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Analysis of the 6 February 2023 Turkey earthquake as a challenge in disaster sociology under the guidance of Bruno Latour and Terrestrial

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CITATION

Kasapoglu A. (2024). Analysis of the 6 February 2023 Turkey earthquake as a challenge in disaster sociology under the guidance of Bruno Latour and Terrestrial. *Journal of Infrastructure, Policy and Development*. 8(8): 6382.
<https://doi.org/10.24294/jipd.v8i8.6382>

ARTICLE INFO

Received: 14 May 224
Accepted: 24 June 2024
Available online: 28 August 2024

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Abstract: Current studies in disaster sociology, which were initiated and developed mostly in the USA upon the request of the army, are far from meeting the needs today. Today, more than ever, new theoretical and methodological approaches that are not human-centered are needed. The research, a part of which is presented here, aims to render invisible the damages and losses suffered by those who are marginalized by the powerful, in disasters in general and earthquakes in particular. The main question of this research is how to address the damages suffered by soil plants and animals, including immigrants in Turkey, due to the disaster on 6 February 2023. (Based on this, the main question of the study is how to address the damages of the natural environment, including plants, animals and soils, as well as Syrian immigrants in Turkey, who were affected by the earthquakes centered in Kahramanmaraş on 6 February 2023, which we experienced most recently, will be addressed with an antipositivist approach.) For this purpose, unlike classical sociological approaches, based on relational sociology, how immigrants, plants, animals and soil are affected together during the uncertainty and complexity in daily life has been analyzed based on available written and visual documents. The findings were discussed with a holistic view, based on the ‘One World’ terminology suggested by relational sociologist Bruno Latour. It has been revealed that due to the earthquake turning into a major disaster, the resident population has become openly or secretly immigrants, and they have been marginalized like other creatures, especially international immigrants, most of whom are Syrians, have been blamed, excluded and rendered invisible. While the research results reveal the inadequacy of classical essentialist sociological approaches based on the basic duality of nature and society, they also show that ‘differences’ and ‘uncertainties’ come to the fore in daily life instead of linear determinations. In addition, while the importance and contributions of interdisciplinary and transdisciplinary studies with concepts such as ‘liminality’ and ‘turning point’ are exhibited, on the other hand, some suggestions are made based on Bruno Latour’s ‘One World’ approach.

Keywords: disaster sociology; relational sociology; immigrants; natural environment; document analysis

1. Introduction

There have been 7000 natural disasters in the world in the last 20 years and nearly one and a half million people lost their lives. In addition, while four billion people are affected by natural disasters, financial losses have reached three trillion US dollars, as reflected in the United Nations “Human Costs of Disasters” Reports (UNDDR, 2020).

Many earthquakes have occurred in Turkey in the last 25 years and 30,000 people lost their lives in the 1999 Eastern Marmara Earthquake. More than 50,000 people lost their lives in the earthquakes with continuous aftershocks, which last started on 6 February 2023, centered in Kahramanmaraş. Additionally, 37,000 buildings were

destroyed and more than two million people started living in tents and containers. More dramatically, at least three and a half million of the 14 or 16 million people living in 11 provinces in the region have migrated to other cities in Turkey (Sağıroğlu et al., 2023).

On the other hand, it is known that half of the Syrians under Temporary Protection in Turkey during the earthquake and other foreign nationals, that is, nearly two million immigrants in total, lived in the provinces where the earthquake occurred. Moreover, the number of deaths among international immigrants is not small. Therefore, when locals and immigrants are taken into account on 6 February 2023, the population directly affected by the earthquake is actually over 18 million. Moreover, the earthquake has affected and continues to affect the whole country with its human, social, economic and political dimensions. As a matter of fact, studies examining the 6 February 2023 earthquake have been published on political public relations (Şen, 2023) as well as surface deformations (Meng et al., 2023).

Disaster sociology, which developed when it was seen that environmental sociology was not sufficient, emerged as an interdisciplinary field that developed with the contributions of medical and administrative sciences, especially human geography. One of the pioneering studies is Samuel Henry Prince's doctoral thesis written in the 1920s. This study is more focused on disaster and social change. After this individual study, more systematic studies on individual and collective behavior began only in the 1940s (Quarantelli, 1977). Technological and natural disasters are the most studied topics. On the other hand, as stated by Danielson et al. (2015), we see that disaster sociology was conducted in Sweden in the 1970s by the Swedish Disaster Research Center, which was established with the request and support of the army as the military power of the state, just like in the USA. The studies carried out in this center, at the request of the army, are mostly focused on social psychological factors such as aggression, panic and fear experienced in disasters.

Within the scope of studies that we can call "convergence", the aid given to neighbors, friends, relatives or the poor as well as their recovery is researched. Individual altruism and pro-social behavior by taking care of others, as well as fear and panic issues that arise in the society shaken by disaster, are actually studied together. In particular, the effects of the media on fear and panic are critically discussed. For example, it has been revealed that the scenarios written by TV or radio program hosts in a short time with incomplete information affect the public irresponsibly and cause fear and panic (Quarantelli and Dynes, 1977; Quarantelli, 2008). It has also been shown that disaster myths, which are social constructs, do not reflect reality (Kappeler and Potter, 1996).

While studying disasters, research focusing on crime and conflict can also be mentioned. However, it can be said that some of the accusations, especially the theft committed during this disaster, do not reflect the facts and that people believe rumors that they have not observed firsthand (Green, 2006). However, exorbitant price increases of goods and or violations of property are among the most common crimes.

