EARTHQUAKE RISK PERCEPTION, COMMUNICATION AND MITIGATION STRATEGIES ACROSS EUROPE

Piero Farabollini, Francesca Romana Lugeri, Silvia Mugnano
Editors



Geographies of the Anthropocene







Geographies of the Anthropocene

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The Authors

5. Communication-Based Prevention Strategies: A Draft Model Proposal

Andrea Volterrani¹

Abstract

Is it possible to prevent something through communication? Or at least to raise people's awareness through communication? The chapter presents and discusses a draft model for the prevention strategies in relation to the risk of natural disasters through an analysis of the Italian campaign "I don't take risks". The draft model consists of: a) the four stages of the change of communication-based prevention strategy process: 1) perception and relevance: how to sense a theme or a significant problem, 2) knowledge: how to deepen the characteristics of the issue or problem that I consider relevant. 3) incorporation: how do I incorporate the theme into the imaginary, and 4) change: how behaviors and attitudes can change; b) the four principles of daily work for the prevention of communication: 1) monitor the media, 2) read the public space, 3) deal with the operators of information, and 4) analyze the media landscape of the theme; c) the five dimensions for the communication-based prevention strategy: 1) popularity of the messages, 2) use of narratives, 3) ritual in communication actions, 4) colonize the imaginary: imaginary appropriation of the market communication, and 5) media education: building knowledge and awareness among citizens; and d) the four phases of the impact assessment of prevention: 1) communication objectives, 2) community analysis, 3) measurement of involvement and participation, and 4) impact assessment.

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The article has been written in cooperation with Dr. Angelica Spampinato with particular reference to paragraph 6.

Keywords: prevention communication, risk, radicalization, change

1. Preface

Cultural change has always been a central focus of social analysis. Understanding what symbols, values, and behaviors are and how they change, leads to understanding in-depth changes and social innovations.

Communication is the catalyst and the core of this change, but often because of its characteristic of seeming naturalness, each individual and community tends to overlook and minimize the visible and invisible potential of communicative actions (Couldry, 2012; Couldry, Hepp, 2016).

This potentiality and inner characteristic are even more important for prevention communication. In fact, if communication is the main focus of the change in the buying patterns market, along with the strengthening and visibility of the brand, what often comes into play in prevention communication is the identity change of both the individual and collective.

Furthermore, the object of change issues is often controversial and contradictory – for example, there may be communication campaigns to counter the risk of pathological gambling, yet there are also explicit and implicit messages inviting you to "try your luck" in some state lottery - from both scientific and common sense points of view, and sometimes, from a moral one as well (e.g., a campaign against homophobia which urges people who have very different value-convictions on the subject to change their opinion). Three different aspects – science, common sense, and morality – involving differentially individual and collective social imaginary (Jedloswki, 2008, p. 134).

This is the first reason for why coming up with and planning prevention communication is not simple: when you touch things that are part of our deepest convictions or which are taken for granted in our daily lives, every fact, interpersonal communication, or media that tends to problematize, you do not have an easy time of it. The roots of imagination are deep and firm, and are unlikely to be affected unless specific events capable of subverting ideas, meaning, and linked images occur.

In the work that follows we will deal with the process of change by referring to an empirical situation, an Italian national campaign to reduce seismic risk, where prevention communication is a potentially unavoidable element. The case focuses attention on the multi-year experience of a communication-based prevention campaign promoted by the Italian Civil Protection Department together with voluntary associations. The model we are presenting has been applied and is also applicable to contexts where communication-based prevention does not refer to natural disasters, as for example in the case of prevention of radicalisation of second-generation young people or as for example in the case of prevention of social diseases such as diabetes.

However, before going into the discussion of the case, we must try to better understand model and what are the processes of change of the individual and collective social imaginaries.

2. The processes of change: a focus

The changes that can be connected to prevention communication are neither simple nor immediate.

But in order to propose an issue that is not just fatalistic, we must try to analyze the process that could lead to changes in the experienced reality. At least four different stages have been identified: a) the perception, selection, and relevance of the topic or issue; b) the knowledge of the topic or issue; c) the incorporation of the issue or problem; and d) the possible change of attitudes and behavior in relation to the issue or problem (Figure 1).

