INVOLVEMENT OF LOCAL ASSOCIATIONS AS ASYMMETRIC FUNCTIONAL EQUIVALENTS TO CENTRALIZED DISASTER MANAGEMENT AGENCY IN DÜZCE: A LUHMANNIAN PERSPECTIVE

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ABSTRACT

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A LUHMANNIAN PERSPECTIVE

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In this study, I focused on the operationally closed character of social systems, especially of organizations, in the face of earthquakes. Like all social systems, organizations reduce the complexity of the environment outside their organizational boundaries, and develop their own blind spots as they narrow their horizons down to organizationally relevant communications only. AFAD (Turkish Republic Prime Ministry Disaster & Emergency Management Presidency) as an organization is a strategic part of proactive disaster management plans and policies, which are functional responses to the problem of earthquakes by the political function system. Starting from Luhmann's concept of "functional equivalents", I tried to approach the local associations and their role in disaster management from a Luhmannian perspective. I studied a purposive snowball sample of local associations in Düzce (Turkey) through semi-structured field interviews about their organizational activities after the August 17th and November 12th 1999 earthquakes. These local associations organized activities for restoring the routine social functioning after the 1999 earthquakes independent from official, specialized disaster management organizations; but they are mostly not recognized by AFAD as relevant organizational partners in disaster planning today. Although AFAD now plans for

future cooperation with various relevant ministries and local parties in its strategic and tactical documents, these efforts of central steering are empirically suffering from blind spots against the history of self-organizing local context. In my research, I found that there is a lack of overlap between organizational efforts of central steering (through established disaster management organizations) and the self-organizing local associations as a result of their reciprocal operational closure and multiple systemic blindnesses. I introduce the term "asymmetrical functional equivalents" to describe this situation in Luhmannian terminology and create an awareness of it in disaster management practices.

Keywords: Luhmann, operational closure, asymmetric functional equivalents, disaster management, Turkey - Düzce

ÖZ

DÜZCE'DEKİ YEREL DERNEKLERİN
MERKEZİ AFET YÖNETİMİ PLANLARINA
ASİMETRİK İŞLEVSEL DENKLER OLARAK KATILIMI:
LUHMANN'CI BİR BAKIŞ AÇISI

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Bu çalışmada depremler karşısında toplumsal sistemlerin, özellikle örgütlerin, işleyişsel kapalılık özelliği üzerinde durdum. Tüm toplumsal sistemler gibi örgütler de kendi örgütsel sınırları dışındaki çevrenin karmaşıklığını indirgerler, ve kendi ufuklarını örgütsel iletişimle sınırlarken kendi kör noktalarını üretirler. AFAD (T.C. Başbakanlık Afet ve Acil Durum Yönetimi Başkanlığı) bir örgüt olarak ileriye yönelik/önetkin afet yönetimi planlarının ve politikalarının stratejik önemdeki bir parçasıdır ki, bu plan ve politikalar siyasal işlev sisteminin deprem sorununa verdiği işlevsel tepkilerdir. Luhmann'ın "işlevsel denklik" kavramında yola çıkarak yerel derneklere ve afet yönetimindeki rollerine Luhmann'cı bir bakış açısıyla yaklaşmayı denedim. Düzce şehir merkezindeki (Türkiye) yerel dernekleri, 17 Ağustos ve 12 Kasım 1999 depremleri sonrasındaki örgütsel etkinlikleri açısından amaçlı kartopu örneklem yoluyla seçip yarı-yapılandırılmış mülakatlar yaparak inceledim. İncelediğim dernekler, 1999 depremlerinden sonra rutin toplumsal işleyişi yeniden çalışır hale getirmek amacıyla uzmanlaşmış afet yönetimi örgütlerinden bağımsız olarak depremle ilgili etkinlik düzenlemiş, ancak günümüzde AFAD tarafından afet planlamasında örgütsel paydaş olarak çoğunlukla tanınmayan yerel dernekler idi. Her ne kadar şu anda AFAD çeşitli bakanlıklar ve yerel paydaşlarla gelecekteki

işbirliğini kapsayan stratejik ve taktik planlar yapıyor olsa da, toplumu merkezi olarak yönlendirmeyi amaçlayan bu çabaların kör noktalar nedeniyle yerel bağlamdaki kendini örgütleme geçmişi ile tam örtüşmediği gözlenmektedir. Yaptığım araştırmada, (uzmanlaşmış afet yönetimi örgütleri yoluyla uygulanmaya çalışılan) merkezi yönlendirme ile kendi kendini örgütleyen yerel dernekler arasında karşılıklı işlevsel kapalılık ve çoklu sistemik körlükler nedeniyle örtüşme olmadığını buldum. Bu durumu Luhmann'cı terminolojiyle tanımlamak ve bu durum hakkında afet yönetimi uygulamalarında bir farkındalık yaratabilmek amacıyla "asimetrik işlevsel denklik" terimini önerdim.