In disaster research, it is important to examine both helpfulness and solidarity, as well as negative behaviors and conflict, relationally and dialectically. It should be noted that efforts were made to bridge the gap between these two different post-disaster behaviors (Harper and Frailing, 2015).

In addition, in recent years, the issue of increasing the capacity to combat crimes in disasters has increasingly begun to be addressed in the context of disaster management and mass communication (Purdum, 2019). Especially immigrants lose their lives more in disasters and efforts to prevent this have gained priority. In the USA, it is known that people of African origin who commit crimes during disasters are more likely to lose their lives as a result of violence (Henry, 2020). In fact, groups that are marginalized and excluded in society, especially immigrants and foreigners, suffer more damage in disasters as an extension of existing inequalities in society. So much so that seven times more losses occur in natural disasters experienced by poor and underdeveloped societies than in rich developed societies (Wallemac and House, 2018). Although the elderly, the poor and the disabled lose their lives more in developed industrial societies, especially in the USA, these losses are gradually decreasing. Especially in the Covid-19 epidemic, disaster-related deaths have occurred among the poor, especially in Asia and Africa, at a rate incomparable to developed countries. As Denis Mileti put forward many years ago (1999), deaths resulting from disasters and the inequalities experienced by disadvantaged groups have not been eliminated.

Approaches to explaining disasters: Different cultural and sociological approaches are used in explaining disasters in the relevant literature (There are also different cultural and sociological approaches used in explaining disasters in the relevant literature) (Xu and Lo, 2022). On the other hand, these approaches also show the changing character of the subject over time. Each of these approaches plays an important role in disaster mitigation and risk management.

The first of these, which is very common in Turkey, is individuals using God for the desire or purpose of getting rid of their own responsibilities (Act of God). Especially in Europe, starting from the Enlightenment Period, when disasters were explained, the concept of 'Divine Retribution' was used to explain that God punished societies. In Turkey, the discourse of 'divine providence' is an expression frequently used by administrators to appease the victims, as well as the resignation and silent acceptance in people's view of disasters. It can be said that the high vote rate of the conservative ruling party in the earthquake region in the 2023 Turkish elections is a proof of this.

The second approach is to explain disasters by natural causes (Act of Nature). For example, excessive rains, hurricanes, floods, forest fires or earthquakes come from mother nature.

People are not blamed for causing great loss of life and property. Here too, the responsibility is placed on nature instead of God.

A third approach is to view disasters as the interaction of humans and natural systems. For example, opening agricultural lands to settlement causes heavy industrial investments in these areas, resulting in population concentration and negatively affects the loss of property and life. Therefore, disasters caused by humans occur (Giddens, 1998).

What is important here is that, unfortunately, the perceptions of individuals with different approaches about the disaster have the power to affect their actions. For example, those who hold God responsible for disasters do not listen to science or even take any action. Because there is nothing they can do against God. Those who attribute

disasters to nature use technology to control natural events. They also care about money power and engineering services. Those who see disasters as a joint product of nature and humans are more rational. They take actions to prepare society, manage risks and reduce harms. They try to rapidly develop programs and projects in order to prevent soil and ground slides such as floods, floods and earthquakes (Xu and Lo, 2022).

In fact, the main question in the light of all this information is how, in emergency situations, managers will reduce the disaster risks of the poorest segments of the population who are most vulnerable in terms of psychological resilience, have weak social support networks, and are politically weak. All this information underlines the need for powerful decision-makers to use both moral and scientific approaches together in their strategies to combat social injustices. In other words, in the analyzes of sociologists, it is necessary to consider together the most vulnerable victims as well as the self-interested approaches of the powerful who cause these victimizations, which lead to disasters in the capitalist accumulation regime.

It is possible to mention many factors in reducing vulnerabilities in disaster studies (Sapountzaki, 2022). The first of these is that administrators reduce disaster response to environmental engineering as if it were just a technical issue. However, such an approach ignores the effects of all other human, social, economic, cultural and regional factors. It neglects vulnerabilities arising from inequalities that already existed in society before the disaster.

Secondly, planning studies that ignore and disregard risks are common. What is neglected here is that, while development-oriented approaches provide economic growth, they also create damaging effects on the region. For example, not only opening stream beds or forests for settlement, but also granting zoning amnesties. That is why nowadays, efforts to prevent green areas from being developed for the purpose of generating profit are given much more importance. It is necessary to fight hard to ban construction and prevent rents, especially on fertile agricultural lands. Because it should never be forgotten that buildings on earthquake faults are at risk of collapsing as well as houses in the forest are at risk of fire.

A third factor is that local and central governments are constantly interested in economic gain and do not care about potential losses. However, vulnerabilities and resilience must be considered together in accordance with the principle of the unity of opposites of dialectics.

A fourth factor that is important in reducing disaster damages is the unequal distribution or even lack of the necessary “resilience capital”. Resistance capital is actually quite comprehensive (Bourdieu, 1977, 1983). As a matter of fact, it includes both physical (public and private structures), social (relationship networks, trust, social relations), political and institutional (organizational capacity, specialties, normative frameworks) and monetary issues (bank accounts, savings, fund providers). Therefore, weak public and private sector collaboration in managing vulnerability and creating or building resilience has very negative effects. In fact, both public and private organizations need to collect disaster-related information (of) by a city, settlement or region together.

