Educating in times of screens: Strategies and technological domestication in six families from Jalisco. A methodological proposal to study the link between education, families and screens

Educar en tiempos de pantallas: Estrategias educativas y domesticación tecnológica en seis familias de Jalisco. Una propuesta metodológica para estudiar el vínculo educación, familias y pantallas

HUMBERTO DARWIN FRANCO MIGUES[1]

http://orcid.org/0000-0003-2979-2956

This article deals with the educational strategies that are used to mediate the use of screens in the home. Through an empirical study carried out among families in Zapopan and Guadalajara (Jalisco), this paper proposes four analytical categories: *media biographies*, *family media trajectories*, *educational strategies* and *technological migrations* to study the relationship between education, families and screens.

KEYWORDS: Education, Families, Screens, technological biographies and technological domestication.

Este artículo trata de las estrategias educativas que se emplean para mediar el uso de las pantallas en el hogar. A través de un estudio empírico realizado en familias de Zapopan y Guadalajara (Jalisco), el trabajo propone cuatro categorías analíticas: biografías mediáticas*, trayectorias mediáticas familiares,* estrategias educativas *y* migraciones tecnológicas *para estudiar la relación educación, familias y pantallas.*

PALABRAS CLAVE: *Educación, Familias, Pantallas, biografías mediáticas y domesticación tecnológica.*

[1]   Universidad de Guadalajara, México.
       E-mail: atreyugold@gmail.com

The family and the household are two important epicenters in the everyday relation we have with screens, since not only that is the place where we spend most of our time connected to them but also because within the home we establish logical relations of usage, appropriation and meaning that make up our media biographies and trajectories.

In that sense, the family plays a crucial role in our process of technological migration and domestication, because it is through its interactions that the educational strategies that regulate the uses and consumption of screens both within and without the home are established. This is not a simple issue if it is considered that in this process, the parents' authority is put to the test before the new generations' media autonomy.

That is why, there is a strong formative/educational component in the relation that families maintain with screens, which becomes apparent in the everyday interactions of its members because it is not just a matter of technology: "it is also a question of a methodological, pedagogical and ideological dimension" that is expressed through "communicative acts" for that is where the "acts of encounter and reciprocity" are taking place, (Aparici, 2010, p. 23) which are so necessary for the eradication of cause-effect relations between a technology and the results expected from it.

Why speak of *screens* in the plural and not of technologies in particular? Because what the families are facing today inside their homes is a technological-digital convergence and that means that multiple processes of media reception, consumption and appropriation are taking place within the household structure given the large number of technological devices that coexist today in family life.

Therefore, screens are understood as the set of technologies that coexist within the domestic space; however, their relevance is not determined only by their quality as technological goods but also by their value as cultural objects.

The objective of this paper is to describe the type of problems and consensuses that occur in families due to the presence of screens in domestic life putting special emphasis on the educational strategies that facilitate mediation, accompaniment, tutelage and prohibition of screens within the household.

Anchored in the tradition of the reception studies in the family context, this article is made up of three sections: 1) an exploration of the role of the family as the educational-communicative agent; 2) a theoretical–methodological proposal to study the link family-screen-education; and finally 3) the results of an empirical approach to the educational strategies and the technological domestication processes in six families from the municipalities of Guadalajara and Zapopan, Jalisco.

The family as an educational-communicative agent

Regardless of the analysis perspective, there are many disciplines that recognize the crucial significance of the family in society. Its relevance is such that it is considered the nucleus or basic cell of the social fabric. That implies that the family, as to subject-object of study, is actually a complex, multidimensional reality, since it represents: "a symbolic reality that transcends every individual and generation, because it incorporates to the present time in a unifying system that confers meaning to its action and to world around it, thus nurturing and feeding the lives of its members" (Tuirán, 2001, p. 24).

It is at its heart that behavior guidelines and sociability standards are created, modeled and shared, because the family operates as a space that produces and transmits cultural guidelines and practices which–of course – include the use, appropriation and domestication of technological devices, since it is the parents, in their role of "social agents," who provide the first intellectual and social capacities, before any other institution does, to interact both within and without the family space.

