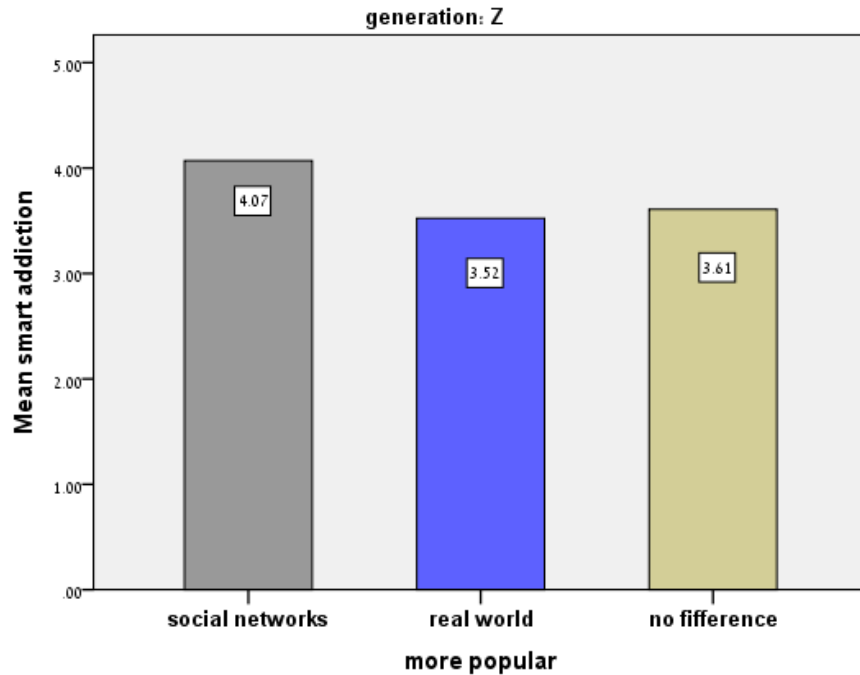
For this research problem (17), two hypotheses were made. The first was that the increasing use of smartphones decreases popularity in the real world of the classroom. In order to examine this hypothesis, a Spearman correlation analysis was performed. The results showed no significant relationship between smartphone use and

popularity in the real world of the classroom among the sample from Generation Z ($r_s = 0.01$, $p > 0.05$), or among the sample from Generation Y ($r_s = 0.03$, $p > 0.05$). These results indicate that the hypothesis that the increasing use of smartphones decreases popularity in the real world of the classroom was falsified and refuted.

The second hypothesis was that the lower the popularity in class, the higher the possibility of smartphone addiction. In order to examine this hypothesis, a Spearman correlation analysis was performed. The results showed no significant relationship between popularity in class and the general level of smartphone addiction among the sample from Generation Z ($r_s = -0.02$, $p > 0.05$), or among the sample from Generation Y ($r_s = 0.03$, $p > 0.05$). Additionally, there were no significant relationships between popularity in class and all other separate items related to smartphone addiction. These results indicate that the hypothesis that the lower the popularity in class, the higher the possibility of smartphone addiction, was falsified and refuted.

However, there were significant differences in the level of smartphone addiction among the Generation Z sample in relation to the sense of whether the youth are more popular in social networks or in reality (as examined by One Way ANOVA analysis). The level of smartphone addiction was significantly higher among the youth who reported that they feel more popular in social networks in comparison to the real world versus those who said there is no difference ($F(2,501) = 9.13$, $p < 0.01$). The results are illustrated in chart 3.

Chart 3: The differences in smartphone addiction with respect to popularity contexts (N=537)



This confirms that the findings from the quantitative questionnaire falsify the hypothesis. Although the IDI interview questions did not assess the two hypotheses directly, it can be understood from the answers that the whole issue of being popular in class is not very relevant or important for the research participants at this age. However, it is important for them to feel loved and cared for by their closest friends.

5.5.1 Conclusions

To address the hypotheses raised in this subchapter, I first examined the subject of smartphone addiction (15). The two parts of the investigation, quantitative and qualitative, both show that for youth, the smartphone is central and significant to the daily routine, and although the comparison sample (Gen Y) shows similarities in their levels of dependence and addiction, there are still differences that lead to the emphatic conclusion that the youth have higher levels of addiction and dependence on the smartphone. This is a result that will be used and will guide the continued presentation of findings and discussion of the subsequent research problems in this subchapter.