For example, it is necessary to have knowledge of the main sources of harm in the region. Because different preparations will be required for earthquake, flood,

overflow or landslide areas. It is also necessary to be prepared to find answers to some important questions. For example, the first question to ask is who will be most harmed and have high vulnerabilities during any disaster? What activities should be taken to reduce potential losses and damages? Who will play the most active role in the organizations and activities to be implemented in the region? And what potential sources exist for developing vulnerability capital? How can sensitive or vulnerable disaster victims access these resources? Where and how will the public be evacuated during or after an earthquake? Are there any gathering areas when houses and workplaces are abandoned due to disaster earthquakes and where are they?

The absence or inadequate level of detailed information on the issues listed above will inevitably negatively affect the risk management policies that managers plan to reduce losses. For this reason, it is necessary for healthcare professionals, civil defense and security experts, urban planners, sociologists, economists and geoscientists to conduct research together in an interdisciplinary manner.

It should also not be forgotten that subjective risk perception is as important as, or even more than, objective risk knowledge. These are interlocking rings in risk management aimed at reducing vulnerabilities and damages. Likewise, public, private sector and NGO coordination is extremely important. Because managers not being able to access the risk information of the region and not knowing the risk perception of the society will be a disadvantage for them (Sapountzaki, 2022). As a matter of fact, Turkey faced this reality in the Kahramanmaraş-centered earthquakes on 6 February 2023.

On the other hand, working together between cultural sociology and disaster sociology is becoming more important today than ever (Xu and Lo, 2022). Because managing risks and reducing harm is not only a technical issue but also a socio-cultural and socio-economic phenomenon. Disaster sociology first emerged in the United States in the 1940s as an effort to institutionalize civil defense and military circles. Unfortunately, non-Western countries and different cultures are assumed to be absent in these studies. However, some radical changes have begun to emerge in the studies carried out in the academy in the last 20 years. Interdisciplinary studies that pay attention to regional and cultural factors gain importance. Especially since 2018, a development or change called “cultural orientation” has begun to occur in disaster studies.

These suggestions, which are frequently observed in the literature, are undoubtedly important. However, these classical or main stream sociological studies are still insufficient. A newer perspective is needed and Relational Sociology becomes important here.

Relational sociology

The most important points that distinguish this study from other previous disaster studies are that it is conducted in a relational sociological manner and rejects essentialism. It is also important to focus more on the process and try to reveal uncertainties, liminal situations and turning points. However, what makes it even more unique is that it moves away from human-centered paradigms. This means that it does not ignore plants, animals and soils. In fact, it can be said that the fact that it focuses

on immigrants rather than the settled population makes it valuable.

In fact, our main duty is to point out that there is no consensus about what relational sociology is. For example, there are those who see relational sociology as a project or language of struggle (Emirbayer, 1997), paradigm (Donati, 2011), theory or approach. Unlike them, Jan Fuhse (2020) sees relational sociology as a scientific ‘field’ under the influence of Bourdieu (1983). Like Bourdieu (1983), when a field is mentioned, Fuhse (2013, 2015) understands coming together in scientific meetings, congresses, publishing important books and articles, and even informal conversations as formal communication acts that enable members to connect with each other.

In fact, to put it more precisely, it is the differences in thinking styles that distinguish a scientific field, a set of views, or a group of writers and thinkers from others (Fleck, 1935, 1979). On the other hand, it is necessary to mention the boundaries that separate scientific fields from each other and show their differences. It should not be forgotten that these borders are drawn over time and there is inevitably competition between areas to gain more power.

Although the relational approach is not a consensus theory, it can be said that it emerged from the discussions of sociologists from various sociology schools (Emirbayer, 1997; Fuhse, 2013; Miche, 2011) on the duality of structure and individual. In other words, the basic question is “Can individuals take action independently of the structure or are they completely guided by the structure?”

As Emirbayer (1997) stated in his Relational Sociology Manifesto, influenced by Elias, it is more appropriate to see the social world as a process rather than a completed essence or substance. In fact, this view is a matter of social ontology and is very different from its meaning in philosophy. On the other hand, the rejection of dualities such as nature-society, mind-body, structure-agency, natural-social, behavior-action, time-space is also at the basis of the relational view. Relational sociologically, social facts emerge within the process of the flow of relational actions in society. Consistent with this view, people become social actors in this process. In summary, while relational sociology is based on the rejection of dualism and essentialist views, on the other hand, it has basic features such as relationality, that is, being more fluid within networks.

As a result, although they have different views, the common aspect of relational sociologists is that they accept that society consists of social relations or networks of relationships between actors (Bourdieu, 1989; Crossly, 2011, 2015; Depelteau, 2008; Donati, 2015; Powell and Depelteau, 2013; Prandini, 2015). Relationships between people are the basis of the relational view. In other words, we need to study dynamic and fluid relationships that are not rigid and static. It can be said that such an approach provides us with important clues when examining the 6 February 2023 earthquake.

It should be noted that the third type of uncertainty, which is referred to as contingency in Harrison White’s (1992) uncertainty classification, is quite instructive for our analysis (Kasapoglu, 2016). In fact, according to White (1992), the first uncertainty arises in social relations. If the roles and expectations that are the requirements of a certain status in social relations cannot be clearly defined, ‘ambage’ occurs here. The second is the uncertainty in the values conceptualized as ‘ambiguity’. Uncertainties in socio-cultural values are also common and identities always try to avoid. Certainly, social values and attitudes of different segments of society cannot be

expected to be the same. For example, the value of the child (Kağıtçıbaşı, 2013) plays a very central role in traditional society.