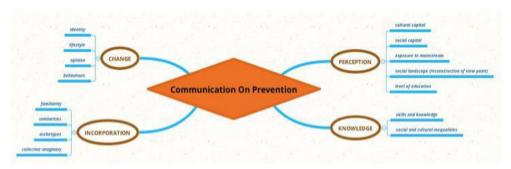


Figure 1 - Model of communication on prevention.

2.1. Perception of a theme or a problem

The perception of the subject by an individual is an important step. For example, I may be horrified by a car accident but do not feel that I can be involved if I do not adopt a different behavior. However, finding that particular communication process which makes me "switch on" my eye is not easy. Seeing what is and what is not relevant to me from among the countless communication processes around me is the first step. Beyond the theories of persuasion that emphasize the ability to build messages that are more noticeable than others, the issue at stake here is another: What are the selective processes that cause a priority issue, a problem, to be strongly tied to my identity aspect, my behavior, and my attitudes? In the above example, it is not easy to see what image or video, such as sequences, or which safety issue in the road driving narrative will be most able to make me turn on the selection (Lotto, 2017; Sloman, Fernbach, 2017). The processes by which we interpret and select media content are very complex (Couldry, Livingstone, Markham 2010). One on which it is important to dwell is that the role of individuals, and the communities they belong to, are established elements in the interpretation to be taken into account in prevention communication. It is a delicate phase that is not attributable only to the visibility of the issue or problem, but also to the ability and symbolic resources that individuals possess. These are not distributed evenly within the population nor do they reproduce the same social and territorial family and economic contexts.

Next comes the problem of cultural inequalities at stake (Bentivegna, 2009), a problem which, along with that of social inequalities, has been too often overlooked or relegated to the margins of reflection in recent times. If I do not have sufficient or adequate cultural and symbolic resource perception, the significance and the selection will be strongly affected, and in some cases, severely limit the opportunities that could be seized. For example, it is known that good nutrition prevents serious health problems. However, it is also known that those who have greater economic and cultural deprivation tend to underestimate the problem, and thus poor nutrition adds further problems to those already in existence.

2.2. Knowledge.

This aspect is closely linked to the second phase of the process of change, knowledge. The transition from the perception of the theme's relevance to knowledge is primarily a growth of awareness of the need to deepen, individually or collectively, a certain aspect in which I am / we are concerned.

In this case as well the path is not deterministic but connected to both the characteristics and individual resources that are available across all media and interpersonal relationships. Neither aspect can be taken for granted; on the contrary, both aspects possess considerable difficulties, even when everything else would tell us otherwise. A striking example is the knowledge that should result from communication processes in risk or crisis situations due to natural disasters. Even in those moments which are critical for physical survival, the initial problematization does not automatically switch to the knowledge of what should be done (Horsley, 2016). Despite seismic risk awareness, few of us remember that there are small things you can do in your own home prior to a seismic event, such as securing everything hanging on the walls. Those involved in risk communication and prevention have tried to come up with and plan complex models that provide a strong activation of local communities and a strong involvement of people who could potentially be interested in such knowledge, with particular reference to those in the most vulnerable social situations (Volterrani, 2016). For example, the involvement of people with disabilities should not exist only "on paper" but actually stem from a detailed one-to-one relationship that increases the degree of risk knowledge and the consequent ability to implement what is necessary in order to prevent their problems.

2.3. Incorporation.

Knowledge alone, however, is not sufficient to prompt a possible action. The next step is incorporation. Some scholars of cognitive psychology (Hofstadter, Sander 2015; Sloman, Fernbach, 2017) have highlighted the way in which humans expand their wealth of concepts and terms in their own world of thought. The tool we use to categorize the outside world is the analogy, i.e., reading the external environment with the categories we already have in our heads and in our daily life experience. The incorporation of new concepts and new experiences is through comparisons — comparisons (note similarities) with what we have in our heads and what we think comes closest to the new issue we are facing. It is evident that absolute novelty will have more difficulty of being incorporated than new minor or simple variations on already known themes and problems. For those not raised in Italy, the bidet is an object and a concept which is not easy to incorporate (or even to comprehend), but it is easier than trying to imagine what it is like for a person without economic resources to make a sea crossing in the hold of a jam-