Anahtar kelimeler: Luhmann, işleyişsel kapalılık, asimetrik işlevsel denk, afet yönetimi, Türkiye - Düzce

Dedicated to,

the memories of people lost in August 17th and November 12th 1999 earthquakes…

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SST	–	Social Systems Theory
AFAD	–	T.C. Başbakanlık Afet ve Acil Durum Yönetimi Başkanlığı / Turkish Republic Prime Ministry Disaster & Emergency Management Presidency
TAMP	–	Türkiye Afet Müdahale Planı / Disaster Response Plan for Turkey
JICA	–	Japan International Cooperation Agency
MEB	–	Milli Eğitim Bakanlığı / Ministry of Education
DepDer	–	Depremzeder Derneği / Association of Earthquake Victims
KEDV	–	Kadın Emeğini Değerlendirme Vakfı / Foundation for Supporting Women's Labour

CHAPTER 1
INTRODUCTION

Abandon every hope, you who enter.
(Alighieri, 1996, 55)

Society emerges on the basis of contingent differences drawn by emerging systems. The *economy becomes the economy by operating economically in a noneconomic environment*. It starts creating an economic world by treating things and communications in its environment (the fruits on the tree, their consumption, their exchange, for instance) economically. It distinguishes itself from other communications and things outside communication and thus establishes itself within society. It becomes another difference within differences already made. *None of these differences "have to be" made, but once they are made, they make a difference*. There is *no principal need* for establishing a social system of economy, education, or politics. The existence of society is not by its "nature" dependent on these systems.
(Moeller, 2006, 41) [Italics mine]

One of the most important conceptual changes Niklas Luhmann suggested in his works on risk concerns the term that is supposed to mark the opposite of risk. Commonly, one regards safety as this opposite. But observing the distinction between risk and safety – that is, seeing it *as a distinction* without ontological qualities – leads to the conclusion that safety never occurs, that it is only a goal worked toward but never reached.
(Japp & Kusche, 2008, 87)

a – Why study disasters and why with Luhmann's Social Systems Theory?

It has been 14 years since that big tremor woke me up at 03:02 am, on August 17th 1999. It was the moment when I got closest to insanity in my life, not being able to tell what was real and what was surreal it pitch black, as I couldn't hear my own scream in the rumble of shaking concrete columns and shattering glass. All of my senses were overcome by this unidentifiable and sudden incident in the middle of the night; all I could feel was utter, absolute fear.

In the coming days, I was going to learn that I had experienced a magnitude 7.4 earthquake and I was going to see that the city of Adapazarı, my hometown, had collapsed almost totally. We lived in tents with my family, just like the rest of the whole city, for months. The smell of dust mixed with rotting bodies of people under the debris in the heat of august lingered over my hometown for months as well. Some of the people under debris were my friends. I still remember the strange feeling I had for a while after the earthquake; indifference mixed with lightness. Nothing mattered…nothing…really…mattered.

Some people said that the death toll was around 17.000 people; but what I saw made me think it was more than that. Some people said that more than 40.000 people died…40.000 human beings…Just like me, and you. It was strange; because I felt like the force behind all those poorly constructed houses was now also manipulating the number of casualties. It was like a giant machine at work, totally indifferent of human beings. It was manipulating things at its convenience. It was bigger than me, you, or anybody; yet almost felt like it was made out of thin air, and little could one ever do to change the way it worked. This personal experience changed a lot both in my personal and academic life.

During the course of writing this thesis, among all the theories I considered in an effort to understand this "force" or indifferent and uncontrollable machine, it was Niklas Luhmann's Social Systems Theory that convinced me the most about why and how the modern society operates outside of a humanistic paradigm, contrary to the discourse on human rights and individual rights. At the very core, lied the

operational closure of differentiated (specialized) function systems of the modern society. As Lee explained, "different societal systems are constructed to carry on conversations about different subjects" (2000, 324). Each one of these functionally differentiated systems operated according to their own evolved codes without direct access to one another's internal operations. They could only *irritate* and *resonate* with each other. I will be elaborating on this later.

Years after the 1999 earthquake, at the beginning of my thesis studies in sociology, I read the article "Modernization Without the Cost" (Bedelsiz Modernleşme, 1999; **Appendix – I**, page 215) written by İhsan Bilgin. I realized that the processes he explained in his article were partly reminiscent of the giant machine I felt like existed and manipulated things about the earthquake.

My ideas started to form in the direction that I had to study disasters sociologically, in order to have a better understanding of this giant machine. At first, I went through Beck's Risk Society (1992) and World Risk Society (1999), trying to bring his theoretical stance into terms with the case of earthquakes in Turkey. His concern seemed more towards the risks discussed in the context of developed countries, such as the nuclear, genetic and chemical accidents as disasters (1999, 50), or the more subtle daily risks such as the use of genetically modified organisms, flexible employment patterns, and the dissolution of traditional networks and the vulnerabilities emerging as a result of an individualized life style. Day by day, all of these issues were becoming more and more relevant for the Turkish context. Some concerns of Beck were quite in parallel with Luhmann's, like the dissolution of traditional networks. Beck's dissolution of traditional networks of support resembled the decomposition of older types of social differentiation, as new types of differentiation emerged and became dominant. Beck's concept of *reflexive modernization* enabled him to discuss the dilemmas and paradoxes of the modernization process, through the lens of risks created by modernization itself. The social debate oriented towards these risks created by modernity, in a sense led to a discussion of the modernity from within, in a reflexive manner, and all these discussions resulted in a need for modernity attempting to modernize itself reflexively. This reflexive situation of modernity was also very similar to Luhmann's ideas about the adaptation of the society to itself (Lee, 2000, 327).