The third is uncertainty, called contingency, which enters society unexpectedly, such as an earthquake. Because in disasters, social order is disrupted, functions cannot be fulfilled and conflicts increase. According to White, this uncertainty that arises in extraordinary situations disturbs identities and increases efforts to terminate them. As a matter of fact, in our Covid-19 Pandemic studies, all uncertainties increased and were defined as contingency (Kasapoglu and Akbal, 2020).

Another concept that is important for our study is liminality, which is used to understand hybrid identities (Koçanlı and Kasapoglu, 2021). Liminality is a widely used concept in social anthropology and psychology (Turner, 1969, 1974, 1988; Van Gennep, 1960). It can be said that especially in the sociology of emotions and psychology, ambivalence is frequently used when explaining the in-between position of identities. Finally, the most used concept is the turning point, which is used to point out important social and individual changes.

In fact, it is possible to say that after the 7.7 magnitude earthquake that we experienced on 6 February 2023, centered in Kahramanmaraş, we, as sociologists, are in a very advantageous position in many aspects in our analysis. In addition to numerous field studies conducted after the 1999 Marmara Earthquake, theoretically benefiting from Bruno Latour (2005) can greatly facilitate our work.

As a matter of fact, the basis of Latour's ideas, which he put forward by going back a long way and being influenced by Gabriel Tarde (1969, 2000), is an approach that does not limit society only to humans. Because while Tarde defines society from the very beginning, he does not exclude animal and cell societies. It even touches upon the societies of stars and solar systems by including astronomy. To underline, Durkheim's sociology, which dominated until recent years, has managed to mislead us for a long time in an essentialist manner. That's why one wonders, "Would sociology and all social sciences be stronger if Tarde's (1969) views were more accepted instead of Durkheim?"

Actually, in his recent writings, Bruno Latour (2005) carefully distinguishes the old sociology, that is, the 'sociology of the social', from the new sociology, which he calls 'sociology of associations'. The main three features of the new sociology that he advocates are not restricting the analyzes to humans and examining non-human entities as well. Latour is also known for his "Actor Network Theory" (ANT). In particular, information, money, technology, disease, microbes, plants in the sea, rocks, and ships are included in social theory as those who have the ability to move, which he defines as "actant" as well as "actor". If we think like these and even more broadly, non-human entities are given serious roles, including laws and regulations. On the other hand, in this approach, science and technology are considered compatible with the social (Kasapoglu, 2023; Latour, 2005).

We need new approaches and concepts when addressing human-nature interaction, which is the focus of this article. For example, Latour (2017, 2018) also emphasizes the need for a new geopolitical organization in his philosophical discussions. He emphasizes the New World. He introduces the concept of 'Terrestrial', which means 'The Earth we live on'.

Latour also uses the word Gaia in the title of his book. Gaia is a very powerful

god in Greek and Roman mythology, synonymous with Terra or Tellus. Its meaning in Latin is very important; because earth means soil. It is very meaningful that Terrestrial was developed as a new concept by Latour. Because it was not used randomly or arbitrarily. Terra evokes the personified presence of the earth. According to Latour (2017, 2018), people live with many species on Earth. In increasingly unfavorable climatic conditions, radical nationalism and migration issues, as well as inequalities, come to the fore again. It can be said that his aim is to draw attention to possible conflicts. In fact, his greatest contribution is that he not only establishes the connection between the conflicts in the world and the climate crises, but also tries to suggest solutions. This is confirmed by the fact that the climate crisis is no longer a problem that can be solved within national borders, but on a global scale. The dichotomy or distinction between global and local already misleads us. Opinions that oscillate between defending narrow or small interests (globalization minus) and its opposite (globalization plus) unfortunately waste our time. We have to be more conscious of these views (Kasapoglu, 2022, 2023).

When we look at the recent past, it is an opinion put forward by Latour 30 years ago that global warming, which plays an important role in climate change, is both natural and cultural, that is, a 'hybrid' phenomenon. The disaster or catastrophe we are experiencing in Turkey today, as of 6 February 2023, is a natural event that has and will have social, economic and political consequences. It should not be forgotten that what turns an earthquake, which is a natural event, into a disaster is the mixture of fatalism and resignation, and liberal economic policies that run parallel to the mentality that does not care about science. Moreover, purely economic-based understandings of development, as well as outdated human-centered definitions of nature, are now subject to criticism. Likewise, neo-liberal policies are now collapsing like toy towers.

Unfortunately, excessive consumption-centered views and practices that do not respect nature are very common in industrial society. For this reason, life with humans and other living things is becoming increasingly unsustainable in Turkey, as in many parts of the world. So much so that what we have experienced in the climate crisis and the recent earthquake disaster, which has been exacerbated by drought and fires felt in almost every region of Turkey, including Istanbul, the mega city of Turkey, shows us that it is quite late. On the one hand, we must now see that the losses of life and property we experience in earthquakes and climate crises are a reaction of nature. That's why we have to accept the importance of nature in the lands we live in and on our planet. As critical realist thinker Bhaskar (2013) also underlines, humans must be more careful and conscious in their dance with nature from now on. As relational sociologists, we must challenge all dualisms, such as the distinction between nature and society. In fact, being aware that human-centered paradigms have lost their validity, we should aim to propose new concepts such as 'Terrestrial' (Latour, 2017), which considers both humans and nature together.