Today, the interaction that the family has with screens is putting their cohesion–adaptation ability to the test in a context that is characterized more and more by the mediatization of their social practices, since it faces the reshaping of knowledge patterns and the symbolic reorganization of power caused by intra- and inter-generational conflicts over the domestication of screens in the home (Winocur, 2011).

In that sense, the family plays a two-fold role because it acts as the primary learning community as well as the primary community

of media appropriation. The first characteristic suggests that within the family the basic knowledge for survival and social interaction is learned; in turn, the second highlights the fact that it is within the family life that we learn to encode and decode the messages and meanings that come from the media.

Consequently, the parents' role as mediators is vital because their media biographies and trajectories work as action models for the children, since the majority of educational strategies they generate are determined by the direct or indirect, conscious or unconscious, active or inactive, critical or uncritical manners in which they were taught to use and consume screens within and without the home.

In this regard, Charles and Orozco (1992) have identified that families, in their educational relations with the media, assume different roles that range from the *permissive* role, where parents do not worry about the media, to the *expositive* role in terms that the only important thing is the time their children spend in front of the media; the *active* role by commenting and putting media consumption in context, and the *repressive* role, where media consumption is prevented and prohibited (p. 8). We would have to add the *creative role* to these categories, due to the current stage of convergence, which implies taking advantage of digital resources to promote both critical reception and creative production of contents (Orozco & Franco, 2014).

However, the circumstances, contexts and specificity of screens determine the fact that families alternate their intervention roles, since sometimes they can be permissive or prohibitive and some other times active or creative.

These educational strategies that they can assume are connected with the way in which media competences (skills for the usage and appropriation of the screens) modify and transform the family dynamics because it is precisely those digital capacities (apparently better handled by the children) that are causing the new generations to play a more relevant role in the educational processes within the family dynamics (Franco, 2015).

Research on the link between family and screens dates back to the appearance of the media within the household space. As a historical route, academic studies have evolved and diversified as new screens

burst into family interactions. Following this logic, most of the studies tend to focus on only one screen and few research projects assume in a convergent manner the multiple technologies that coexist within the home (Guadarrama, 2007).

The central screen in most of these studies has been television because its predominance in family, private, public and community interactions caused researchers to focus their attention on the dynamics it generates within the home. The earliest studies in this respect were noticeably influenced by the theory of effects, an approach that believed that television injected its messages into the audiences without getting any kind of resistance. That is why their interests were related with issues such violence, sexuality and moral values.

Cultural studies were another theoretical current that studied the media-family relation and it was through ethnography of the audiences that they defined the household and the family as "media appropriation communities". Authors such as Silverstone (1993), Livingstone (1992) and Morley (1996) concluded that the cultural relations that are established with technologies re-structure family life by determining their dynamics in the household both spatially and temporally.

In spite of the theoretical and empirical value of these studies, many of their contributions do not seem to apply fully to our reality because reception processes have changed very much due to the sense of ubiquity, hyperconnection and interactivity that audiences enjoy today. Now reception is subjected neither to the home nor to the family hours, since the forms of watching and consuming the media and their multiple contents have multiplied.

In addition, screens have undergone changes, and the possibilities of communication have increased because now the family can be connected without being in the home, which is a game-changer in terms of what used to be understood as the relation between the family, the household and the media. Today, cell phones and the use of the Internet provide the family with another type of connection that did not use to exist and consequently, cannot be explained by previous schemes (Franco, 2015).

Today's technological-cultural convergence demands that current studies consider multiple reception scenarios where several technologies

coexist in the same space generating a great range of practices and connections with their audiences/users. In this perspective, some studies that are similar to the one we present here have incorporated this in their inquiries thus creating new knowledge about the current links between families and screens. Some examples can be read in the papers by Caron and Caronia (2007), Ling (2008), Gabelas and Lazo (2008), Katz (2010), Guerra and Renés (2010), Winocur (2011), Ponte and Simoes (2012), Correa, Straubhaar, Chen and Spence (2013) and Correa (2014).

The present study understands that the relation families-screens cannot be boiled down to the analysis about reception and appropriation of a single technology, since all the screens today converge in the home multiplying the strategies that parents and children should generate to mediate their use, appropriation and consumption.