However, I should make a caveat about Beck's conceptualization of the natural hazards, the risks, and disasters resulting from these. Beck chose to focus exclusively on the risks, which he assumed to have been produced by the modernization process itself. While doing this, he took natural hazards as a default set that already existed before modernization, and therefore considered them rather irrelevant for his theoretical discussions. Although it was important to acknowledge the strategical role of risks in modern society, locating the source of these risks theoretically in a universal sense mattered more for me. The context for which Beck developed his theoretical explanations was different from that of Turkey, not just in social sense but also in physical sense; Germany being much less prone to major earthquakes. I had the impression that Beck's theory bore the marks of this characteristic of the European social and physical context. Later when I had the chance to meet and elaborate on Luhmann's work, I realized that despite the fact that he also developed his theory from within the European social context, his level of abstraction convincingly surpassed Beck's. In other words, I can say that while Beck's theory was more restricted in terms of its specific content, Luhmann's theory "has structural form without specific content…[and] provides explanatory concepts that are abstract enough to be applied to all social systems. The distinctions of Social Systems Theory can be universal because they are without universal content" (Lee, 2000, 330). The way Luhmann conceptualized natural disasters was one of the convincing indicators of this quality in his perspective. For him "even if it is only a question of *danger* in the sense of natural disaster, the omission of prevention becomes a *risk*" (1993, 31). Luhmann was not theoretically overlooking the phenomenon of a natural incident taking place and causing damage in a human society; for him the matter was how the multiple meanings of this incident were processed through domains of communication in a functionally differentiated modern society. The communication logics of differentiated social systems reciprocally ignored and sometimes conflicted each other, manipulating the relative concepts of danger and risk to create complex, unforeseeable effects. For me, Luhmann's theoretical perspective could help discovering the territory of natural disasters, which was conceptually evacuated as pre-modern or obsolete by Beck, in a sense.

The points Beck discussed in his conceptualization of risk would certainly be of interest for sociological research. However, Social Systems Theory appeared to be more likely to move the discussion to a higher, transcending level of theory. Beck made certain *distinctions* in his conceptualization of risks, but his theory did not problematize its own distinctions reflexively the way Luhmann's did. The very issue of distinctions about sociological research could provide a small door into the land of a more inclusive theoretical approach. The concept of *risk* itself, and the source of this concept within social distinctions should be dissected with a systemic theoretical attitude. I felt like Luhmann's Social Systems Theory included, but was not limited to technological hazards and risks. As a result of the formation I received during my sociological education, I was inclined to seek a theory that could be abstracted to problematize all human kind's struggle to adapt for survival.

However, Luhmann was about to teach me that, the adaptation of the society to its own distinctions was more interesting to investigate than its adaptation to its physical environment. This was especially relevant for the intriguing case of natural disasters. Apart from the very dramatic moment of the actual incident and the emergency response period, which could be interpreted as a rather direct interaction between nature and society, it was the routine functioning of the society that set the stage long before this dramatic incident. The hazard incident would take place, randomly puncturing through boundaries of the social systems, collapsing the existing reductions, violating their need of constant reproduction through communications, and thereby dramatically denying them chance of resonating together. After this puncture, the social systems would do what they did best as they recovered; they followed their own contingent distinctions, selections, and mechanisms to restore and change themselves in an *autopoietic* (*operationally closed*) manner, rather than laws of nature. Luhmann made the point about the importance of difference between origination and maintenance in an evolutionary theory of society:

> Society is the outcome of evolution. […] no other theory today is in a position to explain how the structures of the social system develop and reproduce. […] Our inquiry will be guided by the *paradox of the probability*

> *of the improbable*. For statisticians, this is a triviality (or a false application of statistical concepts). After all, every totality of characteristics, for instance, the particularity of a given person, is, if we consider the conditions for these characteristics to come together, extremely improbable: the result of a chance meeting. However, this holds in every case and is therefore quite normal. Statistics can and must ignore this problem. For evolution theory, however, the resolution of this paradox is the point of departure. The improbability of isolated individuals or isolated families surviving is transformed into the (lesser) improbability of their structural coordination, *which is when sociocultural evolution begins*. Evolution theory shifts the problem to time and attempts to explain how it is possible that ever more demanding and ever more improbable structures develop and function as normal. The basic proposition is that evolution transforms low probability of origination into high probability of maintenance.
> (Luhmann, 2012, Vol. I, 251-252)