For the research problem that addresses the influence of smartphone use on self-esteem (16), it was hypothesized that the lower the self-esteem, the higher the possibility of smartphone addiction. As mentioned, this research problem was measured only by the qualitative interview. From the answers obtained in the IDI questionnaire, it was found that in all the youth from the sample I examined, the level of self-esteem

is high and positive. Everyone reported themselves as social and sociable people, and everyone reported that they loved and valued themselves. While a few report mild self-criticism, this does not diminish their self-esteem and self-love.

In addition, from the data obtained from question 38 about not receiving feedback from the environment in the context of smartphone use, the complex, sad feelings and doubts that were raised mainly by the youth indicate the dominance and centrality of the social and online world among the youth. This prevalence is further emphasized by the reduced level of drama found among Generation Y for the same scenario. Still, this is not enough to indicate a relationship between low self-esteem and the possibility of smartphone addiction.

Thus, self-esteem was found to be high and positive among the youth, regardless of their level of smartphone addiction, which, as mentioned, was found to be higher than in the comparison group (Gen Y). Therefore, the hypothesis that the lower the self-esteem, the higher the possibility of smartphone addiction was falsified and refuted.

Two hypotheses were made to address the research problem that deals with the importance of social popularity among the youth (17). The first was that the increasing use of smartphones decreases popularity in the real world of the classroom. The results from the quantitative questionnaire falsified and refuted that hypothesis.

The second hypothesis was that the lower the popularity in class, the higher the possibility of smartphone addiction. The results from the quantitative part falsified and refuted that hypothesis.

However, according to the IDI, most respondents do not see the importance of popularity in the classroom, at least for themselves, but they do see the importance of popularity within their immediate circle of friends. Some also argued that popularity is not important, but what is important is to be a good person.

The answers from the comparison group (GenY) were found to be quite similar to those of the youth regarding the importance of popularity, although some attributed importance and a sense of belonging to being popular.

In addition, regarding the function of the smartphone in promoting popularity, it was found that the youth see the smartphone as a means of communication and for keeping in touch, but not as helping them to be popular. The same understanding was also evident in the Generation Y respondents.

In conclusion, it can be understood that the issue of popularity in the classroom, and in the real world, is not very important or significant for youth, and that the smartphone in this case is used as a means of communication and does not help promote popularity. Therefore, there is no relationship between the variables, and the hypotheses have been falsified and refuted.

5.6 Recapitulation and conclusions of the research

The main problem that this work explores is: what are the characteristic features of the influence of smartphone use on the everyday life of contemporary youth in Israel? As stated, in order to answer this main problem, and for rational, clear, and easy orientation, this chapter was divided into four subchapters.

The first subchapter, “The smartphone in its general characteristics,” was an introduction to, and examination of, the cultural and broader effects of the smartphone in the life of the youth in Israel and the place it occupies in their lives. The answers to all the research problems that were raised led to the clear conclusion that the smartphone is a dominant, central, and important tool in the lives of the youth in their daily routine and in the day-to-day conduct of every moment. This is reflected in the young age at which they first received the device and continues with their extensive use of it during the day and its functionality in the daily routine as a primary, basic, and prevalent communications tool, and as a device that provides entertainment, music, and games. It is accessed throughout the day, frequently and regularly, for all these purposes in what can even be described as chronic usage.

In addition, this conclusion is reinforced in light of the difficulty many of the research participants found in identifying anything that the smartphone does not provide; that is, many saw it as meeting all their possible needs. At the same time, it was found in some of the youth that the smartphone does not meet their physical and emotional needs, which leaves room and potential for the smartphone’s further development in the future.

Finally, the responses to the questions targeting the research problem that addressed the characteristics of the smartphone as a “virtual friend” highlighted its qualities as a personal, private, and intimate device. This is largely due to its portability, ease of use, and easy access to information and means of communication. The comparison sample (Gen Y) also highlighted the generational gap thanks to their similar

answers regarding the qualities and functionality of the smartphone, but without mentioning the words or phrases that belong to the world of closeness and friendship. This emphasizes the significance of the smartphone for the youth, beyond just being a tool, a functional device for communication and for satisfaction of needs, for this age group, it is also attributed with characteristics of personal connection and emotional closeness.

In summarizing the conclusions of the second subchapter, “Sociality and smartphone use,” it was found for the research hypothesis that the more the youth use the smartphone, the less motivation they have to engage in face-to-face interactions, both in the quantitative and the qualitative aspects of the research, that there is no relationship between the variables, and therefore the hypothesis was falsified.