On the other hand, today, population movements within a country from rural to urban areas or between small and large cities, as well as international migrations and forced migrations to our country due to political conflicts such as the civil war in Syria, are not uncommon. Apart from these, migrations that have attracted a lot of attention in recent years are due to climate changes. Since lawyers are inadequate regarding

climate refugees, which are not covered by the current international migration legislation, it is now necessary for us sociologists to intervene (Kasapoglu, 2022). Both climate migration and displacement when earthquakes turn into disasters must now be considered within the scope of forced migration. As a matter of fact, the population movement after 6 February 2023 is not a voluntary but a forced migration. Many experts agree on this issue and that stigma, exclusion and discrimination occur together (GAR, 2023a).

2. Research design

This section includes information about the problem of the research, its objectives in the form of questions as sub-problems, the importance and limitations of the research, and the method.

Research Problem: The main problem of this research is the otherization of animals, plants and soil, as well as 1.7 million international forced immigrants, including other nationalities, especially Syrians, who make up 12% of the indigenous population in the region, after the earthquake that turned into a disaster.

Research Objectives: Within the boundaries of this article, an attempt has been made to find answers to the following questions: a) From a relational sociological perspective, how does it emerge that soil, plants and animals, as components of the natural environment, including international immigrants under Temporary Protection, who are marginalized and ignored, are affected by the earthquake together and are rendered invisible? b) What are the uncertainties, turning points and liminal situations experienced after the earthquake in relational sociological terms? c) What are the factors and recommendations that play a role in combating marginalization as well as exclusion, blame and inequalities?

Importance and Limitations of the Research: It can be said that the importance of this study stems from the fact that it is tried to be carried out by considering both the natural and social environment as a whole with a relational sociological perspective based on Bruno Latour's (2017, 2018) "One World" understanding, as well as the careful selection and use of many visuals as well as written documents in the analyses.

Within the boundaries of this article, while reconstructing the social from a relational sociological perspective, analyzes have been made on animals and plants, mostly Syrian immigrants with temporary protection status, who have suffered great damage and are marginalized more than the local immigrants migrating all over Turkey. Because many people and organizations have written reports and expressed their opinions in order to both record the problems experienced and will be experienced with the forced migration of nearly three million local population in the 6 February 2023 earthquake and to develop effective policies. In addition, the rights and support(s) to be given to local or foreign immigrants are a "political-philosophical" issue as well as an economic one. However, it could not be discussed within the limits of this article.

In addition, even local immigrants, citizens of the Republic of Turkey, who were caught unprepared during the earthquake for various reasons, were reacted (to) by assuming that they excessively increased the general price level, especially rents. In this context, our comparative analyzes of domestic and foreign immigrants, which we

conducted without forgetting the conditions under which all immigrants affected by the earthquake were accommodated or how deprived they were of their human rights, were also excluded from the scope for future publication.

Research Method: When the literature is examined, it is understood that in previous studies, qualitative research such as narrative, life history, and biographies were given equal importance as well as quantitative surveys based on positivism (Xu and Lo, 2020). It is also very significant that disaster sociology, enriched by cultural studies, is increasingly starting to look critically at the consumption and development-based discourse of modern society. Unfortunately, Neo-liberal policies' programs aimed at economic growth attempt to marginalize such new approaches. Nowadays, cultural values and individual responsibilities are taken into consideration together in disaster resilience studies. In addition, narratives, biographies, daily life practices, and public information sources are used extensively for "emotional healing" as well as for the treatment of bodily harm. While official state approaches based on development are gradually moving away, cultural sociological studies are gaining more value (Xu and Lo, 2020). While carrying out this study, attention was paid to such sensitivities, as well as relational sociological problems and process-oriented methodological principles were taken into consideration to the maximum extent. On the other hand, only document analysis was conducted within the boundaries of this article. Visual materials widely covered in the media as well as scientific articles published after the February 2023 Kahramanmaraş-centered earthquake were used.

As it is known, document analysis is carried out with secondary data instead of first-hand data (Elias, 1977, 1978). In fact, the most important advantages of this technique include its efficiency, ease of use, low cost, and the possibility of originality and repetition (Bailey, 2008; Bowen, 2009). In terms of this study, the most important feature of this technique is that it allows comparisons (Günbayı, 2020). On the other hand, not being able to access the documents sought, especially the poor selection of key concepts, or the bias of what is accessed can be considered as disadvantages (Bailey, 2008; Elias, 1983, 1987). However, the three stages of document analysis, namely quick review, reading, understanding and interpretation, were carried out meticulously in this study, and great care was taken, especially when choosing visuals for the reasonable length of the article.

3. Findings and discussion

Since the questions intended to be answered in the research are intertwined, human and non-human (natural environment) factors are considered as a whole, while at the same time, the uncertainties experienced by immigrants under Temporary Protection, who are the focus of the research, are also tried to be revealed.

3.1. Disaster victim animals

The February 2023 Kahramanmaraş earthquakes, with magnitudes of 7.8 and 7.5, affected nearly 14 million people living in a wide geography in 11 provinces (Sağıroğlu et al., 2023). First of all, when we consider animals and disasters based on Latour's one-world approach, we see that they have some important features. For example, in extraordinary situations, it is a very important privilege for them to detect

the first earthquake waves, called ‘P’, at least 12 hours before humans. As a matter of fact, in Turkey, the relationship between animals and earthquakes has been given importance in the media due to receiving or giving information in advance. Some news, based on previous research conducted around the World (Matere et al.,2019) was published in various newspapers.