FOUR CATEGORIES TO ANALYZE THE LINK BETWEEN FAMILIES, SCREENS AND EDUCATION

In the first part of this article, we mentioned concepts such as media biographies, family media trajectories, technological migrations and educational strategies; these analytical categories were built and used in the doctoral paper *Family education in time of screens: Educational strategies and technological domestication in Guadalajara families and households* (Franco, 2015); they are presented below as a theoretical–methodological proposal to analyze how the family –as the primary community of learning and media interpretation − and the home –as the socio- anthropological space of media interaction – are the key settings to study the relation education, families and screens in times of technological convergence.

Put this way, we start from the premise that screens are cultural objects that acquire social meaning through the symbolic value that people assign to them (Pinch and Bjiker, 2008); that is why knowing the individual and family meanings that are deposited on the screens is essential to understand how parents and children are part of this social construct that creates and recreates the imaginarium that we build around the screens; that is why we intend to analyze not only the

use families make of screens from the subjective, but also through the symbolic materiality they acquire within the domestic interactions.

These Interactions generate trajectories that express both the space–time relations that are established with these media, such as the personal biography that is constructed around them. To Martin-Barbero (1996), acknowledging historicity with the screens is one of the basic competences that should be constructed to understand better the practices we undertake through them, but he warns us: "This is not a history of apparatuses, it is the history of the ways in which these apparatuses are used" (p.138); that is, "what for," "why" and "under what circumstances" they were used should always be underscored.

Thinking of the family media biographies and trajectories involves the rescue of technological migrations within the home and discovering the *educational strategies* that are created to identify in two dimensions (the individual and the family one) the type of meaning that parents and children assign to the screens and how the latter, in their course (inside and out the home), modify family education. The following is a brief definition of each of these analytical categories:

* *Educational Strategies*: The set of actions that are used in the family to control, tutor, accompany or mediate the media uses and consumption that occur inside and out the household space.
* *Media Biographies*: it refers to the historicity of the screen in the life of each of the family members; that is, this is a category that seeks to inquire the personal meanings that the screens acquire through everyday use.
* *Media Family Trajectories*: Unlike the biographies, it is the trace that the presence of the screens leave behind in family life, structure and organization, it is made up of not only the history of how the screens appear and are used in the home, but also the changes that occur after its incorporation.
* *Technological Migrations*: This is the process by means of which one or another screen is incorporated in domestic life. That includes recovering why it was acquired, where it was placed, who made the decision and what the presence of the new device implied for family and media life (Franco, 2015).

The operative work of these categories involved creating a methodological strategy that would rescue individual/family understanding and significance of the screens present in each of the six homes analyzed. The following Figure 1 shows both the methodological and the observables used.

FIGURE 1
ANALYTICAL CATEGORIES AND OBSERVABLES
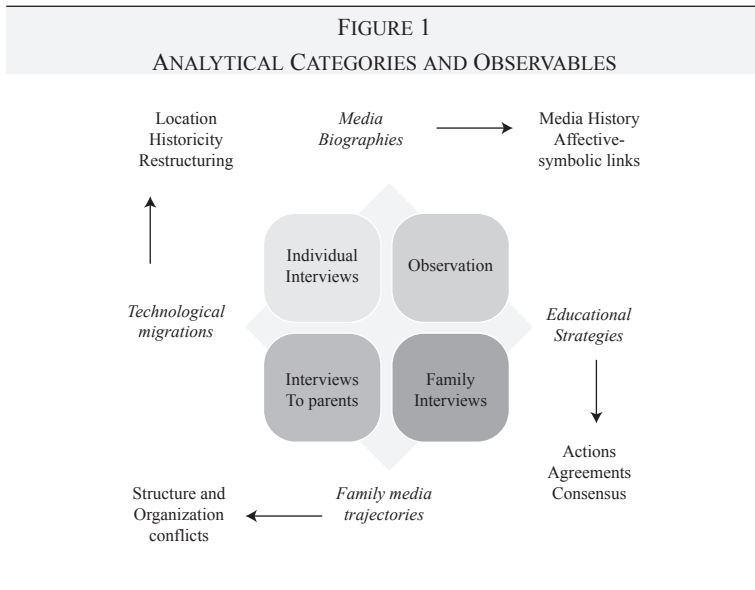
Source: The author

By means of qualitative techniques such as participant observation and individual, parental and family interviews, it was possible to interweave each of the categories so that each process was analyzed through the significance and interpretation that each family gave to their relation with the screens.