During a class in Urban Theories and Social Policy in 2004, I remember reading an article by Richard G. Smith (2003). The article was discussing the concepts of time and space with respect to global world cities, arguing against superficial, linear, and geometric conceptualization of space and against such divisions. He was defending the position that space was a topological, manifold concept transcending all boundaries and borders imposed on it superficially. To clarify his point in opposing absolute, normative divisions and boundaries based on laws of nature, Smith cited Stephen Jay Gould (1991). Gould was making the same point through a case of single egg Siamese twins from Sardinia back in 1829, and how absolute, normative, fixed classifications failed to conceptualize this phenomenon:

> Their categories were wrong or limited. *The boundaries between oneness and twoness are human impositions, not nature's taxonomy*. Ritta-Christina, formed from a single egg that failed to divide completely in twinning, born with two heads and two brains but only one lower half, was in part one, and

> in part two – not a blend, not one-and-a-half, but an object embodying the essential definitions of both oneness and twoness, *depending upon the question asked or the perspective assumed*.
> (Gould, 1991, 200; cited in Smith, 2003, 570) [Italics mine]

Smith cited Foucault as well in his arguments in questioning boundaries and categories; "…a limit could not exist if it were absolutely uncrossable" (Smith, 2003, 571; Foucault, 1977, 34). The basic notion that there were no boundaries in nature, but we humans drew the boundaries has been very influential on my thinking and got stuck in my mind. I thought that boundaries, or more generally, *distinctions* were the content of Pandora's Box for theoretical constructs. Luhmann's treatment of the concept of *distinction*, including his own theoretical constructions in the academic domain, was very fundamental in this sense. In my opinion, his theoretical awareness of the importance of distinctions provided a very potent reflexivity for his theory. In other words, Luhmann's Social Systems Theory was very well aware that every distinction led to construction of a different *environment*, but at the same time it was structurally blinded towards the rest of its background. As a result of contingent character of distinctions, and selections based on them, no set of distinctions or resulting selections can be essentially better, or can escape from having a structural blind spot, including Luhmann's own theory. Social Systems Theory's advantage paradoxically lied in the very acceptance of this contingent situation as a distinctive part of its formation. With this reason, Luhmann referred to Social Systems Theory as a supertheory with claims to universality, including both itself and its opponents (1995, 4). Moeller had a dedicated chapter, pointing at how Luhmann transcended the popular academic claim of constructing a meta-narrative, by constructing a supertheory instead:

> His theory was to be nothing less than a "supertheory," a theory that would be of universal relevance. […] There was no privileged point from which a metanarrative could claim to be truly "meta-," to be truly beyond. […] What does the replacement of "metanarrative" with "supertheory" mean? […] Like a metanarrative, a supertheory also claims to be able to deal with practically

> everything. […] Unlike a metanarrative, however, a supertheory is built around an ironic or self-ironic core. […] A supertheory reflects on the fact that it and its validity are its own product – and is therefore absolutely *contingent*.
> (Moeller, 2006, 200)

The literal parallelism between the importance of *contingency* for Social Systems Theory is an important connection between Luhmann's theory and sociology of disasters and contingencies. The word contingent itself means:

> 1 **:** likely but not certain to happen **:** possible
> 2 **:** not logically necessary; *especially* **:** empirical
> 3 *a* **:** happening by chance or unforeseen causes
> *b* **:** subject to chance or unseen effects **:** unpredictable
> *c* **:** intended for use in circumstances not completely foreseen
> 4 **:** dependent on or conditioned by something else
> 5 **:** not necessitated **:** determined by free choice
> (WEB-5, Merriam-Webster, "contingent", 2013)

According to this definition, the very situation of earthquake emergency, on which I focus for my case study in this thesis, points to a state of being otherwise, other than expected or so far established, at an unexpected time. Luhmann uses the term contingency to mark the possibility that all distinctions (including the set of distinctions through which the society as a system emerges) and the resulting selections can be made otherwise, and that order is an emergent phenomenon. In other words, what makes a situation an emergency is its ironic revelation that all selections that make society possible can be different than they currently are. The *system* fundamentally consists of a distinction between system and the environment; and there are countless other ways that this distinction could have been made in another functioning way. The very emergence of the social order is actually based on *double contingency*; that is orienting one's own uncertain behavior to the uncertainty in the other's:

> At first glance, it may seem surprising that the doubling of improbability (related to specific behavioral choice) leads to probability. This does not concern a simply linear problem of increase or decrease. If, in addition to one's own behavioral uncertainty, another's behavioral selection is also uncertain and depends on one's own behavior, the possibility arises of orienting oneself to that and determining one's own behavior in regard to it. Thus it is the emergence of a social system, which is made possible by a doubling of improbability and which then facilitates the determination of its own behavior.
> (Luhmann, 1995, 117)

Luhmann uses the term *functional equivalents* to account for outcomes of this contingent situation, that there can be countless other ways for social order to emerge. In an infinite universe, full of infinite number of possible distinctions, selections and their combinations, the probability of any one specific version to play out is extremely low; therefore any social order we observe and experience is *improbable*, but not impossible, for Luhmann.