Based on this information, it can be said that some behavioral changes were observed in animals before the earthquake. According to veterinarians who have studied these issues (Lee, 1976), cats are hiding; hens do not perch high and lay eggs or peck at each other; dogs barking and constantly watching the owner; fish jumping out of the water, washing ashore en masse; convulsions in mice; mussels sticking to high places; biting each other’s tails in pigs; vertical jumps, contraction and alertness in rats; In winter, snakes wake up from sleep and emerge above the ground, and honey bees abandon their hives (Karadeniz, 2007).

It is known that the reactions of animals in extraordinary situations such as earthquakes occur as a result of the electrical changes that occur before the earthquake, creating a transformation in the nerves in the animals’ brains. In fact, while some brave animals such as lions stay back, it is observed that some docile animals become more aggressive (Karadeniz, 2007; Tributsch, 1978, 1982).

Although we do not have a consensus among all scientists about animals foretelling earthquakes, the important thing is that they too are victims of earthquakes, lose their lives, become disabled or homeless. For this reason, animals affected by earthquakes, just like humans, (must first) need to be rescued, treated, and subjected to mental and physical rehabilitation during earthquakes. In addition, it is known that on 6 February 2023, in rural areas, small cattle such as sheep and goats and cattle such as cows and oxen could not be rescued because they were locked in their barns. It was observed that birds in the sky took off in flocks during the earthquake, drawing the letter ‘V’, as well as cats and dogs rescued from strays in the cities, and the pictures were reflected in the media. Immediately after the earthquake, flocks of sheep raised in the surrounding sheepfolds began to run through the city streets hungry, thirsty, and even in fear and panic. (See **Figure 1**). As a matter of fact, it was possible to observe the same panic in birds. (See **Figure 2**).



Figure 1. Sheep after the earthquake.

The picture of a dog waiting for its owner to be rescued showed us that animals, as well as people, are affected by earthquakes (See **Figure 3**). Similarly, the teary-eyed woman feeding her cow with a broken leg as if it were her child showed the

solidarity of the inseparable parts of nature in the disaster victim. (See **Figure 4**).



Figure 2. Birds affected by the disaster.



Figure 3. After the disaster, humans and animals' hand in hand.



Figure 4. Woman feeding her affected cow.

In the first days after the disaster, it was possible to see the exemplary solidarity of people and animals everywhere. In fact, the rescue teams were trying to revive the dog by giving life water to the dog, whose head was stuck outside among the rubble. (See **Figure 5**).



Figure 5. Helping a small dog waiting to be rescued.

In fact, since the earthquake turned into a disaster, the damage was great not only in cities but also in villages. When the flimsy village houses were demolished, both people and sheep, who tried to shelter in the tents, became victims of the disaster, along with their lambs (See **Figure 6**).



Figure 6. Mother trying to take care of her lamb.

3.2. Disaster victim plants and soil

It is possible to observe the damages occurring in the natural environment in gardens and fields, and therefore on trees and plants. For example, apricot trees in Malatya and olive trees in Hatay were shaken from their roots in the lands separated as a result of the ground shifting. Likewise, the fields where plants grow, which are the source of a wide variety of agricultural products in Turkey's nutrition, have been greatly damaged. Human-sized gaps have appeared in the fields.

Especially in Hatay's Altınözü district, large collapses have emerged. The earthquake changed the properties of the soil in the village called Tepehan. So much so that the land that was previously an olive grove has now turned into a canyon. (See **Figures 7 and 8**). On the other hand, the waters that were deep blue and clean enough to drink in the past turned into swamps and were deeply affected by the disaster (See **Figure 9**).



Figure 7. A large olive grove that splits and cannot join together.



Figure 8. The olive groves were shattered along with the soil.



Figure 9. Shining clean waters and living plants turned into a sea of mud.

The cracks that formed in Hatay and the surrounding lands during the disaster were so large and deep that they exceeded human height. Those who visited the area were astonished and tried to document the rifts (see **Figure 10**).



Figure 10. Victims are astonished: The collapses in the soil caused splits the size of a human.

According to the Food Agriculture Organization (FAO) reports, the February 6 Earthquakes affected 15.73 million disaster victims and one fifth (20%) of food production in 11 provinces that are mostly engaged in agriculture. Apart from the urban settlements affected by the earthquake, great losses also occurred in rural areas. So much so that the earthquake caused 1.3 billion dollars of agricultural damage. In fact, it was reported by FAO that the damage in the agricultural sector exceeded 5.1 billion dollars. Unfortunately, considering that the region called the fertile moon/crescent covers 15 percent of Turkey's Gross Domestic Product and one fifth of agricultural exports, the losses are huge. Watermelons, which were produced very efficiently in the region, disappeared from the fields. The few that remained were doomed to rot and disappear because they were cut off from their roots. (See **Figure 11**).



Figure 11. Vegetation has changed.

Although the sunflowers produced in the region tried to survive, they soon disappeared while the ruins were cleared. Trees that had been uprooted by the earthquake and stretched along the road were also waiting to be removed. (See **Figure 12**).



Figure 12. Sunflower and fruit trees affected by the earthquake.

Another reality is that FAO's call for international aid to cover major disaster losses was not met, and aid remained at only 1.5 million dollars against a need of 112 million dollars. The urgent need of farmers for seeds and fertilizers has still not been met. However, more than 30% of those living in the earthquake zone make their living through agricultural production.

3.3. Immigrants who are victims of disaster

One of the most important dimensions of the research is the international immigrants, most of whom are Syrians, who are under Temporary Protection living in the region and are mostly employed in agriculture. Many research reports have revealed that their victimization is quite high (GARb, 2023; Sağiroğlu et al., 2023).