In this sense, the category of technological migrations enabled us to delve into the screen historicity in the life of the six families that were studied, which generated the necessary background to know how and under what circumstances each of the family members made up their media biographies, which are not just the sum total of the family media trajectories; quite the contrary, they are autonomous entities that provided

the particular way in which each family signified their technological relation, appropriation and domestication; lastly, educational strategies worked as the analytical pivot that helped to differentiate and qualify the individual/particular manner with which the family established the rules, consensus or prohibitions that regulated the relation that all the members of the six families maintained with the screens present in their homes.

EDUCATIONAL STRATEGIES AND
TECHNOLOGICAL DOMESTICATION IN SIX FAMILIES

The field of research is a construction of reality that is built depending on each object of study; therefore, in order to undertake the empirical approach of this work, it was decided to build a significant sample made up of six families from the municipalities of Guadalajara and Zapopan, Jalisco (Mexico), which were supposed to have different socioeconomic levels, as well as a dissimilar family composition and different type of technological connectivity.

The justification for this choice was supported by our interest in reporting, comparatively speaking, how the insertion or more or fewer screens in the home (usually resulting from their economic capacity) influenced the *educational strategies* generated around them. Moreover, we wanted to stress how the sociocultural context (where the family media biographies and trajectories were built) could be a determining factor in the generation of the meanings that the screens started to adopt in the parents' and children's lives and how this became apparent through the technological domestication processes.

THE TECHNOLOGICAL MIGRATIONS IN THE SIX HOMES

In order to understand the way in which the screens were integrated into the domestic life of the six families analyzed, a diachronic account of the process was made, which enabled its incorporation in time and form in each of the homes. A first finding revealed that the incorporation of a screen was related with its absence in some of the parents' family life, because if they had grown up without a computer, they decided that they children should have one not only because of the technological

TABLE 1

GENERAL DESCRIPTION OF THE SIX FAMILIES SELECTED

Family	Family 1	Family 2	Family 3	Family 4	Family 5	Family 6
Year it started	2003	2009	2007	1982	2000	2007
Family Composition	Nuclear Home Female head	Compound Home Male head	Compound Home Male head	Extended Home Male head	Nuclear Home Male head	Compound Home Female head
Number of members	Three	Four	Four	Five	Four	Five
Names and ages of the members of each family	María 38 years Daniel 8 years Karina 6 years	Ricardo 30 years Marla 31 years Daniela 10 years Bernardo 1 year	Fernando 38 years Tania 36 years Ana 15 years Julia 5 years	Roberto 55 years Josefina 53 years Sofía 20 years Raúl 11 years Martha 80 years	José 40 Years Rebeca 38 years Víctor 15 years Emilio 8 years	Juan 29 years Alejandra 33 years Pablo 13 years Sandra 9 years Miguel 3 years
Socioeconomic level	A/B	C+	C+	C	C-	D+
Municipality	Zapopan	Zapopan	Zapopan	Guadalajara	Guadalajara	Guadalajara

Parents' Educational level (degree)	Master's	Both Bachelor's	Doctor's Bachelor's	Both Bachelor's	Both bachelor's	Bachelor's Master's
Number of screens in the household	8	16	11	14	9	10
Hours per day dedicated to consumption	27	38	40	36	19	37

Source: The author.

value as such, but also because of what it had meant for them not to have a computer, especially in the school context.

The second finding is that the incorporation of this or that technology was concerned with the specific dynamics of each of the six families, since if they had very long working hours which involved them being away from home for a long time, the screen was chosen to act as a sort of family connection/communication; for example, a cell phone allowed not only access to a number of entertainments and connections for the children when they were home alone but it also enabled parental vigilance from a distance.

A third finding was discovering that the trace of technological migrations was not necessarily a generational issue, because the children are not the only ones that enjoy the new technologies, since the process of technological convergence caused the media biographies and trajectories of all the members of the family to be affected, to a greater or lesser degree, due to the presence of screens in the domestic space. The growing use of new technologies by the parents sped up the acquisition of technological goods in all the families.