Furthermore, for the hypothesis that the increasing use of smartphones leads to lack of ability to recognize facial expressions among the youth, it was found that there is no relationship between these variables, and therefore the hypothesis was not verified positively.

For the research problem that dealt with the influence of digital media use via the smartphone on youth social involvement, the hypothesis that the more the youth use smartphones, the less they are socially involved was raised. This hypothesis was related to the following research problem that discusses how the smartphone culture affects intimate relationships among the youth. The results found for the hypothesis were complex and ambiguous. In the quantitative questionnaire, a positive relationship was found between the use of the smartphone and the level of social involvement among the youth, and therefore the hypothesis was partially positively confirmed. In contrast, in the qualitative IDI interviews, it was found that there is no relationship between the increasing use of smartphones by the youth and the decrease in their social involvement. Therefore, the hypothesis was falsified and refuted in the qualitative part.

I did not make a separate hypothesis for the research problem discussing how smartphone culture affects intimate relations among the youth; however, this research problem examined and was related to the variable of social involvement. In this way, it was found that the smartphone is very present during joint activities of youth couples, but it was also found that there is the desire to reduce the use of the smartphone during these activities as much as possible.

Examination of the final research problem of this second subchapter, for which I hypothesized that because of the use of smartphones, the youth have less courage to express an opinion because it can lead to negative face-to-face feedback, it was revealed, both in the quantitative and the qualitative parts of the research, that there is a positive relationship between the variables, and this hypothesis has been positively confirmed.

Subchapter 3, “Effects of the smartphone in private use,” first dealt with the research problem discussing the effects of smartphone during classroom hours on the satisfaction of the youth from the teacher, the lesson, and the course. The quantitative aspect of the research did not positively support this hypothesis.

In contrast, thanks to the option of obtaining in-depth, reflective responses from the research participants, it seems that in fact, the youth really care and take note of whether teachers prohibit or permit using the smartphone during class. From these responses, it can be concluded that some of the assumptions received positive verification, but this was not adequate and complete for all components of the hypothesis. However, from the responses to the second part of the question, it seems that all research participants (both Generations Z and Y) are aware of their lack of presence in the physical reality, when they are on the phone and mentally absent, which gives further support to the positive verification of the hypothesis.

In this subchapter, the effects of the smartphone on sleeping habits were also examined, and the hypothesis was made that the use of a smartphone before bedtime leads to bad sleeping habits. However, despite all the collected data showing high levels of engagement and strong presence of the smartphone around sleeping time, i.e., both before sleeping and while sleeping and during the night, most research participants from both samples reported that they sleep well and deeply. The combination of the quantitative and qualitative parts revealed that there is no relationship between the variables. Therefore, the research hypothesis was falsified and refuted.

Next, the research hypothesis that the more intensively smartphones are used, the more difficult, protracted, and stressful daily decision-making becomes for the youth, was tested. This hypothesis was found to be positively confirmed by the quantitative questionnaire, in particular, given the fact that no relationship was found between the variables for the comparison group, Generation Y. Moreover, the in-depth study via qualitative interviews also provided backing for the hypothesis by revealing

the prevalence of the smartphone in all aspects of the youths' decision-making process, as a source of information, a source of communication with relatives for consultation, and for access to social networks, where "the wisdom of the masses" can be exploited.

Accordingly, it was hypothesized for the research problem that dealt with how smartphone culture affects the independence of the youth that, thanks to smartphone usage, the youth are more independent in the knowledge world but less independent in the physical world. Based both on the quantitative questionnaire and the responses to the IDI interviews, this hypothesis was found to be positively confirmed.

The last subchapter, number 4, dealt with smartphone addiction, self-esteem, and popularity both in the classroom and in the real world. Many components were examined that explore the potential for smartphone addiction, and both the qualitative and the quantitative parts support the conclusion that the youth have higher levels of addiction to and dependence on the smartphone compared to the sample from Generation Y.

Further, regarding the effects of the smartphone on self-esteem, the hypothesis that low self-esteem leads to a higher possibility of smartphone addiction was refuted by the findings; in fact, it was found that youth have high levels of self-esteem, a figure that is further confirmed by comparison to Generation Y.

