Earthquakes And Society: Rethinking And Rebuilding Our Relations With Knowledge

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ABSTRACT

Studies suggest that social resilience regarding earthquakes has been weak in Turkey due to inefficient long-term measures. Based on a comprehensive review of literature, this paper argues that this weakness relates to the structural characteristics of public sphere, as well as institutions and collective actors interacting within it. These factors affect the content and use of knowledge, which then become a source of social vulnerability in face of earthquakes. Drawing on this argument, the article brings forward a draft agenda and strategy for discussion that may help transform society's relations with knowledge. The proposed model is not based on technology utilization (though it is important), but on coordination between scientific community and civil society organizations because of their distinct positions and roles in generating and disseminating knowledge. The goal is to empower segments of society to put necessary social mechanisms and organizations in place and have them work efficiently. Hence, this article calls for self-reflexivity toward reorganizing the relations between scientific community and other segments of society, which may then help revise socially available knowledge and ways of using it. Discussing such challenging issues in the context of disaster management require uneasy collaborations not only between social and technical experts but also between scientific community and other sectors of civil society, as well as between central and peripheral entities within all the aforementioned.

KEYWORDS: earthquake resilience, scientific community, civil society, Turkey

INTRODUCTION

The strongest earthquakes felt in Turkey by December 2017 occurred in the Aegean Sea in June and July with magnitudes of 6.2 and 6.6, respectively. Afterward, geologists clarified in media how these earthquakes were formed and advised people to keep away from unsafe buildings. The importance of urban transformation as well as the roles of governments and homeowners, to that respect, was emphasized once more; some foresaw that the topic would fall of the agenda in a couple of days.

As this example recalls, each earthquake in Turkey revives concerns about potential or actual victims, doubts about government action, and risks in urban areas because everybody observes that society is not adequately prepared. So one wonders, how does it come that individuals, governments, and cities keep being more or less unprepared despite all accumulated experience and knowledge in Turkey?

I will argue below that this is simply because the involvement of society in earthquake mitigation is inadequate. Its involvement may increase only if we (the ordinary people in society) conceive preparation as a social matter rather than a matter that primarily depends on personal or governmental responsibility, choice, and capacity. Socializing the sphere of preparation requires an expansion of civil society, in which civil society organizations (CSOs)

and scientific communities communicate better and contribute more effectively. To achieve this, we (the scientists and practitioners in civil society) need to reflect first on some of our assumptions about individuals and society, and then on our positions, functions, and relations in public sphere.

To this end, I will draw on an analysis of more than 150 texts examining the social aspects of earthquakes in Turkey (Acikalin, 2017). I will compare mainly two cases, Marmara and Van, a region in the West and a province in the East of Turkey shaken by earthquakes greater than magnitude 7 in 1999 and 2011, respectively.

Literature on social aspects of earthquakes suggests that there has been certain progress with respect to preparedness when one compares the Van experience with that of Marmara. For example, the organizational efficiency and performance of emergency services increased, psychosocial support in tent cities became systematic, and a considerable amount of permanent housing units was provided faster. Most of such services were delivered by the Disaster and Emergency Situation Management (AFAD), Kizilay, municipalities, and CSOs. These collective entities' cooperation among themselves and with other networks in and out of Turkey was more prevalent in Van.

Despite such capacity increase, improvement remained limited for 12 years in certain issues, about which people continued to complain after the Van earthquake: for instance, location of housing areas, building inspections, damage assessments, distribution of tents, out-migration used as an instrument of managing crisis, provision of infrastructure in prefabricated cities, security in residential areas, and quality of permanent houses (Acikalin, 2017). In addition, there were some other problems that received less popularity, such as a poorly functional recording system in the only functioning hospital during emergency period, a lower efficiency in public health system than search and rescue arrangements, the gap between identified and satisfied needs of survivors, uncertainties that affected negative feelings of survivors due to lack of information, and an increase of occupational accidents by 63% in the first year (Hekimoglu et al., 2015; Dedeoglu, 2011; Dursun et al., 2012; Karanci et al., 2011).

Here, one can question the role of scientific communities, CSOs, and the media in unchanged problems. Might these collective actors assume any responsibility in Van for any of those problems (without referring to central or local governments)? Might they at least be responsible for bringing up these issues insistently to public attention so that individuals acquired systematic information? If these actors have any problems in fulfilling their social responsibilities, what can be the effecting factors?