packed boat always on the verge of sinking. This is perhaps the most important aspect of the change through communication process because it leaves little room for innovation and far-reaching trends. We tend to consolidate what we know well and distrust what we do not know. No wonder this reasoning as the survival of the species is closely linked to the ability to read and assess the dangers posed by the unknown. The archetype of fear of the new and different is rooted in our collective imagination and is an integral part of human history (Durand, 1960). This does not mean that we do not possess the cultural tools to overcome this archetype, but, returning to the reflections on cultural inequalities, it is unthinkable that we all possess the same means. It is much easier to shrug our shoulders and say, "We've always done well" or "There is nothing to do; it's fate" than evaluate alternatives and possibilities, and build visions and different horizons (Vergani, 2012) on the subject or the problem to be addressed.

2.4. Change.

The fourth and final phase is the action of change. This is a delicate phase because the action of change may have effects on both the individual and collective level and can be real or imaginary. Individual change is more complex because it involves a "revolution" in the behavior or attitudes of our daily lives. If we think of how challenging it is, for example, for individual smokers to quit smoking despite a large presence of information and empirical evidence, we can understand that this step, which is often considered to be "simple," possesses, however, many elements of complexity to be explored. The most common expression is, "I want to stop smoking because it's bad for me, but I can't." Another issue is the change of the collective imagination which, though complex, can be achieved more easily. In fact, this is closely connected with local cultural change or the collective imagination on the subject. Returning to the example of smoking, the growing prohibition of spaces available for smokers has been accepted as a positive change, even by smokers themselves, without protest.

The process of change can be connected to prevention communication and, therefore, is complex and articulated. If we add to the difficulties of interpersonal and media communication processes that are now an integral part of the studies on the audience (Murray et al, 2003; Bentivegna, Boccia Artieri, 2019), we understand that the challenge is difficult but very attractive to those who care about improving the quality of life of our communities.

3. The problem / opportunities of the mainstream

Reasoning on the change in the communication process means, therefore, trying to operate in order to push the public imagination in the direction of an enlargement of the symbolic resources available to individuals and communities of often complex and contradictory issues and problems, such as social ones. Opening the imaginary means making the images, ideas, and values that would otherwise remain marginal in our heads available and accessible to most people.

The mainstream is defined as the media cultural production (cinema, television series and serials, video games, and communications products) hegemonic in contemporary societies; namely, that set of behaviors, attitudes, and meanings to which we refer, even unknowingly (Martel, 2010), and which remain in our collective imagination so as to occupy almost all of the space, especially if we pause to assess the large overlap with common sense in contemporary society. Many features of contemporary common sense are produced by the mainstream media, which feed and reinforce ways of speaking and thinking – lifestyles. This is not to make a generic accusation of superficiality and banality in the mainstream but, rather, to highlight the potential role it plays in people's lives. Socialization, first of all, against those who have lifestyles, especially consumers in the western world. Anticipation of what the future might be, or rather the idea of the individual and collective future. It is an imaginary reserve from which drawing inspiration for the construction of identity (Silverstone, 1994). It is evident that prevention communication, as we have described it up to now, cannot remain on the periphery of the mainstream, cannot build a symbolic universe apart, but must instead promote a real colonization using homogeneous technical and quality standards and which is likely to contaminate and replace, symbolically and culturally, the mainstream. A positive example of the process of change in the mainstream is that of the perception of the care of the environment as a determinant for overall well-being (Peruzzi, Volterrani 2016, p. 150). Despite the fact that the conduct is not always consistent, ecological awareness has reached the heart of the mainstream within the last thirty years. The same reasoning cannot be said of the rampant issue of child poverty in African countries where the awareness has not turned into incorporation, or even produced the "stolen letter effect;" that is, objects that are right in front of everyone's eyes but go unnoticed.

Precisely for this reason it is even more necessary to share this vision of prevention communication in a cultural context which is often used to thinking that the important issues are very different.

All of this is adversely affected if we design prevention communication with a completely different approach from the other types of communication: participation.