This evolutionary stance removes moralizing judgments from sociological theorization, since there is no privileged ethical position from which we can look and judge any other distinctions as ultimately better or worse, safer or more dangerous; they are just different. This was one of the fundamental points of debate between Luhmann and the critical thinkers such as Habermas. Whereas Habermas attributed certain scenarios of social change the quality of being good and the others bad, Luhmann argued that the judgments of good or bad does not make a difference for the society as a system. In other words, while Habermas looked for progress and liberation in society through the correct policies and discussion, Luhmann acknowledged the anthropo-centric quality of these "wishes", and reminded that the operation of the social systems had long been decoupled from what human individuals wish or plan to do about it. The evolution itself is not a teleological process, aiming to reach a true, correct, or better future state; but it is just a process of cumulative adaptive change from moment to moment. At this point, to prevent

any misunderstandings, I should refer to Moeller, for his caveat about Luhman's treatment of evolution as opposed to social Darwinism:

> Luhmann is *not* a social Darwinist in this sense. Social evolution for him, like biological evolution for post-Darwinist biologists, is not to be automatically equated with social progress. Functional differentiation is an effect of social evolution, but is not in any general way "better" than stratified or segmentary differentiation. Evolution is not teleological. Its partial blindness does not allow it to take aim. Furthermore, the lack of a central force or a socially progressive element (such as, for Marx, the proletariat, with the Communist Party as its avant-garde) makes it impossible to anticipate any specific course that history may take.
> (Moeller, 2012, 74)

Every distinction includes only *some* elements, and excludes *all* others. The issue of disasters as contingent/emergent situations by definition has a lot to do with distinctions, selections, and resulting decisions being made in a certain manner, leading to recognition of only some factors at the expense of all other factors; therefore always structurally producing different and complex sets of *risks* and *dangers*, some of which result in disaster. There are always more factors excluded (i.e. not recognized), than included.

According to Japp & Kusche, *risk* is basically an attribution of the possible damage to the consequences of a decision made by a system itself, while *danger* is attributed to events outside of the system (2008, 88). Luhmann points at the fundamental connection between a theory of modern society and the topic of risk:

> […] sociology […] cannot observe society from without, it operates from within society; and of all observers, *it should be the first to realize the fact.* It may all very well adopt the topics of the moment, may support protest movements, may describe the dangerous nature of modern technology or warn against irreparable environmental damage. But others do the same. What ought to go beyond this is a theory of the selectivity of all societal

> operations, including the observation of these operations; indeed, even including the structures determining these operations. For sociology, the topic of risk ought thus to be subsumed under a theory of modern society, and should be shaped by the conceptual apparatus thereof.
> (Luhmann, 1993, 5)

Robert Stallings, in his article "Disaster and the Theory of Social Order", quoted the same part while suggesting that it would be more meaningful to embed the issue in the context of modern society rather than pursuing a theory of disaster per se (Stallings, 1998, 134). When we look at the details of how Luhmann conceptualized the production of risks and their handling in modern society, we can easily agree with the point Stallings makes. Luhmann elaborated on the issue of attribution, arguing that the modern society did not orient itself to the distinction between risk/security anymore, but to the distinction between risk/danger (1993, 25). He made the point that the modern society's function systems were selectively recognizing *risks* but not *dangers*, since *risk* is how each function system can attribute consequences to their own decisions; but not to others' (1993, 27). There is no ultimate state of safety or security, because every decision creates new, and even more complex problems along with the ones it solves in a complex system (remember Weber's, and Merton's 'unintended consequences'?). Thus, the society just cannot be ready for anything. Luhmann argued that, "the solution appears to lie in […] acceptance and elaboration of the problem, on a multiplication and specification of risks. In other words, we have to collaborate with distinctions, not combat them" (1993, 76).

Luhmann's recognition of the indifference of the society towards individual wishes and ethical dilemmas as an operationally closed system, and his acknowledgement of its evolutionary operation fundamentally independent from human control and steering clicked with the feelings of vanity that I had during the days after the August 17th earthquake. Major earthquakes in Turkey are not new phenomena, but a persistent social lethargy regarding any properly coordinated and conclusive action towards mitigating their disastrous effects, and moreover, a persistent social lethargy about removing the underlying causes of destruction and

vulnerabilities is the routine. In this sense, with his conceptual formulation of the modern society and his perspective on how society operates Luhmann could clearly help discovering the theoretical reasons of this indifference, lack of coordination, and lethargic attitude.

The details of the Social Systems Theory, I will be covering in the coming chapters on theory and methodology. For now, let it suffice to say this; rather than having a naïve hope, and setting myself an overwhelming task of making things right for the society in terms of earthquake safety, I abandoned all hope, like Dante said, and decided to delve further into the cogs of this emergent and indifferent machine…

b – Why Düzce?

While considering different theories, I had already started surveying the territory about the practical cases to be explained. I decided to focus on the organized activities about the issue of earthquakes. The reason for this decision was that, the process explained in Bilgin's article operated at a level higher than the single individual, her individual perceptions and behaviors; the coordinated nature of the behavior was of higher importance. The same theoretical attitude was also one of the main characteristics of Luhmann's perspective. Nassehi stated that;

> Luhmann's theory is interested in understanding how events that can be attributed to individual actors become meaningful within a process that itself cannot be attributed to individual actors […] He [Luhmann] does not appreciate 'the actor' as a theoretical concept. […] individual behavior cannot be explained by itself.
> (Nassehi, 2005, 182-183).