Syrian immigrants came to the border region where the earthquake occurred, as forced immigrants, with only a few personal belongings stuffed into nylon sacks. After the disaster on 6 February 2023, they returned to Syria as a victim of a second forced migration, with only a small amount of belongings that could fit into nylon sacks and even their entire savings destroyed (See **Figure 13**).



Figure 13. Second forced migration for Syrians.

These immigrants in the region were placed in a more disadvantaged situation during the earthquake, as they tried to shelter in places such as basements or warehouses, which were mostly abandoned by their local owners and were mostly ruined on the lower floors before the earthquake. Especially among those trying to survive in urban areas, their efforts to take temporary shelter in unhealthy houses due to high rents increased the loss of life in the earthquake. As a matter of fact, international literature also supports our findings. Immigrants and the poor are the groups that lose their lives the most in the world (Wallemac and House, 2018).

It has also been demonstrated by Sağiroğlu and his team (2023) that international immigrants have various options. Undoubtedly, going back is an option, even if it is unlikely. As a matter of fact, there was a huge crowd at the Cilvegözü Border Gate. However, those who returned were limited to 60,000 (cited in Duruel, 2023). On the return trip, they had so little belongings that they could barely fit into a stroller (see **Figure 14**).



Figure 14. Even a baby stroller is important when carrying.

Unfortunately, it was possible to talk about many cases in which Syrian immigrants were unfairly accused and beaten. Omer, who was looking for food for his children, was one of them (see **Figure 15**).



Figure 15. Although it is claimed that it is not very common, it is proof that immigrants are subjected to violence.

As stated by Green (2006), untrue rumors spread rapidly and disaster victims, especially immigrants and the poor, are most negatively affected by these situations. Unfortunately, as search and rescue activities were not carried out in time, immigrants, like many local populations, were buried without their identities being determined. The sad thing was that they did not have their IDs when coming to Turkey and when passing away. (See **Figure 16**).



Figure 16. Funeral ceremony for three Syrians in Hatay.

The first discrimination that international immigrants experience after the earthquake is that they are outside the coverage area of emergency response teams and cannot benefit from rescue and emergency interventions in a timely manner. The truth of the matter is that due to organizational disorders throughout the region, housing and nutrition aid could not be provided to the resident population on time. The state was late, non-governmental organizations (NGOs) and local governments from other provinces started to heal the wounds. Under these conditions, international migrants could not be provided with accommodation in tent cities, and hot meals, food and even clothing aid could not be provided due to fear of the reactions of the residents (GARa and GAR b, 2023).

Syrian immigrants, mostly young people, had to return to Syria at risk because they could not provide the necessary shelter and food after the earthquake. (See **Figure 17**). Unfortunately, leaving and staying had the same negative effects for them.



Figure 17. Cilvegözü Border Gate: It is difficult to go or stay.

The situation of immigrants as “Caught Between Two Fires” has been frequently written about in the media. It is a common belief that the number of immigrants under Temporary Protection, who are especially targeted by opposition parties, is much higher than what the official authorities say, and even exceeds 10 million, including Asians such as Afghans and other immigrants from Africa. Their exclusion, humiliation and discrimination became much more severe under earthquake disaster conditions. Moreover, this population that came with forced migration continues to suffer injustice as the subject of a second forced migration. Unfortunately, there were many immigrants who were accused of plunder and beaten (See **Figures 18 and 19**).



Figure 18. The journey has begun again: Waiting for help is even more painful.



Figure 19. Both physical and emotional rupture together.

It is observed that international immigrants first migrated intensively to the nearest provinces, Mersin and Adana, and received great reactions as they reached rates that would affect the distribution of the local population, putting a strain on health, education and housing opportunities. However, within a year, with the intense work and determination of local governments and non-governmental organizations, it can be said that the path to normalization has begun.

The other third option, going to a third country other than Turkey, cannot be said to yield much results. European countries, where immigrants especially want to go, provide support for immigrants to stay in Turkey. It should not be expected that they would accept earthquake victims under these conditions.

Uncertainties are experienced very often: To go or to stay? (GARb, 2023). It is one of the most frequently asked questions. Immediately after the earthquake, intense population movements began out of the region, and all local and foreign earthquake victims began to migrate to Istanbul and Ankara, albeit further away, as well as to neighboring cities such as Mersin and Adana, which were less affected by the earthquake.

When International Migrants tried to immigrate in this context, they witnessed that they were restricted from leaving the city they were in, first for 90 and then for 60 days, within the framework of the residence permits given to them. In addition, attempts by Syrian immigrants to take shelter with their relatives and compatriots in Istanbul, where international immigrants live most densely, were also prevented. In other words, not only the time limit but also the imposition of city change restrictions have become concrete evidence that discrimination is gradually increasing. Many immigrants left Istanbul immediately due to high rents and high cost of living. According to the Migration Research Association, migration to Istanbul was fragile and short (GARc, 2023).

To open a parenthesis here, the statement made to the public by 51 NGOs and political parties in Turkey as a reaction to the public administration that marginalizes these immigrants and makes decisions that are nothing but discrimination is really important. In summary, in this declaration, while demanding the removal of both the 60-day and city restrictions, the Directorate of Migration Management is asked to give up its policies aimed at diluting the immigrant population. In short, it is said that the Dilution Project, which is based on racism and hate speech, should be removed immediately. Although reactions like this had significant effects, immigrants had to

return to the earthquake zone for real reasons such as working in agriculture.