4. Participatory prevention communication: an essential prerequisite

Prevention communication cannot exist without the participation of the holders of the problem, the interests of users, and the producers of communication. A triangle that is crucial if we want to trigger at least the start of the change processes we mentioned. If you want to increase blood donation among young people, it is not enough just to construct communications campaigns aimed at them, but also to construct occasions where the young people themselves are the protagonists.

Engagement is not just an observation of a different use of the media by the public, but one of the roads that promotes awareness and involvement of the citizens of a community (Dahlgren, 2009; 2013). And it is the first step before moving on to the knowledge, incorporation, and action for change.

Participation requires its own time and its own rules (Curran, 2011) to give space to all those who intend to take action. However, in prevention communication that does not mean slowing down but enriching and articulating content and mode of use.

Working on participatory prevention communication, starting from the construction and sharing of social representations and social imaginary, is a pretty unique perspective.

The process planning social-imaginary and social-engineering-communication of social representations, in fact, does not stop at the first change of the imaginary and social representations but continues if the contributions of groups of people and the points of view are activated and implemented in a systematic way. The result is a communicative planning that not only endures but is also able to constantly renew itself, thereby increasing the participation and involvement of new groups of people.

The multiplication of participating groups has a positive effect on local communities. It is the participation in prevention communication projects that changes perceptions and actions, and therefore, also semantic maps. For

example, if I want to change young people's relationship with alcohol, I have to try to rebuild their perceptions and their imaginary, submit them, and be ready to change them again in order to understand where to direct the communication and, especially, how to build it in the first place. You redraw the conceptual boundaries of some issues, along with other social or individual identities not based on simple content but on a responsible involvement in the community or territory. It is a way of enhancing those roots within the vital world and common sense, of being in the world of everyday life that characterizes at least a part of civil society and the third sector.

5. New prevention communication strategies

If this is a plausible picture, what could the new communication strategies for organizations (public and nonprofit) interested in the change of social imaginary be? See figure 2.

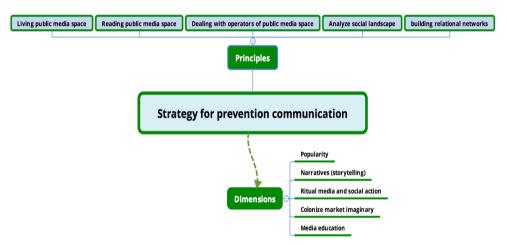


Figure 2 - Strategy for prevention communication.

5.1. Four principles

The first principle is monitoring the media public space daily – not only journalists, but also television (national and local) and the Internet – in order to be able to appropriate the narrative styles, symbology, and prevalent

proposals from major manufacturers of the imaginary. Mastering the mainstream is essential in order to build a prevention communication that goes beyond.

The second principle is reading the media public space concerning social themes with detachment in order to highlight not only contradictions and shortcomings, but also symbols and rituals. Sometimes, some people talk about the absence of social and prevention issues without assessing their presence in narratives and imaginary places, such as the television series, which are rarely visited by organizations (public and nonprofit) but often frequented by individuals and communities (Buonanno, 2008). A key prerequisite for any prevention communication project is the rebuilding of the media outlets with the topic of our interest.

The third principle is dealing with the operators of media public space (journalists, producers, writers, and directors) in order to understand dynamics, languages, styles, and working routines, especially with regard to the production of TV series and serials. It becomes a credible interlocutor when there is a need, for example, to construct new narratives by television writers. There are no permanent confrontation areas, and if there is a change in media narratives, it is related more to a transformation of the authors, writers, and scriptwriters than to an initiative taken by organizations.

The fourth principle is analyzing and continuously monitoring the issue which is our membership organization's subject of interest, and then to go and explore different points of view removed from it, to see and learn the ways in which others learn the imagery of the subject that interests us. We will be surprised by how the social imaginary also extends to those who are most distant from those other individuals who are fully involved in communication actions on the subject.

5.2. Five aspects of a prevention communication strategy

Based on these principles, how can we build a sensible strategy in prevention?

There are five dimensions to be considered as cornerstones. We must inspire communication actions to popularity, which can be achieved if we put ourselves in the shoes of others (even when we do not like or agree with them) and attempt to share their thoughts and their imaginations.