The framework drafted below will help inquire initial answers for such questions. My focus will be on the issue of earthquake preparedness and on two collective actors (scientific communities and CSOs) to critically assess the organization and dissemination of knowledge, upon which I will develop suggestions for action.

EARTHQUAKE PREPAREDNESS: SOLUTIONS AND ISSUES

In literature on social aspects of earthquakes, technology, training, and organization are mentioned as three key instruments for resolving long-lasting problems of disaster mitigation, or more positively, for developing social resilience against earthquakes. Using these three instruments, which jointly point out to a strategy, one can achieve short-term objectives, such as preparing societal groups to help operate a search and rescue and distribute aid during a disaster relief stage. By using the same instruments, one can achieve long-term objectives as well, such as urban transformation and behavioral change.

Below, I will examine how the strategy based on the technology-training organization trilogy is built and used to achieve two long-term objectives (urban transformation and behavioral change).

Technology and Urban Transformation

Literature on social aspects of earthquakes helps us identify the social imagery of technical knowledge, technology, and urban transformation.

Technical knowledge becomes visual in public discourse via earthquake commentaries-predictions and news-comments about urban transformation (Acikalin, 2017; Altintas, 2012; Kokturk and Kokturk, 2007; Timisi and Dursun, 2008; TSKB, 2012). Natural scientists, private actors (e.g., building constructors), and public administrators receive visibility that is highly associable with technology.

The fact that central and local governments attach importance to technology can be traced in their investments in search and rescue equipment, earthquake warning systems, and buildings that are to be used as crisis management centers (TSKB, 2011, 2012). As for individuals, one can indirectly infer from the survivors' discussions that they place importance on technology in risk mitigation, as they complain about careless building inspections and damage identifications, prefer to live in few-store buildings, or feel guilty for not having taken measures for protection (Acikalin, 2017). Moreover, there is positive evidence that earthquake survivors attach importance to scientific knowledge, as they listen to experts on television programs to obtain knowledge about fault lines, magnitudes of earthquakes, or technical specifications of strong buildings when such issues are explained in simple ways; also, they consider scientists as among social leaders (Acikalin, 2017; İseri Say et al., 2005; Kasapoglu and Ecevit, 2004; Timisi and Dursun, 2008). The same is valid for the media as they give coverage to experts.

Highly populated and economically developed settlements have always drawn more public attention. This is because the public is aware of the fact that such places engender high risks and costs. Although the society perceived the problem as structural, it held both governments and contractors responsible for the death of hundreds in both Marmara and Van cases (Acikalin, 2017). Using this sensitivity, urban transformation began to be brought up to public attention more in the post-Van situation. Urban transformation has become almost the main (if not the only) instrument to mitigate earthquake risks in populated areas since then (Altintas, 2012; TSKB, 2012).

Public administrations (especially the central government—the state) appear in the social imagery as the main actors of planning, inspection, and so on, in urban transformation, whereas individual contractors for building constructions are placed just after them as responsible entities for implementation. However, when the issue is "collapsed" or "risky" buildings and its ultimate solution is urban transformation (regardless how it is conceived), the conventional list of responsible actors extend to the so-called opportunist homeowners and ignorant citizens. In popular discourse, as one may observe in mainstream media, "ignorant" citizens refer to those who do not obtain necessary information to get prepared for earthquakes, and "opportunist" homeowners refer to those who try to use the procedures to maximize their benefits, that is, negotiate for their new flats to be bigger in size and higher in quality after the reconstruction ("transformation"). In other words, homeowners demand as much share from urban rent as possible. Although those who abuse the procedures and demand outrages shares occupy a considerable space in popular discourse, the literature does

not provide systematic data as to whether such abuses establish a pattern to determine the progress or quality of urban transformation.

It appears in the literature that taking advantage of "opportunities" is either considered an unquestionable human attribute ("normal") or negated (i.e., labeled as abuse). Negation of "opportunism," however, is not followed by its contextualization (Altintas, 2012; Kokturk and Kokturk, 2007), and thus such questions are overlooked: How are these "opportunities" created? Is there anybody who takes bigger share from "opportunities" than individual homeowners? Is there any differentiation among homeowners in terms of being able to access opportunities? Therefore, one understands little as to whether there are relations patterned among "urban transformation industry" (i.e., construction and real estate sectors, their subsectors, big companies shaping the market, and TOKİ), actors that may have direct or indirect interests in the process (e.g., some companies in the media), and governmental bodies (central or local).