The two hypotheses raised regarding the influence of digital media use via the smartphone on youth popularity in class: first, that the lower the popularity in class, the higher the possibility of smartphone addiction, and, second, that the increasing use of smartphones decreases popularity in the real world of the classroom, were found to be unsubstantiated and were therefore refuted.

Thus, it can be concluded that the smartphone is a central, dominant, important, and valuable device that fulfills many functions in the lives of the youth and in their routine daily reality. It was found that many of the research hypotheses were not verified positively, but this does not reduce or detract from the weight and centrality of the smartphone in the lives of contemporary youth in Israel. It was found that the smartphone is in virtually chronic use among the youth and has features and components that are functional for employment, entertainment, and as a tool for relieving boredom, as well as features that promote personal connection and emotional closeness.

Epilogue

To conclude my research work and to summarize the answer to the main research problem, which explores the characteristic features of the influence of smartphone use on the everyday life of contemporary youth in Israel, it has been found that the smartphone meets many of the youths' needs but still does not satisfy all of them. It has been found to be influential and meaningful in the decision-making processes and degree of independence among the youth. It has also been found that the smartphone is undoubtedly involved in and influences, sometimes significantly, the patterns and methods of communication among the youth. At the same time, it was found that most youth are still socially involved and understand and appreciate the need for and importance of physical presence in interpersonal interactions, as well as the significance of non-verbal language, which is not holistically conveyed online via the smartphone.

Finally, I consider it appropriate to address a major issue for this work, to which I devoted chapter 4, and that is smartphone addiction. This is a major and currently pressing topic that concerns my research population specifically and the Western world in general. All the data collected for this research has shown that, in addition to the smartphone being so significant and central in youth life, it is also a locus of excessive and often uncontrollable preoccupation, such as on social networks or in inappropriate attention to work-related issues during social gatherings. This use can lead to dependence and addiction to the smartphone among the youth.

Based on words not directly quoted in chapter 5, but which I heard and observed, especially in interviews, and also based on comparison to the responses from Generation Y, there seems to be increasing awareness of smartphone addiction and its negative consequences among the youth. Most of the time, this awareness exists in constant conflict and reveals a gap between the potential of the smartphone to be a sort of "virtual friend" and its ability to cause addiction. It seems that for the youth, the use of the smartphone, its presence and involvement in their lives, is perceived as more natural and inevitable, compared to the Generation Y respondents, who were not born into the smartphone technology and are not "digital natives" (Prensky, 2001). This was perceptible, additionally, in light of the expressions of frustration and guilt regarding the youths' lack of control, their dependence on the smartphone, and their understanding of its potential for addiction.

Many times, the smartphone is perceived by the youth as having human qualities and as a sort of friend – a virtual friend of course – as an assistant in communicating with the environment, as someone who is always there, contains all the memories and moments of life, gives confidence in moments alone like walking alone in the street, and it is the first thing they approach in a moment of boredom. And on the other hand, there are the negative consequences of that friend being available anytime and anywhere, which may lead to the same addiction and dependence that increases as they use it more.

In light of the many studies consulted, in light of the data collection, interviews and also my involvement in the field in general, and as a teacher who meets every day with many youths in particular, I expect an optimistic continuation for the youth and their use of smartphones. It appears that the great challenge for contemporary youth is to know how to assess and manage their use of the smartphone in their daily routine, to try to control its use, to avoid dependence and addiction, and to get the most out of the benefits it offers without losing their connection to the real world beyond the screen. Thanks to the growing awareness among the population in general and among the youth in particular, I regard this challenge with optimism and believe that the youth will succeed and be educated to manage the technology, and it will not be the case that the technology will manage them.

In addition to the optimism I feel, and with a realistic view of things, the youth will not be able to and should not deal with the technology alone. It has recently been found that there are countries, including Israel, that understand and are aware of the effects and negative consequences of smartphones, and especially the growing global power of big corporations like Facebook and Google. These countries are starting to implement regulatory actions aimed at controlling, monitoring, and limiting those giant corporations. All this is being done in order to maintain and protect the user population, who are in fact the majority of the world population today.

In conclusion, the smartphone is an amazing technology that has entered world culture in general and Israeli culture in particular. It has been found that the characteristics and components of the smartphone are so many and varied and, accordingly, that they impact and change the reality of everyday life in Israel. And as Neil Postman (1992) put it: “Every technology is both a burden and a blessing; it is not this or that but both this and that”. A statement so true and relevant needs to accompany

society and culture all over the world in dealing with the challenges facing smartphone technology.