1) Putting yourself in the shoes of others. Put yourself in the "shoes" of the means of understanding the mechanisms, styles, languages, and popular

places in the media public space. Of course, you may think this means, for example, speaking to those who care about their own issue (the issue that directly affects them), e.g., people with disabilities caring about other people with disabilities or the operators who deal with disabilities. They are important information and communication functions, but if I want to implement a process of change, I must listen to those who are furthest away from disability and who may not even want to hear about the topic. You may miss something, even then, in the richness and articulation of contents to acquire breadth (and depth) of communicative action. We must not forget that rooted popular stereotypes are not very rich or articulated in terms of information, but they are widely present in the mainstream and often correct with regard to prevention issues. Building popular prevention communication does not mean trivialization and simplification of the messages and content, but that messages and contents can be decoded and interpreted by many.

- 2) Looking for narratives. Narratives are the second important dimension of our strategy. Human life, history and biography, is our first story. The approach (Bruno, Lombardinilo, narrative 2016) to communication means not only finding stories in the media, but developing the ability to discover, collect, and analyze stories, and then invent, build, and commission new ones, which then become representatives of the community. Stories must not appeal only to us, because the stories become narratives if we tell them to others and if others hear them. In addition, we must always keep in mind that there is only the "reality" or the "real" in the stories. The likelihood is that only one is possible and credible from among multiple realities (Schutz, 1972), and a story is deemed credible only if we share it with others. In summary, it is not important to build large, detailed stories, but instead to draw from the "mines of the stories" in social and prevention life, as well as from those that are already present in other corners of the collective imagination.
- 3) Rituals. The third dimension is the ritual. Our daily life is full of large and small rituals of which we do not want to do without. For example, the ritual that we follow when we get up in the morning that is difficult to differentiate or the way in which we tie our shoes. For this purpose, ritual also means proposing familiar actions and communication (Couldry, 2012, p. 80). The question we must ask is, "What creates meaning in my land and communicative context?" The question, though, is that very often what creates meaning is taken for granted and is silent since it works from a cultural background that determines common sense. The ritual dimension, by contrast, is a dimension that, behind the apparent static repetition of common sense,

can intervene in imagination, thereby modifying it. In practice, it means being systematically reproduced and easily identified by the inhabitants of a territory of prevention communication activities without fear of being repetitive because one of the goals is just that.

- 4) Colonize the collective imagination (Peruzzi, Volterrani, 2016, p. 220). The fourth dimension is that of colonization to which we referred earlier. The imaginary proposed by the actors who act in the market are not "evil" and, above all, make up the central part of the frame; they are the most widespread and popular, and also the most democratic. The profit actors are appropriate in a time of popular social imaginary, which used them to expand or build new market space. As a counterpoint, third sector organizations or public organizations could do the same, utilizing widespread and previously used imaginary as part of the market to promote new social imaginary. This does not mean the flattening of market strategies or transfer of prevailing cultural patterns in the market, but recognizing what are now standards in the archive of images and imaginary and making use of them by offering an intelligent and creative remix that can support different but contiguous perspectives.
- 5) Educate the media. Finally, the last dimension refers to media education (Buckingham, 2003). Despite the many paths of learning and spread of pedagogical aspirations of many of the social issues of most organizations, the potential of sharing common media education is not widely perceived, not only in the context of schools and young people, but also as one of the cornerstones of lifelong learning. It is through these medium- to long-term paths that people acquire the skills to understand, analyze, and individually and collectively build media culture, thereby helping to build cultures and innovative collective imagination.

6. The communication campaign, "I don't take risks:" a best practice with some problems

"Terremoto—Io non Rischio" ("Earthquakes-I don't take risks") is a national-wide Italian campaign to reduce seismic risk first launched in 2011. The campaign is now in its eighth year in 230 Italian districts, most of them classified as Type 1 and 2 areas, which identify them as being at medium and high seismic risk. The campaign has been promoted by Civil Protection and A.N.P.A.S (acronym for "Association of National and Public Assistance") in partnership with Ingv (National Institute of Geophysics and Volcanology) and ReLuis (a web group made up of various university laboratories of

physical engineering). The campaign aims to sensitize the population to earthquakes by attempting to spread information about the correct procedures to follow during seismic risk situations. The promoters of the campaign, attempting to increase citizen awareness and therefore simplify the handling and acquisition of topics about earthquakes, have collaborated with properly trained volunteers. The campaign, "Terremoto—Io non Rischio," is carried out by groups of volunteers who, on specially organized days, perform activities designed to sensitize the citizens of their communities.