Alternatively, a structural perspective would have helped notice the marginalized position of homeowners before other stakeholders who actively form urban spaces, how preferences of societal groups lose meaning and technology gains significance as a source of power and safety. Technology becomes "ours" depending on our purchasing capacity; this underlines the value of money and links the individual to the consumption system and the "world of opportunities." When these structural/systemic problems are not considered carefully, homeowners are placed bottom in the hierarchy of stakeholders, for whom asking even for partial participation (especially in an organized manner) would be deemed "abnormal" and at best ignored. Although homeowners are kept at the margins of the stakeholder structure, can tenants be positioned as stakeholders? They would receive visibility and honor only when they become "earthquake victims."

Training and Behavioral Change

Although training is not considered as substantial as technology, its significance is emphasized by administrations, in civil society, and around scientific circles. Here, the fundamental assumption is that the individual is an entity that might develop awareness and change behavior if s/he is well informed. Yet, the issue of how to achieve this becomes a bit problematic as explained below.

First, as the literature indicates, the aim of training is to ensure that individuals take measures and learn how to protect themselves from the harmful effects of earthquakes. Once again, especially central governments assume main responsibility for training; but one doubts how one actor can achieve this systematically throughout Turkey. Except for the local governments of big cities around Marmara, municipalities do not seem to do much for it (Aksit and Karanci, 2000; MAG, 2014; TSKB, 2011, 2012). CSOs are in similar condition; on top of it, suffering from lack of resources for organizing systematic programs, so one can hardly consider them as responsible actors for training.

Second, training programs appear to target all citizens in general, and primary school students in particular; some governorates and private companies have their employees trained, some receive earthquake drills as well (Acikalin, 2017; MAG, 2014; Oner, 2007).

However, the literature does not provide information as to whether such activities are systematic or prevalent, such programs progress well (e.g., AFAD's goal to reach one million persons), their impacts are positive and sustainable, or the number of earthquake preparation

programs targeting university students has increased since the Marmara earthquake, which had been quite limited then (Dedeoglu, 2000).

Third, an individual is not generally imagined as "a part of collective units and the space" in the design of training programs in such ways that students, parents, teachers and workers in schools; workers, their families and bosses in workplaces; and residents in buildings, neighborhoods or villages collectively learn and experience the tasks that might be undertaken in different stages of earthquakes and remember their acquired knowledge from time to time.

In these respects, one may suggest that those training programs that have these three problems (systematic delivery of training services, developing a thoughtful content that conceives participants as socially meaningful entities, uses many ways to deliver the information and repeats it many times) do not serve to generate an earthquake preparedness culture.

Finally, although collective actors imagine training as based on an assumption that human beings have an ability to change, earthquake survivors rather assume that individuals do not have such an ability; interestingly enough, practice seems to divert partly from survivors' perception (Acikalin, 2017; Berkay et al., 2003; İseri Say, 2005; Karanci et al., 2011; Kasapoglu and Ecevit, 2004; Seker et al., 2014; Yakut, 2003). For example, although there is a high level of willingness to obtain information and to participate in organizations, access to information and organizations is limited. Television is almost always the mere source of information that one can access; yet, earthquake survivors report that they are sometimes misled or frightened by what they hear in the media. Therefore, let aside expecting that individuals change behavior, one may find not many people who can count the provinces located in high-risk earthquake zones and know that community self-help is essential because aid might not be available during the first 72 hours.

As a result, in face of difficulties of obtaining resources to manage daily life and of obtaining information to make sense of the reality, people seem to avoid reality, tend to deny it or develop unrealistic optimism. This whole process becomes even more dramatic if individuals experience a severe earthquake incidence. So it might be that individuals use the assumption that "human beings do not change" because of all sorts of deprivations; it becomes functional in the defense mechanism to keep them (their selves) intact.

There is supportive evidence in some studies on earthquake preparedness (ADV, 2004; Aksit and Karanci, 2000; Karanci et al., 2004; Kurultay, 2002; Tezgider, 2013): media and sources of information are insufficient, individuals have limited access to sources, programs are not systematically monitored and evaluated; the link between knowledge and daily life is weak, sources of information (e.g., media) sometimes provide inaccurate knowledge, and ethical principles are not defined. In short, as long as meanings, sources, and supports are not in line with new opportunities and old or new needs, individuals are not able to perceive the coherence between the information received and different aspects of life; thus, behavior does not change.