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Appendices

Appendix Number 1: Blank Questionnaire Generation Z

Hi, my name is Dror Krikon. As part of my doctoral dissertation in sociology, I studying effects of the smartphone on our live. I will thank you for a few minutes of your time to fill out the next questionnaire. This questionnaire is anonymous.

Age: 15, 16, 17, 18

Gender: male / female

place of residence:

- North
- Center district
- (geography) plain
- South
- Judea and Samaria

		8-10	11-13	14 and over
1	I got my first smartphone in age			
2	In my opinion, a person in Israel gets his first smartphone in age			

3. I'm using my smartphone during the day

- a. To an hour
- b. Between 1 to 5 hours
- c. Between 6 to 10 hours
- d. Other _____

4. When I see an unusual thing (such as: accident, amazing view, a famous person).
the first thing I'll do?

- a. Stand and watch
- b. Get the smartphone to take pictures and record
- c. Call to a close friend to share with him

d. Other _____

		True	False
5	I have a friend who doesn't have smartphone		
6	It happened to me once that I called or sent a text message to someone next to me or with me in the same room		
7	It happened to me once that I found myself investing time in writing a message / email / recording a text message instead of calling the person himself		
8	I check my smartphone in the middle of the night		
9	A group conversation in one of the social networks on the smartphone, considered a social meeting		
10	A group conversation in one of the social networks on the smartphone provide me the need for a social meeting		
11	I would like to reduce the time I'm busy with the smartphone		
12	I can't reduce the time I'm busy with the smartphone		
13	It happened to me once that I have give up on a hobby or activity because I were busy on the smartphone		
14	My smartphone is always within reach		
15	I Have seen or experienced cyberbullying		
16	I have a name or nickname for your smartphone		
17	When I have a dilemma, I use my smartphone for making the decision		
18	I prefer to share feelings or thoughts through the smartphone because I have a fear of a negative reaction to what I will say		
19	While with a spouse, I would upload a photo of us together		
20	It happens that I use a smartphone while I am alone with my spouse		

21. The easiest way for me to convey a message is to

- a. speak up
- b. Send text message
- c. Record a voicemail message

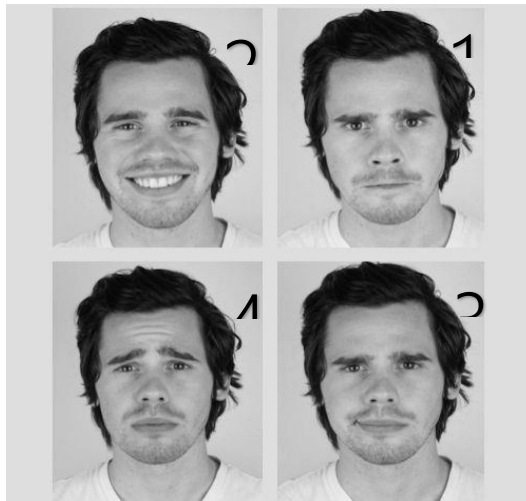
		Every day	A few days a week	One's a week	A few days a month	Not at all
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22	The frequency I meet with friends during the week is (not at school/work time)					
23	I try to initiate a face-to-face meeting with friends					
24	I would like to meet face-to-face with friends during the week					

25. For me to initiate a face-to-face meeting with friends, is

Very important	Important	I don't care	less-important	Not-important at all
----------------	-----------	--------------	----------------	----------------------

26. Look at the following pictures



		joy	nerves	apathetic	Satisfied	skeptic
	the emotion expressed in Figure 1					
	the emotion expressed in Figure 2					
	the emotion expressed in Figure 3					
	the emotion expressed in Figure 4					

		When the teacher agrees to use the smartphone during class	When the teacher prohibits the use of a smartphone during class
27	I'm more satisfied with the teacher		
28	I'm more satisfied with the lesson		
29	I'm more satisfied with the entire Course		

30. Before bedtime, I stop using my phone

- a. never
- b. 1-5 minute
- c. 6-30 minute
- d. 31 minute- more

31. while I'm sleeping my phone is:

- a. with me in bed
- b. on a table next to me
- c. outside of the room
- d. Turn off

32. The first thing I'm doing in the morning is:

- a. Checking messages on my smartphone
- b. Brush my teeth
- c. having breakfast
- d. Other: _____