The campaign is based on the principle of widespread diffusion: every single inhabitant is informed about seismic risks. That person then undertakes the responsibility of informing his/her relatives, friends, and acquaintances, who in turn inform the people they know, thus creating a network of territorial relationships.

The campaign provided training for over 2,000 volunteers who then trained another 10,000 volunteers on various topics: the historical memory of areas; the seismic nature of areas; the dangerousness of areas and vulnerability of housing estates; the decrease of seismic risk; the role of the state and of the individual citizen in preventative action; how to communicate seismic danger, storytelling; and how to logistically manage the assigned town squares for the campaign.

If we compare the model with the campaign, we can observe some very interesting aspects. Firstly, with regard to perception, the actual presence in the town squares frequented by Italian citizens allows for the increase of the relevance of the theme through proximity and familiarity.

Secondly, with respect to knowledge, face-to-face interpersonal relationships allow for a thorough examination of the prevention theme.

Thirdly, the involvement of volunteers increases both the degree of trust and the sharing of language simplicity, thus favoring the incorporation of the prevention themes.

Finally, the number of citizens who have changed their behavior after the campaign has increased by 35%, an excellent result in a context such as the Italian one where little attention had formally been paid to prevention.

The campaign "I don't take risks," if subjected to the evaluation lens of the prevention communication model, shows opportunities and problems that are interesting to talk over and tune up further reflections on the prevention communication model. To begin our analysis, the very first consideration concerns the relationships with the four areas of the model.

Let us start with perception. Over the years the work of the campaign has broadened the range of territorial action by involving a larger number of voluntary associations and municipalities. In spite of this, one of the remaining problems is prompting the entire population to perceive the potential relevance of the issue (social prevention in regard to the most common natural disasters).

Referring to the whole population, improving the level of perception of the topic (and not of the campaign) is not easy, but "I don't take risks" privileges the involvement and participation of volunteers rather than paying close attention to the ways used to reach those who are not "feeling" the theme, those who think that the theme does not concern them directly, those who do not come out of their homes because they have their own ways of making use of communication (interpersonal and media) that avoids direct socialization and multiplication of relationships (human, both real and virtual).

These are just some of the hypotheses as to the possible motivations for which perceptive actions are not activated by large segments of the population in spite of the fact that the campaign employs the presence of volunteers in the streets. In addition to these, further merely quantitative issues must be added that are mainly related to the fact that a national communication strategy was not designed and built to support the action of volunteers in the territory, if not through a website. Secondly, the communication tools used (the interpersonal relationship and the informative brochure) do not allow for switching effectively to the subsequent phases of the model: knowledge and incorporation.

As far as the knowledge area is concerned, the campaign relied on hot tools such as the report and on cold and static tools like the brochure and the informative website. The idea of giving life through the interpersonal relationship is certainly fundamental in order to be able to assess the cognitive deficiencies that can be noticed in the population. But in this case the differences in the level of education and basic cultural instruments for interpretation are crucial. The campaign does not confront the problem of differentiation and uses the same content for all. On the other hand, the question of the "popularity" of a message is one of the main principles of a good prevention campaign; however, if we do not seize the opportunity to develop differentiated in-depth analysis on a cultural and cognitive basis, it is likely that the relevance of the topic will remain only at a perceptive phase.

The incorporation of the campaign "I don't take risks" is a crucial point to discuss: if the behaviors proposed by the campaign do not become obvious to those who have perceived and elaborated on the theme, there will not even be the conditions for a change in everyday reality. This step needs (and the campaign follows this principle) continuity and ritual activity repeated over

time as a first step. If we want something to become more similar to archetypes, we first need a certain period of time for new ideas, new concepts, and new imaginaries to settle into the individual and collective imagination. From this point of view, the campaign lasts for too short a period every year for the involved population to have the time to think over later. Secondly, familiarity is fundamental; that is, concepts should be used that are related to behaviors which are not too counter-intuitive and are, above all, simple and easy to reproduce.