RECONSTRUCTING THE FAMILY MEDIA BIOGRAPHIES AND TRAJECTORIES

The process of reconstructing the media biographies of each of the members of the six families approached turned out to be a very revealing exercise, since these subjects had seldom questioned their relation with technologies or the role the latter played in their lives because for many of them, especially the children and youths, technologies have always been part of their everyday experience and it is difficult for them to imagine themselves outside the practices they maintain with or through them; quite the opposite, parents did manage to differentiate these stages in which they lived without a strong dependence on technologies, though now –just as it happens with their children– most of them cannot conceive of themselves without surfing on the Internet or having a cell phone.

An initial find was that the media biography of each of their parents was particularly influenced by the socioeconomic level of

their family of origin, by their own technological domestication process and in some cases, by the profession or work activity they are involved with today.

This biographical makeup in the parents' relation with the screens, as a second finding, is the largest influence for the children's media biography makeup though it is not the most determining, since it is the screens themselves and the current stage of mediatization of the social practices that generate a breaking away in the constitution of the children's media biographies because they have faster, more effective processes of technological domestication.

Technological domestication involves a number of appropriation, objectification, incorporation and conversion activities. These activities, in the words of Silverstone (1996), ensure two things: 1) the full incorporation of technology to the people's everyday life and 2) the significance of technologies as something of our own that is essential for everyday life.

The appropriation stage is defined by Silverstone as: The moment in which an artifact leaves behind its status as commodity, within the formal economy, and becomes an object that belongs to someone who, when they take it home, gives it a specific meaning" (1996, p. 176). Acknowledging this was essential in drawing up the media biographies for each family member, because while for some technology is a necessary evil for others it is the vortex of all their experiences.

> Technology bothers me because it cuts off our communication, but I know it is a necessary good, since otherwise, I wouldn't know where the family is and how it is doing. It bothers me, but I cannot leave home without my cell phone anymore (Raquel, Family 6).

> Technology moves today's world and refusing to use it is forcing yourself to backwardness, I feel that today it surpasses me by far, but I know that if I stop using it I will miss out on an important part of what my children are doing on them (María, Family 1).

This incorporation is no doubt occurring in more novel screens that require greater generation of media competences; in this regard, the

mothers, mainly, were the ones that sought them out the most to help their children:

> The problem for us as parents is that if you don't learn to use the technologies, you won't know what to tell your children when they ask you a question (María, Family 2).
> Technologies provide many satisfactions, but they are also demanding to us as parent because they compel us to have skills that we don't have (María, Family 1).

This second stage generates an *objectification,* since people begin to transfer and assign meanings to the technologies according to the relation they are beginning to establish with them. This objectification is one of the greatest challenges, because this individual action necessarily has to be put to the test and be debated with the others; for example, screens do not have the same meaning for the children than for the parents; therefore, they will both want to debate them, in the family negotiation about the use and consumption of the screens, be it to find a solution to the conflict or to impose one's views over that of the other's.

> Facebook is important in my relationships with my friends because there we express how we feel. I'm there all day long because being online has become something that I just can't stop doing … my parents tell me to get out of the house more, but being there is a new way of hanging around with people (Ana, Family 3).

> Ana has to open up more and not just have personal relations on the Internet. Perhaps I can't understand what she feels being there, but I know that her relationships cannot be built only on Facebook (Tania, Family 3).

The third stage, incorporation, explains how technologies are incorporated into the subjects' everyday activities according to their needs, knowledge and preferences. Technology is functional when "it becomes incorporated in the users' everyday routines and time structure" (Silverstone, 1996, p. 177).

The day I realized that I could not live without being online, I knew that the Internet was part of me and that I would have a hard time getting it out of my life. Sometimes I'm online because of stuff from work, but more often than not, it is about Facebook nonsense (Ricardo, Family 2)

I measure my day on the basis of my use of screens … I believe that I see it like this now, because in the morning I turn on the TV and log in on the Internet from my cell to check Facebook (Marla, Family 2).

That does not mean that routines will always remain the same, since uses and appropriations will change over time and circumstances. Some practices will disappear or yield the way to new interactions, which presupposes the constitution of a non-linear relation with the technologies, which was visible in the six families.

In conversion, the last stage of domestication:

The technology is integrated into the user's image, thus contributing to the definition of its material and symbolic capital, and it is displayed publicly as a way of reaffirming a certain position through its ownership and usage competence (Yarto, 2010, p. 177).