33. I'm consider myself popular in the class?

The most	Much	In the meddle	Not much	Not at all
----------	------	---------------	----------	------------

		0	1-30	31-100	100 and above
--	--	---	------	--------	---------------

34	The number of WhatsApp groups I'm a member on is				
35	The number of followers I have on Instagram is				
36	The number of friends I have on Facebook is				
37	The number of friends I have in reality is				

38. The importance of the number of members in the social networks is?

Very important	important	In the meddle	Less important	Not important at all
----------------	-----------	---------------	----------------	----------------------

39. I feel more popular in:

- a. Social networks
- b. In reality
- c. No difference

40. When I'm in the middle of something important and my smartphone rings or gets a message alert. I would:

- a. Answer immediately
- b. Finish the important thing and only then I will answer
- c. Just look to see who it is
- d. Other _____

		All the time	Often	I don't remember	Seldom	Never
41	Sometimes I find myself use the smartphone more than I planned					
42	It happens to me that I lose a sense of time when I'm on the smartphone					

43. If my smartphone was got lost. I would feel (multiple choices)

- a. anxiety
- b. Sadness

- c. I would not care
- d. Other _____

44. I check my smartphone phone:

- a. Every minute
- b. Every five minutes
- c. Once an hour
- d. Other _____

45. I use the smartphone in any of the following situations (multiple choices)

- a. During the meal
- b. In the toilet
- c. In conversation with another person
- d. While watching TV
- e. None of these

46. I'm using my smartphone for making decisions

- a. Every day
- b. Every week
- c. Monthly
- d. Not at all

		phone call	text message	Face to face	Other
47	I prefer to tell someone what I feel about him (positive or negative) by				
48	I prefer to tell someone what I think about him (positive or negative) by				

49. In a moment of boredom, I:

- a. Staring at the sky
- b. picking up the smartphone

- c. Looking for someone to talk to
- d. Other _____

50. I like my smartphone:

- a. Very much
- b. Neither likes nor hates
- c. I do not like it - it's a device
- d. Other _____

51. I would learn a new technique (Drill in the wall / Hang a picture / New cosmetics technique / Build a wooden chair, etc.) by:

- a. Search on the internet with my smartphone
- b. Try myself until I'll make it
- c. Ask a person who understands
- d. Other _____

52. I will get new knowledge or learn something new, by:

- a. Read online through the smartphone
- b. Read online through the computer
- c. Read a book about it
- d. Ask someone who understands and learns from him
- e. Other _____

Complete the sentence:

53. I would like someone to invent an application that will _____

54. I like about my smartphone that _____

		Strongly Agree	Agree	Partially agree	Disagree	Disagree at all
55	It's hard for me to make decisions					
56	It takes me a lot of time to make decisions					
57	making decisions makes me nervous					

Appendix Number 2: Blank Questionnaire Generation Y

Hi, my name is Dror Krikon. As part of my doctoral dissertation in sociology, I studying effects of the smartphone on our live. I will thank you for a few minutes of your time to fill out the next questionnaire. This questionnaire is anonymous.

Age: 33, 34, 35, 36, 37

Gender: male / female

place of residence:

- North
- Center district
- (geography) plain
- South
- Judea and Samaria

		8-10	11-13	14 and over
1	I got my first smartphone in age			
2	In my opinion, a person in Israel gets his first smartphone in age			

5. I'm using my smartphone during the day

- e. To an hour
- f. Between 1 to 5 hours
- g. Between 6 to 10 hours
- h. Other _____

6. When I see an unusual thing (such as: accident, amazing view, a famous person).
the first thing I'll do?

- a. Stand and watch
- b. Get the smartphone to take pictures and record
- c. Call to a close friend to share with him
- d. Other _____

		True	False
5	I have a friend who doesn't have smartphone		
6	It happened to me once that I called or sent a text message to someone next to me or with me in the same room		
7	It happened to me once that I found myself investing time in writing a message / email / recording a text message instead of calling the person himself		
8	I check my smartphone in the middle of the night		
9	A group conversation in one of the social networks on the smartphone, considered a social meeting		
10	A group conversation in one of the social networks on the smartphone provide me the need for a social meeting		
11	I would like to reduce the time I'm busy with the smartphone		
12	I can't reduce the time I'm busy with the smartphone		
13	It happened to me once that I have give up on a hobby or activity because I were busy on the smartphone		
14	My smartphone is always within reach		
15	I Have seen or experienced cyberbullying		
16	I have a name or nickname for your smartphone		
17	When I have a dilemma, I use my smartphone for making the decision		
18	I prefer to share feelings or thoughts through the smartphone because I have a fear of a negative reaction to what I will say		
19	While with a spouse, I would upload a photo of us together		
20	It happens that I use a smartphone while I am alone with my spouse		