Considering our research topic, we can say that the third type of uncertainty, that is, ‘contingency’, has increased, since uncertainties arise mostly at unexpected times, such as earthquakes, and as a result of an external influence on the system, even though they always potentially exist. In fact, it would not be wrong to say that ‘ambiguity’, that is, uncertainties in social relations, has also deepened. Because not only foreigners but also the local population began to leave the region rapidly and became immigrants. They are also held responsible for the increase in the general level of prices, especially the increase in rents, or for the suffering of students when the dormitories are vacated and immigrants are settled. Even though a year has passed, it is clear that the housing problem has not been solved for both the residents and the international immigrant population. On the other hand, the most important example of uncertainty in values is the support of the government as the only solution despite all the disruptions. It can be said that discourses of providence and nature are effective by suppressing rational behavior.

As Harrison White (1992) emphasizes, identities, that is, immigrants, are tired in their struggle to avoid uncertainties. When they consider whether to go or stay, their conditions are really negative. Because they fled their country due to war and they have life safety problems. In addition, while they have been struggling to hold on since 2011, by 2023 they now have children born and educated in Turkey and a routine in which they can make ends meet. Moreover, they do not have a home waiting for them when they return to their country, and their relatives have been scattered to many parts of the world. On the other hand, even though they are among the poorest in Turkey, Syria’s economic situation is very bad, and their share of welfare will be very low, even less than one fifth of Turkey’s. In addition, it can be said that the higher social status of women in Turkey causes immigrants, most of whom are women and children, to choose to stay.

Although some progress has been made in adaptation under normal conditions, as the earthquake disaster had devastating effects on a wide geography, even the local population was able to reach the scarce resources very late and with difficulty, and they, as foreigners, began to be blamed more.

They were unfairly blamed for unemployment, unidentified theft, and even rising prices. When they rebelled against these conditions, they began to experience “Emotional Breaks”, as Danişoğlu stated, from the living spaces in which they had previously tried to be satisfied (GARc, 2023). At this time, they gathered at the border gates and were caught between two fires. Therefore, the earthquake that turned into a disaster was truly a turning point. In this context, when the question of whether to leave or stay is made frequently, it can be said that most of the immigrants, whether local or foreign, remain in a liminal state.

The most important aspects of being on the threshold or in limbo have emerged with the increase in the number of return migration events. According to the literature, the longer the time passes, the more difficult it becomes to return (Kasapoglu and Ecevit, 2001). We can say that the socio-economic structure of the region, which feeds Turkey and employs the largest number of immigrants, as well as its agriculture-based economy, accelerates the return to the lands of those working in agriculture rather than the urban population.

4. Conclusion

Since orientation towards culture is actually insufficient, it seems more appropriate to act from the One World approach, as stated by Bruno Latour (2017, 2018), who rejects the distinction between nature and culture. This actually requires investigating uncertainty, turning points and liminal situations and identities. Another overlooked point when examining the effects of earthquakes on animals, plants and soil is the distinction between earthquake victims. However, we must not forget for a moment that people who are marginalized and ignored as elderly, children, women, disabled or immigrants are also victims of the disaster.

As a result, the earthquake disaster is a “turning point” in relational sociology. The earthquake directly affected a population of more than 16 million, including immigrants, in 11 provinces. Although the effects of the earthquake brought with it many “uncertainties”, in White’s (1992) terminology, it can be said that those with “ambage” and “contingency” emerged the most. In this context, “liminal” situations were also observed frequently. Disaster victims have both natural and social strengths and weaknesses. They deserve support to look to the future with hope in their post-earthquake lives. It is expected that studies of this type will increase in order to provide this support from a “relational perspective” that does not distinguish between natural and social sciences.

On the other hand, without denying what we experience with populist views, we need to remember that our planet belongs to all living things, that is, to all of us. Because nature and society are not separate but a single system. From this point of view, we must always look at relations and be against dichotomies of right-left, global-local, structure-culture. In a non-essentialist way, we should try to look at it ‘pulveristically’, that is, polyphonic or multi-centered, that is, more democratic, instead of ‘universal’.

Policy Suggestions: In future research, as stated by experts at the Colorado Disaster Research Center (Peek et al., 2020), in order to further democratize access to information, disaster and environmental sociologists should work without ignoring gender inequalities as well as poverty, race and ethnicity. Additionally, it is expected that priority will be given to vulnerable groups such as children and the disabled, as well as the elderly. It is inevitable for these studies to work together with other disciplines, always bearing ethical concerns, in a way that is more fair and aims to combat inequalities, by articulating with public sociology as suggested by Michael Burawoy (2005, 2021), and to conduct disaster sociology studies not only for science’s sake but also for the public. In addition, as well as the negative aspects, it would be appropriate to study groups such as women and immigrants, who have become stronger by successfully performing some functions during the disaster, together with the plant, animal and soil components of nature. As Bruno Latour (2017, 2018) insistently underlines, One World belongs to all of us. Not only humans, but also plants, animals and soil are traumatized and need both time and support to heal. Uncertainties, vulnerabilities, differences, turning points and liminal positions await consideration in a non-essentialist manner. We need process-based reviews more than ever. Therefore, we can say that relational sociology should be brought to the fore a little more these days.

In fact, as Aslan (2023) stated, monitoring the disaster-affected population, which is constantly on the move, with artificial intelligence applications such as “migration-meter”, should be considered as an important step in solving the problems they experience, and projects should be developed using relational sociology.

Conflict of interest: The author declares no conflict of interest.

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