Additionally, the campaign promotes this aspect with the use of a simple and clear graphic that effectively symbolizes some behaviors. In the end, a short reference to imagery already known by the population.

In this case, domestic culture plays an important role. In fact, if in some local contexts the memory of natural disasters produces a collective imaginary predisposed to accept suggestions for prevention and in other contexts there is a mix of poor memory (because the last natural disaster occurred centuries earlier) and fatalism, the collective imagination is clearly in contrast with preventive behavior and attitudes. The homogeneous campaign throughout the national territory does not properly deal with this issue.

The last area of the model is change. The two levels of change (both real and in the collective imagination) can be reached in the long-term, especially in territorial communities where there is a low or no perception of risk. The campaign has come to the point (2011-2019) of being able to carry out an impact assessment on those communities involved in the initial phases with regard to the behaviors to be followed in case of an earthquake. This would also be a suggested way in which it would be possible to revise the entire proposed route up to now. Despite these reflections as far as the model of prevention communication is concerned, the campaign "I don't take risks" is the first example in Europe which has the merit of having paid attention to social prevention and not just infrastructure prevention, addressing issues and problems for which no experience had been made before.

7. Conclusion

In conclusion, talking about prevention communication today means addressing the problem of cultural production.

In fact, the model is not only useful as communication for natural disasters, but for prevention communication in general. We have experimented, with good results, the model on a European project called "OLTRE," whose aim is to prevent the radicalization of young, second-generation Italians of Islamic origin through an on-line communication campaign; however, we will discuss specifically the results of this research on another occasion.

Many organizations and experts have often underestimated the aspect of prevention communication because it has been deemed secondary to preventive or response action — an error which has been paid for dearly because, as we have seen, the space was occupied mainly by market culture. The available space is limited, and it will be difficult to act if approaches, prevention communication methods, and actions are not changed.

Precisely for this reason it is important to accept the challenge of innovation that lies in the ability to design prevention communication strategies which have the means to promote and legitimize the growing presence in the available media space through fascinating and diffusible products and credible narratives.

However, it is important to underline that in the era of deep mediatization (Couldry and Hepp, 2017: 24-50) which involves and deeply changes every aspect of our daily lives, prevention also passes and will pass more and more through digital communication. This aspect does not close but rather reinforces the need to integrate interpersonal relationships face to face with the actions of the digital world, without interruption.

This road will inevitably also lead to the use of the so-called Big Data which, while respecting citizens' privacy and democratic control (Couldry and Mejias, 2019), can considerably improve the first phase of the model, prevention, by better understanding which aspects need to be clarified and, consequently, communicated within the different territorial communities. Territorial relations and digital support platforms are, therefore, two of the directions to be explored in the near future (Volterrani, 2019).

The hope is that they do not remain only ideas, but instead become instruments of daily action in organizations that have social change at heart.

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References

Bentivegna, S., 2009, Disuguaglianze digitali, Laterza, Roma-Bari.

Bentivegna, S., Boccia Artieri, G. 2019, Le teorie delle comunicazioni di massa e la sfida digitale, Laterza, Roma-Bari.

Bruno, M., Lombardinilo, A., 2016, *Narrazioni dell'incertezza: società, media, letteratura*, FrancoAngeli, Milano.

Buchingham, D., 2003, *Media Education: Literacy, Learning and Contemporary Culture*, Polity Press, Cambridge.

Buonanno, M., 2008, *The Age of Television: Experiences and Theories*, Intellect Ltd, Bristol.

Couldry, N., Mejias, U., 2019, *The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It for Capitalism*, Stanford University Press, Stanford.

Couldry, N., Hepp, A., 2017, *The mediated construction of reality*, Polity Press, Cambridge.

Couldry, N., 2012, Media, Society, World: Social Theory and Digital Media Practice, Polity Press, Cambridge.