22. The easiest way for me to convey a message is to

- d. speak up
- e. Send text message
- f. Record a voicemail message

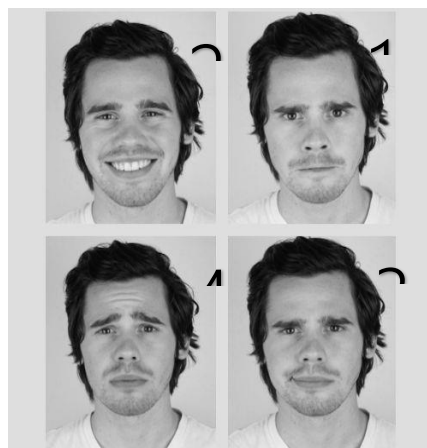
	Every day	A few days a week	One's a week	A few days a month	Not at all

22	The frequency I meet with friends during the week is (not at school/work time)					
23	I try to initiate a face-to-face meeting with friends					
24	I would like to meet face-to-face with friends during the week					

27. For me to initiate a face-to-face meeting with friends, is

Very important	Important	I don't care	less-important	Not-important at all
----------------	-----------	--------------	----------------	----------------------

28. Look at the following pictures



		joy	nerves	apathetic	Satisfied	skeptic
	the emotion expressed in Figure 1					
	the emotion expressed in Figure 2					
	the emotion expressed in Figure 3					
	the emotion expressed in Figure 4					

	*Think of yourself as a high school student	When the teacher agrees to use the smartphone during class	When the teacher prohibits the use of a smartphone during class
27	I'm more satisfied with the teacher		
28	I'm more satisfied with the lesson		
29	I'm more satisfied with the entire Course		

34. Before bedtime, I stop using my phone

- a. never
- b. 1-5 minute
- c. 6-30 minute
- d. 31 minute- more

35. while I'm sleeping my phone is:

- a. with me in bed
- b. on a table next to me
- c. outside of the room
- d. Turn off

36. The first thing I'm doing in the morning is:

- a. Checking messages on my smartphone
- b. Brush my teeth
- c. having breakfast
- d. Other: _____

37. I'm consider myself popular in the circle of your friends?

The most	Much	In the meddle	Not much	Not at all
----------	------	---------------	----------	------------

		0	1-30	31-100	100 and above
--	--	---	------	--------	---------------

34	The number of WhatsApp groups I'm a member on is				
35	The number of followers I have on Instagram is				
36	The number of friends I have on Facebook is				
37	The number of friends I have in reality is				

39. The importance of the number of members in the social networks is?

Very important	important	In the meddle	Less important	Not important at all
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41. I feel more popular in:

- a. Social networks
- b. In reality
- c. No difference

42. When I'm in the middle of something important and my smartphone rings or gets a message alert. I would:

- a. Answer immediately
- b. Finish the important thing and only then I will answer
- c. Just look to see who it is
- d. Other_____

		All the time	Often	I don't remember	Seldom	Never
41	Sometimes I find myself use the smartphone more than I planned					
42	It happens to me that I lose a sense of time when I'm on the smartphone					

47. If my smartphone was got lost. I would feel (multiple choices)

- a. anxiety
- b. Sadness

- c. I would not care
- d. Other _____

48. I check my smartphone phone:

- a. Every minute
- b. Every five minutes
- c. Once an hour
- d. Other _____

49. I use the smartphone in any of the following situations (multiple choices)

- a. During the meal
- b. In the toilet
- c. In conversation with another person
- d. While watching TV
- e. None of these

50. I'm using my smartphone for making decisions

- a. Every day
- b. Every week
- c. Monthly
- d. Not at all

		phone call	text message	Face to face	Other
47	I prefer to tell someone what I feel about him (positive or negative) by				
48	I prefer to tell someone what I think about him (positive or negative) by				

55. In a moment of boredom, I:

- a. Staring at the sky
- b. picking up the smartphone

- c. Looking for someone to talk to
- d. Other _____

56. I like my smartphone:

- a. Very much
- b. Neither likes nor hates
- c. I do not like it - it's a device
- d. Other _____