Organization
Organization of earthquake preparation activities, as the explanations above imply, is handled mainly by public administrations, especially the central government. CSOs are welcomed to support governments, but this position CSOs are not imagined as responsible bodies. Parallel to this reasoning, one may observe that social expectations from CSOs have changed positively

over time although they may be considered weak and not clear contentwise if one thinks of their potential contributions (Acikalin, 2017; İseri Say, 2005; MAG, 2014).

Some professional organizations, such as chambers of architects, engineers, and physicians, have always been active, contributing almost to all stages of disaster management from emergency relief services to produce knowledge; accordingly, they have received visibility in public sphere since the Marmara earthquake. Since then, organizational capacity for preparation activities improved as the following examples indicate (Acikalin, 2017): the foundation of AFAD, formation of search and rescue teams and training of their staff, establishment of platforms through which CSOs interact better, CSOs' delivery of training programs, more systematic collaboration among the central government, selected municipalities and CSOs not only during emergency period but also later on for preparing the national action plan. Furthermore, the number of centers in universities has increased, some of which are interested in urban transformation, disaster management, and even social aspects of disasters.

In the civil society, practices such as constructing community-based organizations and training of volunteers have become somewhat permanent since the Marmara earthquake in this region; yet, it does not seem that such practices have been pervasive in Turkey (Acikalin, 2017; ADV, 2004; MAG, 2014; İseri Say, 2005). One reason is the lack of resources, which cause CSOs to restrict their physical coverage. The second reason is a disconnection that the high value seemingly attributed to individuals but they are not supported by training, knowledge, and practice. The third reason is the low level of recognition of civil society by public administrations and private companies. CSOs' lack of resources for earthquake training is one example which may connect the first two reasons. Another example may be given for the central government that it distanced itself from critical CSOs, even time to time impede them in both Marmara and Van, but it seems to become more systematic in Van. In addition, legal arrangements, such as the identification of principles for giving accreditation to capable CSOs, have not been made as of 2016. However, this is the way how one makes state-society relations standard, transparent, and predictable. Nevertheless, one should note that these "issues" do not seem to take up much space on the agenda of the civil society or scientific communities; under these conditions, it is not realistic to expect significant contribution to preparation activities from the media.

These conditions give an idea about the silent removal of CSOs from the scene during the recovery period (the first year) in Van (Acikalin, 2017). Whereas, toward the end of the first year, the civil society in Marmara had made a breakthrough, increased and diversified its spheres of activity with the help of struggles waged during the previous months (Aksit et al. 2003; Johnson 2011; Kumbetoglu 2006; Yarar 2006; Yucak 2004a, b). In a report published by the National Earthquake Council, founded in 2000, social aspect was articulated with six themes (TUBITAK 2002).

Yet, if the struggle for the "space acquired" does not sustain, that space is abandoned rapidly. The Council may be considered as an example for an "acquired space" as it functioned positively in terms of articulating social aspects into physical and technical issues of earthquake risk management. Nonetheless, it had two handicaps: first, it was not much in touch with societal groups, and second, it had little autonomy in its relation with the central government. As a result, it was dissolved in 2007 without being noticed (Kurultay, 2002; Oner, 2007), an important space lost. This was the period during which the social perspective almost vanished in the national earthquake research program of 2005 to 2014, developed by The Turkish Institute of Science and Technology (TUBITAK), and the issue completely disappeared

in the projects supported by AFAD in 2016. If collaborations within and between scientific communities, as well as between them and CSOs do not constantly generate joint agendas for collective action, which then would influence collective memory, regressions become inevitable.

These topics have not been discussed much in the literature. Nor have there been many studies that follow progress systematically. Furthermore, interest in civil society has decreased over 12 years. As for the last issue, one of the reasons might be that the political-social conjuncture of the Marmara earthquake changed. However, some examples suggest that the problem was more complicated for social sciences. For instance, family, as an institution at the center of hegemonic interest in the 2000s, was not studied in Van. Another example may be that there were only two presentations on earthquakes in the National Congress of Social Sciences in 2016. When one evaluates these seemingly irrelevant examples together, one may think that social scientists have limited capacity to develop common interests or, at least, to follow the existing agenda. If this argument is true, one may conclude that social science communities have not provided the society with knowledge to increase motivation for earthquake preparedness.