Later as I elaborate on the Social Systems Theory, we will see that Luhmann considered the individuals not as a part of the social system, but as the environment of it (Luhmann 1995, 179). It is the communication that constitutes the system, and communication has to refer to itself to reproduce itself further.

The earthquake disaster in today's cities is a systemic issue, and therefore the discussions, and possible solution alternatives have to consider the systemic logics. Having decided that my focus in this thesis was going to be on the organized and systemic responses to earthquakes, I discovered that Luhmann's theory is also focused not on the individual in its wholeness as the building block of the society, or her singular behaviors; but instead, it focused on the modern division of the *in*dividual into thematic aspects of communication. The result of this thematic division of individual into communicative aspects was the coordinated, and organized behavior within each function system guided by each system's own operational closure and their respective codes, without direct regard for the other systems (Moeller, 2006, 46-47). In the theory chapter, I will be elaborating more on the importance of organizations in modern society.

Looking for the first trace of organized local activity about earthquakes, I searched for the Earthquake Victims Association (Dep-Der) in my hometown, Adapazarı. To my surprise, while searching for the earthquake-related organizations, I realized that the Earthquake Victims Association (Dep-Der) in Adapazarı had been closed a few years after the 1999 earthquake. Dep-Ders were a very popular type of local earthquake-related organization that emerged after the 1999 earthquakes in the disaster area. However, the Dep-Der activities in Adapazarı were terminated few years after a recent and major earthquake. It was evident that the vicinity of Adapazarı had been hit by major earthquakes in the last century in an almost cyclical manner (See **Table 1**, page 13).

Table 1. Major earthquakes in history in the vicinity of Adapazarı & Düzce

Year	Location	Magnitude	Casualties	Damage
1943	Adapazarı	5,6	346	unknown
1944	Bolu, Gerede & Çankırı	7,2	4600	50.000 houses collapsed
1957	Bolu & Abant	7,1	66	unknown
1967	Adapazarı & Mudurnu	7,2	173	1.078 houses damaged
1999	Gölcük & Adapazarı	7,4	20.000+	245.000 housing units and workplaces damaged
1999	Düzce	7,2	4948	122.551 housing units and workplaces damaged
2000	Hendek & Akyazı	5,8	-	60 injured due to the panic

(WEB-8, Wikipedia, "Deprem Kronolojisi", 2013)

In the face of such a recurrent natural hazard, witnessing the local lethargy in Adapazarı in the long term about taking initiative in an organized manner for earthquake-related activities was certainly irritating at a personal level for me. The local organization thematizing this issue (Dep-Der) had disappeared while the problem and the future risk still continued in Adapazarı. This observation challenged me to start questioning the issue of participation of the local population in earthquake-related organized activities. I kept searching for Dep-Ders in near cities and found that one still existed in Düzce. At this point, having been frustrated by the absence of an active Dep-Der in Adapazarı, I made a decision to focus on the full half of the glass. There are two ways of looking back in time; one would be finding faults and criticizing what already went wrong, and the other would be finding strengths, finding things that worked, in order to improve them. I decided to do the latter.

Apart from an active Depder, there were other reasons why I decided to study Düzce and not Adapazarı. The first one was a logistic manageability concern. The number of local associations in Adapazarı was around 1400, while the number of associations in Düzce was around 400. Secondly, the Governor's Office in Düzce was considerably more cooperative than the one in Adapazarı in providing the contact information of all the associations on the list. Thirdly, Düzce was the epincenter of a second major, magnitude 7.2 earthquake just 3 months after the first one; which could give me a chance to gain some insight about the responses of the local associations to the first earthquake and then to the second earthquake that followed 3 months later.

Because of these reasons, I decided to focus on Düzce for my field research. I requested a full list of the local associations from the Governor's office, to assess the local associations' engagement in earthquake-related activities, and then look for any discrepencies between the local history and centralized planning efforts. I wanted to have an understanding of different self-observations of the society through centralized disaster management plans and through the context of local organizations in Düzce. How society makes sense of the earthquake incident, how it processes the meaning of it, and how it communicates about it depends on different logics of

communication divided by functionally differentiated systemic boundaries (in this study the organizational boundaries specifically) according to a Luhmannian perspective. With this reason, I tried to investigate how these functionally differentiated self-organized bundles of communication processed the meaning of the same incident differently. I also tried to track if the local associations currently manifest any coordinated character among themselves and with the centralized efforts about earthquakes. Theoretical and methodological issues regarding the research process are to be covered in more detail in the theory and methodology chapters respectively.