My dad is using his cell all the time; he takes it everywhere he goes. I don't know what he is doing but he does not pay attention to us, I tell him that it is stuck to his hand" (Daniela, Family 2).

Rafa, put down the cell phone and pay attention to me", that is a phrase I say to him all the time; however, he says that he has to be connected because of his work, but I know that it is not always true (Marla, Family 2).

In order for the appropriation of a technology to have consequences, it is necessary for the technology to "be displayed materially and symbolically". This conversion goes not only through the apparatuses used and owned but also through those that are not possessed (Yarto, 2010, p. 178).

> I felt bad once because the teacher asked us to bring a toy to class and I brought a rag doll and a toy computer that teaches me words in English. All the other kids brought their laptops, Smartphones and an Ipad (Sara, Family 6).

> Not having a laptop generates negative comments at my school, I don't feel bad because my parents have brought me up not value material things too much, but I have insisted that it is necessary for me to have a computer. It would mean a lot to me to have one; I would feel freer (Ana, Family 3).

During the reconstruction of the interviewees' media experiences, it was possible to observe how these particular meanings given to the technologies and put into practice in their technological domestication processes determine the way a family relates with screens; what's more, it is possible to understand how the media family trajectories are generated explaining the multiple negotiations that occur within the home to adapt the family dynamics to media practices and vice versa; for example, media trajectories were conditioned by three factors: socioeconomic level, the parents' profession and the meanings of the technologies in their sociocultural contexts.

Socioeconomic levels, according to the study, do determine domestication of the devices though not necessarily the meanings that can be built around the screens because their construction is social and despite the fact that they can be used only a little within the home, this does not prevent the construction of a social representation about technology, which is more visible in children:

> I tell my parents that they do not understand me because I'm from the digital generation, which makes me see the world in a different manner (Sara, Family 6).

> You must know that I have a chip inserted in my hands. My hands see the phone and then the chip kicks in and I know what to do (Daniel, Family 1).

In this regard, parents also feel these differences, but they prioritize other values and competences that go beyond what is merely technological.

> I see how my son gets his phone and finds everything. I feel that generational divide, it's not so easy for me to assimilate technology (…) but besides all that, we, the parents, have life experience that helps us guide them when they have a problem (María, Family 1).

> I trust her, but I don't trust the Internet, I don't trust what she's doing or the people who go online. I know my daughter, I know her personality and her intentions, but I can't control her desires and what she might feel when she finds something that is not appropriate … (Marla, Family 3).

These marked differences in the ways in which the children and young people interviewed value technology and how they think that the use they make of it separates them symbolically and generationally from their parents is an important element to delve in the differences there are, not only around technological domestication but also in terms of the formation of media biographies and family media trajectories.

EDUCATIONAL STRATEGIES: CONFLICTS, CONSENSUS AND NEGOTIATIONS IN THE FAMILIES

One of the objectives of this article is to show how technological domestication, technological migration, family media biographies and trajectories influence the generation of educational strategies to allow, regulate or prohibit the use of screens within the home.

In order to clarify this, we used the Theory of Social Construction of Technology (SCOT) because it allows us to unfold the way in which different relevant actors establish a relation with a technological device that they somehow consider troublesome and to this end, they offer several alternatives to stabilize and resolve the conflict.

In SCOT theory, it is important to indicate who the relevant actors are; what problem they identify that a technology is causing; what meanings they assign to it and in what parameters they offer a temporary solution to settle the conflict.

From the perspective of this theory, it is acknowledged that there is not an absolute solution to the problem because the actors involved

participate all the time in a process of interpretative flexibility that is constantly bringing about multiple controversies. In this regard, they maintain that technologies are built and acquire meaning through social exchange, human interaction being the one that restructures their meaning when they become integrated into a given social context (Pinch&Bjiker, 2008).

In this sense, the six homes were made up of relevant actors (parents and children) that had a unique relation with technologies and through this process they conceived different problems and solutions around the presence of technologies in their homes. This interpretative flexibility brought about several controversies that were subjected to discussion so as to generate the closure mechanisms that allow finding a partial or final solution to the problem caused by a given screen.