Couldry, N., Livingstone S., Markham T., 2010, Media Consumption and Public Engagement: Beyond the Presumption of Attention, Palgrave Macmillan, New York.

Curran, J., 2011, Media and Democracy, Routledge, London.

Dahlgren, P., 2009, *Media and Political Engagement: Citizens, Communication and Democracy*, Cambridge University Press, Cambridge.

Dahlgren, P., 2013, *The Political Web: Media, Participation and Alternative Democracy*, Palgrave Macmillan, New York.

Durand, G., 1960, *Les Structures anthropologiques de l'imaginaire*, Allier, Grenoble.

Hofstadter, D., Sander, E., 2015, Superfici ed essenze. L'analogia come cuore pulsante del pensiero, Codice Edizioni, Torino.

Horsley, J.S., 2016, "Media framing of disaster". In: Schwarz A., Seeger M.W., Auer C. (Eds.), *The Handbook of International Crisis Communication Research*, Wiley and Sons, Chichester.

Jedloswki, P., 2008, "Immaginario e senso comune". In: Carmagnola F., Matera V. (Eds.), *Genealogie dell'immaginario*, Utet, Torino.

Institute for Strategic Dialogue, 2015, Counter Narratives and Alternative Narratives. The role of counter- and alternative narratives in prevention of radicalization, RAN (Radicalization Awareness Network).

Lotto, B. 2017, Percezioni, Bollati Boringhieri, Torino.

Martel, F., 2010, Mainstream, Flammarion, Paris.

Murray, C., Schroder, K., Drotner K., Kline S., 2003, Researching Audiences: A Practical Guide to Methods in Media Audience Analysis, Arnold Publications, London.

Peruzzi, G., Volterrani, A., 2016, *La comunicazione sociale*, Laterza, Roma-Bari.

Schutz, A., 1972, Collected Papers I. The Problem of Social Reality, Springer, London.

Schwarz, A., Seeger M. W., Auer C., 2016, *The Handbook of International Crisis Communication Research*, Wiley and Sons, Chichester.

Silverstone, R., 1994, Television and Everyday Life, Routledge, London.

Sloman, S., Fernbach, P. 2017, *The Knowledge Illusion. Why We Never Think Alone*, Penguin Publishing Group, London.

Vergani, E., 2012, Costruire visioni, Exorma Edizioni, Rome.

Volterrani, A., 2011, Saturare l'immaginario, Exorma Edizioni, Rome.

Volterrani, A., 2016, "How to Build Prevention for the Elderly and Disabled before Natural Disasters? The Added Social Value of Voluntary Organizations in Europe", *Sociology and Anthropology* 4 (2): 92-98.

Volterrani, A. 2018, "Participation and Communication in the Time of Social Media: A Chimera or an Opportunity", *Sociology Study*, May 2018, Vol. 8, No. 5, 213-219, doi: 10.17265/2159-5526/2018.05.002

Volterrani, A., Iezzi D.F., Ceccherelli A., 2018, "Communication of a Natural Disaster. An Earthquake Case in Social Media and Online Newspapers", *Sociology Study*, June 2018, Vol. 8, No. 6, 257-266, doi: 10.17265/2159-5526/2018.06.001.

Volterrani, A. 2019, "Community Development and Communication: Preliminary Case Studies in Italy", *Sociology Study*, April 2019, Vol. 9, No. 4, 135-145

Increasingly, socio-natural risks and disasters represent the result of an unsustainable interaction between human beings and environment. The current scientific debate has generally agreed on the idea that the impact of natural hazards needs to take into account the social vulnerabilities and exposures to risk of the affected population. The most recent earthquakes have unequivocally shown the complexity of the phenomena and their multi-scale dynamics. Indeed, the territory is the combination of natural, social and cultural environment and only by exploring its anatomy and physiology, it will be possible to manage and protect it in the best way.

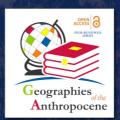
This volume collects a quite wider range of national and international case studies, which investigate how socio-natural risks are perceived and communicated and which strategies the different communities are implementing to mitigate the seismic risk. This publication has been possible thanks to a fruitful discussion that some scholars had at the 36th General Assembly of the European Seismological Commission held in Malta from 2 to 7 September 2018.

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