One of the most important points about 1999 earthquakes was that these two earthquakes took place in the most industrialized, most rapidly urbanized and densely populated region of Turkey. The north-western Marmara region has been following an increasing trend in industrialization and urbanization for the last 5 decades. My research field, Düzce, is located on main transport routes such as D-100 highway (also known as TEM) and E-80, which connect two major cities like İstanbul and Ankara. The province hosts a highly active forest industry of more than 200 companies of different sizes engaged in various forest products from raw materials to furniture. Production, processing and packaging of hazelnut comprise another major item in the economic activities. The rising labor costs in textile endustry in nearby industrial provinces like İstanbul and Kocaeli drives a considerable workforce to smaller neighboring provinces, making textile a growing industrial sector in Sakarya and Düzce as well. The manufacturing of small arms such as pistols and hunting shotguns, manufacturing of other various light machinery (such as agricultural and forestry machinery), small and medium-sized enterprises in sectors such as food processing or cardboard production make up the activities of organized industrial zone in Düzce. The touristic venues including high plateaus, rivers and winter sports are also becoming increasingly attractive fields of investment. The service sector is also growing along all others. As a result of its proximity to strategic transportation routes, professional long-distance truck driving is one of the most popular lines of work. When we look at the ratio of sectors over the years, we can see that agriculture is declining while manufacturing, construction, and commerce increse (Düzce Governor's Office, 2002, 13). Considering all these

factors, it is no surprise that Düzce had an increasing population for decades and from year to year. We can see in **Table 6** (page 29) that while the overall province population was 342.146 in 2011, the most recent TÜİK report shows that it went up to 346.493 in 2012. 58,1 % of this population lives in urban centers in Düzce's subprovinces and 41,9 % live in the villages (TÜİK, 2013, XII).

After a preliminary unstructured interview with the Düzce Dep-Der, I started to think about the rest of the local population. The members and administrators of Dep-Der had already been engaged in earthquakes and the related problems in an organized manner; but what about the rest of the local organizations in Düzce? The earthquake struck the rest of the population as well as the Dep-Der members, and it will hit them again in the next incident. This idea led me to focus on the local associations that are normally not specialized in earthquake-related communications, decisions, and activities, but were nevertheless involved in such activities self-organizedly after the last major earthquake. Depder was a very active association specialized in earthquake-related communication, decisions, and activities. It was founded after the 1999 earthquakes. However, there were hundreds of other non-specialized associations that already existed before the 1999 earthquakes, some of which opted for using their existing organizational structures for earthquake-related activities as well. It was this local capacity, which contributed to restoration of routine functioning after the earthquakes, that I tried to look into.

My curiosity was about what people could do for themselves in an organized (self-organizing, or self-steering) manner in the case of an earthquake disaster. Formulating it in Luhmann's terms, I can say my curiosity was about how society adapts to itself in a self-steering manner, and if it re-organizes its own functionally differentiated context for earthquakes in the long run. My argument is that the local associations' reactions to the earthquake, and disruption of routine organizational communications and functions would structurally ignore each other's earthquake related activities despite their geographical proximity in the long run. As a result of the predominance of functional differentiation, this systemic ignorance and reciprocal blindness would also be a fundamental part of the relations between these local self-organized efforts and any centralized disaster management and planning efforts. The local organizations would primarily orient their decisions and functions

towards global function-systemic logics of communication in the society, and they would be preoccupied with their own reproduction in their disaster responses. Communal idea of unity would be now subordinated by modern systemic differences. In the same manner, new systemic boundaries formed through political function system would also be primarily concerned with their own reproduction and contingent definitons of environment. While reducing their systemic horizons to disaster-related communications and central coordination of them, any centralistic steering efforts would still run the risk of ignoring historically and practically relevant self-steering functional equivalents, putting them in an asymmetrical position in terms of their involvement in disaster management and planning in the long run. Therefore, studying what local people have done in an organized manner after the last major earthquakes, and investigating how those relate to future disaster planning efforts means defining and studying an asymmetrical relationship between centrally steered and locally self-organized functional equivalents in this thesis. This asymmetry is based on my definition of central disaster management efforts as the system, and the non-specialized earthquake-active local associations as its environment. Such a study, I hope, would give us sociological insights and clues on alternative possibilities of organizational disaster communication in long-term social resilience against earthquakes.

c- Self-organization as a dimension of social resilience vs. systemic blind spots

Interestingly, my decision to focus on self-organizing local efforts about earthquake disasters was informed by an AFAD (Afet ve Acil Durum Yönetimi Başkanlığı – Turkish Prime Ministry Disaster and Emergency Management Presidency) seminar on disasters in 2011 summer. The psychosocial support providers with substantial field experience emphasized the importance of the local capacities of the victim population during this seminar. The support from outside the local boundaries would always be limited in terms of timing, duration and content; and the local population would be on their own when the support providers leave. The local population will also be on its own when the next hazard hits in the future.

So these field practitioners emphasized the importance of what the local population could do for itself, using its own capacities. Thus, in this study, I am trying to formulate "a sidelong glance at other possibilities" in parallel with AFAD plans (Luhmann, 1995, 54).