The solutions to the conflict, from the perspective of the SCOT theory, result in two processes; a rhetorical one, where the relevant actors consider the problem has been solved and another which implies closure, where there is a redefinition of the problem, which again brings about discussion or debate among the actors involved. This tends to occur like this because each actor has not only different meanings about the technologies in question but also different technological domestication processes.

MAIN PROBLEMS AROUND THE SCREENS PRESENT IN THE SIX FAMILIES

One of the first steps to understand the educational strategies that emerged in the families analyzed was to delve in the type of problems that each of them identified due to the presence of the screens in their homes. Some of the most frequent were: access to inadequate (pornographic or violent) contents, personal and family security measures due to contacts with strangers on the Internet and loss of family communication and interaction due to excessive use of the screens.

These concerns, with their variations depending on what each family considers permissible or accessible, can be differentiated according to the type of technology that generates them or the family situation that causes them. Although the media and technologies that were most

frequently mentioned were the cellular phone and the Internet during the observation and the interviews.

Access to sex or violent contents also has several points of origin, although the ones that really worry the parents are those that are introduced via the television and the Internet; in the case of the first screen, control is maintained by blocking channels or refusal to watch certain contents; as to the Internet, this control is lost because parents claim that "they do not know how to control it". The main risk here, from the parents' perspective, is Facebook because of the contact their children may have with strangers that can deceive or extort them. The news that is published about this issue and their chats with other parents increase their fears, but also help to create the strategies to limit its use.

The second concern: alienation. It applies to all the screens, but the one causing the most buzz because of its multimedia capabilities is the cell phone, which has turned out to be a double-edged sword because it is the technology that breaks family dynamics but at the same time has become an indispensable screen for domestic life because it allows reducing uncertainties like "I wonder where they are" and "they are fine" thus expanding the notion of home and the family's security.

The above is fully connected with the loss of personal or family privacy, because the cell phone, with its multiple accesses, introduces into the home people, situations, contents and expectations that are contrary, in many of the cases, to family dynamics and values. Here, Facebook appears once again as one of the constant discussion points in media relations between parents and children.

The same happens with the use they make of the computer, since its Internet connection opens the doors of the home to strangers; that concerns the parents because of the constant use their children make of the social networks because they post information about the family, its members, their possessions, habits, customs and values that are exposed for all the world to see.

With this breakdown of the problems identified by these six families, it was possible to see the influence that family media trajectories have, because it is their stories, competences, shortages, imaginarium, expectations and fears that shape a number of situations that are perceived as problems because they involve both the meanings that

each family confers to the screens and the traces of humanization the devices acquire when they become allies or rivals of family education. Everything is influenced by the social context which, in addition, promotes meanings linked with the virtues and defects not only of the technological gadgets but also of their uses and appropriations.

CONSENSUS AND NEGOTIATIONS
BY THE PROBLEMS GENERATED BY SCREENS

In view of the problems identified here, the first solutions that are presented by the parents have to do with regulating /prohibiting the screens, though first with the generation of dialog with their children to think about the implications of their media practices. Then comes reflection, the exchange of information and the establishment of family communication as the basis to negotiate and reach comprise about the strategies that will be used to reduce risks.

This, as narrated by the families, is a complex, complicated, wearing process because no one is ever satisfied, since parents are now participating in the same media process and they have not managed to "set the example in practice". During the in situ observation, it was possible to confirm that the consensus works inasmuch as it allows preserving the family's emotional stability, since all of them sought to anticipate the problems generating a series of agreements that the children follow without greater difficulties because they themselves negotiate certain concessions for their compliance:

> As long I as can enjoy doing what I have been doing on the computer, I don't mind following certain rules (Raúl, Family 4).

> One makes concessions to have the party in peace, I'm interested in having my cell phone and they are interested in me listening to them; that can be done, no problem (Ana, Family 3).

It seems that the children have not only learned to negotiate but also they do so fully aware of the educational strategies their parents use, since they realize that the rules will not last forever because parents cannot ban

their children from doing exactly what they do. That makes it clear that parents are no strangers to the meanings and feelings about technologies, what happens is that that is not taken into account when it comes to thinking of educational strategies because in most cases the children are deemed incapable of taking part in the decision-making process.

> I try to explain to them before I get in trouble, I try to explain to them what I think so that they understand how I feel when I'm online (Ana, Family 3).