With their ups and downs within changing national and global conjunctures, CSOs continue to struggle to expand public sphere and thus increase the capacity of earthquake preparedness and intervention in Turkey in an atmosphere briefly defined above. However, the established expectation from civil society is to have CSOs function as an element ("filling material," "spare tire") that steps in if public administrations (particularly the state) are insufficient and to the extent that they deem suitable. Over 12 years from the Marmara earthquake to that of Van, the relations between public administrations, private sector, and the mainstream media improved. All these developments are in line with the institutional-legal structures in Turkey and such structures affect the power structure in any sort of organization and detract the administrative culture from an egalitarian-inclusive (fully participatory) approach (Acikalin, 2017; Aksit et al., 2003; Gulkan, 2009; Yarar, 2006).

Thus, the vicious circle closes down and solutions diminish. In face of a crisis, such as an earthquake, informal social networks save the society from falling apart; the heavy cost of this performance, in turn, is that systemic change to develop resilience against earthquakes remains limited. Among the factors restricting change are putting up with short-sighted solutions, social hierarchies, and perception of CSOs merely as "aid providers" in times of emergency. Within this context, daily life includes also many difficulties and uncertainties, in which it becomes impossible for individuals to focus their attention on a specific topic for a long time; thus, violation of rules becomes an easy solution and sometimes the only solution. Being stuck in crude reality nourishes an approach that turns new earthquakes into new disasters and contributes to our failure to turn into a "resilient society" (Balamir 2000).

WHY IS THAT?

A structural evaluation of the current situation may help us formulate some solutions to our problems. Let me start this way, there are five spheres in modern societies that are to be autonomous; these are personality-identity, society, culture, economy, and politics (Aksit et al., 2003). Dependency of any of these spheres increases the likelihood of structural hierarchies, whereby power holders enjoy privileges in regard with access to resources and decision-making. Such a structure does not encourage the privileged entities to build capacity against earthquakes, whereas their use (and abuse) of resources is more likely to increase the vulnerability of the whole system. Oppressed groups or those under societal tutelage, in turn, remain vulnerable because they have limited opportunities to access resources and limited

abilities to build capacity against earthquakes. Therefore, the society develops "holistic vulnerability" instead of resilience (Özerdem and Jacoby, 2006). In such circumstances, not only vulnerable groups but also privileged groups and settings are highly harmed by the crisis resulting from a strong earthquake.

It is difficult to change a system that produces vulnerabilities against disasters. A part of the explanation may be as follows: the core of power (the state in the context of earthquake management in Turkey) develops direct relations with individuals, CSOs, local governments, the capital, media and scientific communities as it governs these actors' lives to certain extents. Here, governing simply means defining beings, determining rules, controlling, punishing, or favoring actors. The relations of such (crude) governance generate alliances (or power blocs) at system and subsystem levels. To the extent that the system sidelines such values like equality, transparency, fairness, cohesion with the nature, it also destroys the autonomies of all the participants, including those staying at the core of power blocs. Many of those who are excluded from power blocs participate voluntarily to the system maintenance to get access to resources or prestige, regardless how little they would be; this is called hegemony. Hence, actors go under tutelage, they lose more autonomy and become increasingly dependent, cautious, and vulnerable; their connections with the power block become stronger, whereas the others turn out to be weak, dysfunctional, meaningless, and tense. Weakened internal dynamics also erodes self-respect and self-confidence, which in turn limits more to be innovative, take initiatives, solve internal tensions, and handle even obvious problems. In such circumstances, those who understand that social characteristics should change are not able to come together for sustainable solutions, and if they achieve to do so, they hardly maintain their cooperation. So, the hegemony deepens and the damage in society's resilience against earthquakes becomes even more invisible.

Despite several bottlenecks, there are hopes toward change that relate particularly to the current structure of social systems which are multilayered, multidimensional, and interactive; this makes the adoption of hegemony more likely to be imperfect. Differentiations generate various struggles, though patchy, in an attempt to access to resources and/or to challenge domination; this, in turn, half-opens the door to changes for good or for bad, which are difficult to control.

HOW TO BREAK THE VICIOUS CIRCLE?

I would like to start my suggestions from "individuals" who are imagined as "earthquake victims" and sometimes held responsible for earthquake preparedness. To be sure, individuals should be active and autonomous while fulfilling their responsibilities in a preparation process. But how?