57. I would learn a new technique (Drill in the wall / Hang a picture / New cosmetics technique / Build a wooden chair, etc.) by:

- a. Search on the internet with my smartphone
- b. Try myself until I'll make it
- c. Ask a person who understands
- d. Other _____

58. I will get new knowledge or learn something new, by:

- a. Read online through the smartphone
- b. Read online through the computer
- c. Read a book about it
- d. Ask someone who understands and learns from him
- e. Other _____

Complete the sentence:

59. I would like someone to invent an application that will _____

60. I like about my smartphone that _____

		Strongly Agree	Agree	Partially agree	Disagree	Disagree at all
55	It's hard for me to make decisions					
56	It takes me a lot of time to make decisions					
57	making decisions makes me nervous					

Appendix Number 3: Blank In-Depth Interview questions

1. Question 1: What do you do with your smartphone when you are alone?
2. Question 2: What norms, acceptable social behavior, what is permitted and what is forbidden with the phone do you know about using a smartphone (for example, do you reply to a message right away or when you want to? Do you always answer a phone call? Do you click "like" even when you do not like the post?
3. Question 3: Do you see yourself as a sociable person?
4. Question 4: What is a social meeting in your opinion?
5. Question 5: What are you doing during the social meeting?
6. Question 6: How do you organize a social meeting?
7. Question 7: Does communication via the smartphone provide the need for contact with a friend as a substitute for a physical encounter?
8. Question 8: What is the importance of meeting face-to-face with friends in general? and the importance of interpersonal communication? and what is the difference between interpersonal communication and e-communication?
9. Question 9: Are you a person who initiates social meetings?
10. Question 10: Have you ever had a conversation with a person and did not look at him in the whole conversation?
11. Question 11: What happens to your presence in a situation or event when you use the smartphone?
12. Question 12: Do you manage to concentrate when you use a smartphone while you are in a physical social interaction?
13. Question 13: Do you manage to enjoy what is going on around you when you're on your smartphone?
14. Question 14: What would you prefer, that the teachers agree or disagree to use the smartphone during the lesson? And who do you appreciate more, the teachers who allow or forbid? And is it possible to be satisfied with something when you are in place, physically but not mentally?
15. Question 15: How do you think it's easier to convey feedback (positive or negative), face to face or via smartphone? What do you usually do?
16. Question 16: How do you think it's easier to express feelings (positive or negative), face to face or via smartphone? What do you usually do?

17. Question 17: What do you do when you and your spouse are alone? is using the smartphone (and not Shared activity) is one of the activities?
18. Question 18: How often do you check your smartphone? What makes you do that? What need it provides you?
19. Question 19: Where is your smartphone during the night, when you are sleeping?
20. Question 20: Do you deal or use your smartphone before you fall asleep?
21. Question 21: Can you sleep when the smartphone is away from you, for example, in the next room
22. Question 22: How important is it to you to be popular in class?
23. Question 23: What is the importance of the number of members on social networks? And why is that important to you?
24. Question 24: How much the smartphone, helps you become popular in class? in which way?
25. Question 25: How long do you think you spend time on social networks?
26. Question 26: If you would like to reduce the time you are busy with the phone, why?
27. Question 27: Are you able to reduce your phone time? On what does it depend?
28. Question 28: Try to describe your feeling, if suddenly your phone is got lost?
29. Question 29: Describe How would you feel being alone on the street without your smartphone? What would you do in this situation?
30. Question 30: Can you go to school or work without your smartphone?
31. Question 31: If you were stuck on a desert island. What are 3 things that you would take with you?
32. Question 32: Does the smartphone help you make decisions? Is the smartphone involved in making your decisions? How does Smartphone help you make decisions on a daily basis?
33. Question 33: The Smartphone offers many applications and answers many of people needs. But which need is still missing for you to be satisfied by the smartphone?
34. Question 34: Do you feel bored occasionally? When? Why? And if you are bored, what do you do?

35. Question 35: What is the advantage of the smartphone over other devices? What are its characteristics that allow it to be your virtual friend and meaningful to you, compared to other devices?
36. Question 36: How is your sleep at night? (Good, deep, with breaks, weak)
37. Question 37: Do you love yourself? Who are you?
38. Question 38: Describe the feeling when you send a message / post / upload a picture or anything. And not getting any response, like 'like', a heart sign, or any real response?