> I tell my mom to listen to me before she judges me or forbids things. If she listens to me, we can reach an agreement (Pablo, Family 6).

It is important to say that the first step to consensus is taken by the mothers, since they are the ones that spend the most time at home and the ones who are the most aware of their children's media practices:

> Since the moment we are bringing home a technology, we know there will be conflict because someone will want to use it more or will try to hog it, before that happens; we all talk and set clear ground rules (Raquel, Family 6).

> I apply the method of the dialog and I'm always telling Daniel and Karina that they can't have everything they want or use the screens all day long, I know they are young, but they understand more when I talk than when I scold (María, Family 1).

Consensus occurs in connection to the meanings the screens have rather than in terms of its usage, since most parents and their children debate this in their chats:

> My mom listens to what other people say or to her imagination, but she seldom asks me what I do on Facebook. I have a hard time making her understand that she is asking me to do exactly what she doesn't do (Pablo, Family 6).

> The problem with my parents is that they think that I don't listen to them because I'm always using my cell; they haven't understood that I can do two

things at the same time. It's not like what happens with my mom, she goes onto her phone and disappears (Ana, Family 3).

The differences between parents and children regarding the way they use, appropriate and give meaning to technologies in the home are always the basis that creates the problems, because that lack of agreements makes it difficult to negotiate (though not everlasting) between them. That is why the educational strategies used by the parents on their children are fully influenced by their own media experiences and, in many cases, they reproduce the same educational practices they had in their own childhood and teenage even if they are applied on technologies that are completely different; however, a large number of the strategies emerge in consensus that is generated by the children because they themselves point at the mistakes.

In this process, family media biographies and trajectories also play a crucial role because it is precisely through them that they pave ways that the families want to follow for their children to have a healthier and more productive relation with technologies. The strategies detected in the six families were established to try to eradicate these risks but also to prevent the family life from becoming fragmented as a result of the ever more individualized usage of screens.

Consensus led to a reduction of uncertainties and the creation of shared strategies that, in some cases, already included the children's feelings and not just the parents' opinion. The educational strategies that follow these parameters have better results than those that only impose the parents' meaning, because in practice, they do not set the example.

The proposal in this article was to reflect the creation of these educational strategies in the light of the identification of the problems screens cause in family life; however, these problems were not altogether explicit because –in general terms– both parents and children do not conceive of these differences in meanings and usages as problems but rather as part of the intergenerational clash that place them before different realities.

Perhaps part of that lack of identification lies in the fact that five of the six families analyzed are made up of young parents that have also

grown up side by side technological development, and somehow, they understand how their children feel. These new households and families seek to make a difference in their children's educational processes, since they have committed to a horizontal family education as opposed to the close, forbidding education they received.

Nevertheless, they also debate how to assimilate and understand their children's media practices and the meaning relation existing between them and some devices (the cell phone) and some technological platforms (Facebook), with their growing, assimilated usage that they as parents are also beginning to turn to.

CONCLUSION

This article developed a methodological model that could serve as the basis to continue delving in the link families-screens-education, which presupposes the analysis of a relation that is renewed constantly. The challenge is to continue working it to create greater understanding of the analytical categories proposed here: technological migrations, media biographies, family media trajectories and educational strategies. In this regard, the article identified that the screens in the six families analyzed acquired two opposite roles: 1) as family dynamics connectors, and 2) as barriers that separate the relation between parents and children generationally and symbolically.

In this sense, the educational strategies manifested in the six families found a way to impact both the reduction of said opposition and the operational, symbolic and affective understanding of the meaning the screens have in the family and personal life of each of its members.

The empirical experience of this paper indicates that the link families-screens-education is not only a dispute between the operational and the symbolic but also a contraposition between the meanings around such conceptualizations, because what is at stake is the transmission of the cultural, informative capitals that are created in the relation families have with screens at home.

I do not mean by this that interpretations are univocal, no. I intend to clarify that agreements, as it could be observed in the six families analyzed, are concentrated in the limits where technologies at a

symbol level become "humanized" and are regarded as objects that at certain times and under certain circumstances may be allies or enemies. This situation, in itself, already referred to a level of technological domestication where the objectification and conversion of the screens exposes openly that the meanings that orbit around them are the result of the biographical crossing that is being built around the family media trajectories.

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