For example, training programs might be designed in such ways that the contents sound realistic and open to questioning when participants practice and think of their daily lives and that they attain training periodically. Individuals as the target groups of training programs might participate through CSOs in the design, implementation, and monitoring of the programs. They might also contribute to the identification and solution of problems, that is, updating of the programs so that the information obtained becomes part of daily life. Thus, several segments of society, including the marginal (most vulnerable) ones, are able to contribute to the formation of a new culture of sustainable disaster risk management or of resilience against earthquakes.

In line with a holistic approach facilitating the internalization of new knowledge, one might think of several different tasks. For instance, making preparations for the first 72 hours

through a rotating voluntary work system in crisis management centers, controlling every single element from assembly point signs to emergency situation containers, production of closets with locks, ensuring that the closets having locks are available in every hardware store in each town in a risky area, selling "closet fixing packages" next to the candy shelves in all market chains, ensuring that trade unions explain relevant rights when they deliver preparation training to families, distributing informative leaflets in schools on parents' meeting days each semester, organizing contests, and many other tasks…

Organized, not individual, volunteers, long-term campaigns, and public relations activities are necessary for the fulfillment of these tasks. Short-term projects, based on grants, can only be a tool for these campaigns for improving the dialogue between volunteers and organizations.

It is obvious that these tasks require coordination between CSOs and public administrations. Both sectors need scientific communities for the production and questioning of the knowledge they need to have. Scientific communities and CSOs should cooperate to establish links between different types of knowledge and between knowledge and society. All sorts of media are required at local and central levels to promote campaigns; however, first, scientific communities and CSOs should inform the media. Especially when it comes to urban transformation, specific projects might be needed to ensure that the mainstream media, which is in close relations with the power bloc (governments and capital groups), become more willing to be informed. Collaboration of scientific communities and CSOs is also required to communicate with the private sector and public administrations for promoting public interests regarding urban risks and protection of the nature. In addition, one should remember that serious disasters will not occur only in Istanbul or Marmara.

The method that people in Turkey are accustomed to is to convince the state (central government) to lead to such a long-term and comprehensive set of organizations. However, considering that this approach leads to the reproduction of a control-tutelage system in new forms, one might try a new method: social and natural scientists might make a sort of "master plan" in institutional collaboration with CSOs and, based on this plan, they might prepare a research and implementation program; using these tools, they might keep the topic of earthquakes/disasters on the public agenda.

Paying attention to stakeholder participation in plan and program preparations will increase the validity of outcomes identified in these documents. For instance, it will be understood to what extent relevant public institutions are willing to support the process and in which issues they are willing to invest. TUBITAK might be the initial source of funds in plan and program preparation phases; the source of funds might be gradually diversified with development agencies, municipalities, universities, AFAD, private sector, and international organizations.

Broad promotion of such a joint program will encourage (at least) social scientists to study earthquake preparedness, shed light on the topics, and inspire further studies. It would be possible to suggest revisions of the earthquake programs of TUBITAK, AFAD, and universities. Similar contributions might also be possible for civil society as far as progress is made in the implementation of joint programs, such as public discussions on significant pending issues might be brought up the public agenda or solutions might be sought for more efficiently (e.g., the accreditation of CSOs, occupied evacuation areas, looted emergency aid containers). As the process warms up, it will be more possible to create neighborhood organizations, compile experiences of volunteers, and constantly update the program. The process might also help build more egalitarian relations, in which the likelihood of systematic information flow to and from public administrations and private sector increase as well as public decisions become

more favorable to environment and society. Thus, such activities might increase the efficiency of central and local governments to build capacity, develop willingness, and keep private sector's utilization of natural and urban spaces under control in favor of collective interests. This, in turn, increases the societal participation in protection and transformation of the nature and the built environment, where necessary. As a result, demanding that public actors facilitate activities of the civil society through funds and institutional-legal regulations might require fewer struggles when the support of public opinion expands.

Consequently, the primary goal is to ensure the autonomy of the five main spheres. To this end, the center should not belong to a fixed actor or a power bloc. If autonomy will not be a source of conflicts, relations of domination should not continue to exist in new forms. In this challenging process, which will also involve regressions, institutional collaboration between social and natural sciences and CSOs seems to be the key to the first of many doors successively locked on the way to become a resilient society against earthquakes. It is possible to foresee that each success may boost hopes that common goals can be achieved and may revive ideas about how to succeed in that.

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