Self-organization is an important capacity of the local population in the case of a disaster; and it is also one of the important components of a multi-dimensional definition of resilience according to the working paper of the UN emBrace project;

> […] one widely used definition of resilience in this field involves: i) response to the disturbance, ii) capacity to self-organize, iii) capacity to learn and adapt (Folke, 2006; Parry et al., 2007).
> (Birkmann et al. 2012, 2)

> […] a new understanding of systems is emerging and highlights attributes such as nonlinearity, uncertainty, emergence, scale, and self-organization.
> (Setiadi & Chang Seng, 2012, 8; in Birkmann et al. 2012)

> A widely accepted definition of resilience applied to social-ecological system involves: (1) a response to/capacity to absorb disturbance, (2) a capacity to self-organize, (3) a capacity to learn and adapt (Folke, 2006; Parry et al., 2007).
> (Birkmann et al. 2012, 22)

> Pelling (2010) also emphasized the elements in the social-ecological system, namely social learning and self-organization, which are also explored through other literatures such as social movements, participatory and communicative planning (Pugh and Potter, 2003).
> (Birkmann et al. 2012, 23)

In the embrace project working paper, the perspective that particularly emphasized the importance of self-organization as a dimension of resilience was the

Social-Ecological Systems perspective (Berkes et al., 2003; Folke, 2006; Parry et al., 2007).

Kalaycıoğlu, Rittersberger Tılıç, et al. also stated the importance of the already existing social networks as the most important indicator providing people with a variety of support facilities, with a caveat that reliance on these networks should always be combined with other coping mechanisms (2006, 1). It helps develop new capacities and improve the already existing ones. These remarks remind of the African proverb; "if you want to go fast, go alone; if you want to go far, go together" (Anonymous). However, as we elaborate more on the Social Systems Theory of Luhmann, we'll see that it is not about going together in a unitary, communal sense in modern society anymore; but it is about increasing the capacity to work with systemic differences of the society that matters. And moreover, it is not that easy to "go together" while every single individual has different concerns and ideas in their minds about what to do and how; thus it takes a lot of "reductions" to coordinate these efforts. "Going together" in an increasingly complex social setting requires confinement of communication into functionally differentiated thematic domains, that is to say it is more manageable for the system to ensure the consistency of communication about science, about law, about education, about religion in their own respective boundaries by employing increasingly specified operating codes. These systemic boundaries make sure everyone involved communicates through the same medium and has the same understanding, and therefore the desired actions as a result. Ensuring behavioral convergence on any issue in an increasingly diversifying social context depends on specifying further differences (i.e. reductions) within the social system. Creating even further differences for even further specification of expectations and closer behavioral approximation is an effective way within systemic boundaries; however, this also leads to a proliferation of blind spots between the boundaries. The more the system reduces complexity, the more it has to ignore. Over time, the combinations of these reductions and inter-systemic ignorance (with only a very limited capacity for structural coupling between systems) creates an ever-expanding avalanche of blind spots. In this thesis study, I am attempting to make another cut through systemic boundaries, and offer an alternative to the way the society observes itself. I am

attempting to study the relationship between the systemic reductions in terms of disaster management and the already existing social elements these reductions ignored along the way. I propose that, the most strategical contribution of sociology to disaster management would be to discover such blind spots between systemic reductions. The implementation of any centralized top-to-bottom disaster management policy should be coupled with the history (i.e. genealogy, in the evolutionary sense) of self-organized local attempts; and this local history is what I am focusing on in this study.

Turkey's urbanization without covering the costs of proper urban infrastructure was a way of going fast, with cheap individual projects by independent small contractors ("müteahhitler"); however, this individualized strategy did not get Turkey too far in the long run; because it lacked the capacity to handle the increasing complexity in social setting as a result of massive population movement to urban centers starting at 50s. Being more resilient against crises and disasters can be conceptualized as an ever-decaying process involving a combination and relationship between many different traits and factors, a process that needs constant reproduction. Therefore, such a process requires the evolution of stabilizing mechanisms in the form of a media of communication and operating codes of its own. However, this is a paradoxical situation. If an 'earthquake resilience subsystem' were to evolve, this means it would have to exclude all the other function systems, and would be primarily concerned with reproducing itself, having its own blind spots. In this sense, dangers, risks, and disasters are built into the social system by its very own structure. Thus, there could be no transcendental entity or position from where the society can be "steered" into safety. As a result of increasing differentiation, every function system has its own understanding of being resilient, and these may conflict or remain indifferent to one another. The best alternative would be to produce more observations, and establish as many connections through systemic differences and boundaries as possible.

Luhmann's academic debate with Habermas over the very fundamental characteristics and dynamics of the society is a very well known issue. Moeller gives us an overview of this debate, putting Habermas's efforts towards a non-hierarchial and egalitarian visions of the society against Luhmann's radically ecological an

evolutionary theory (Moeller, 2012, 71). Habermas' conceptualizations of the society, which attribute rationality and certain systems a central role in the liberation of the society, is deeply at odds with Luhmann's "polycentric (and accordingly polycontextural) theory in an acentrically conceived world and society" (Moeller, 2012, 71). Habermas' "progressive and leftist" (Moeller, 2012, 71) visions of the society find no correspondence in an evolutionary thinking since

> An ecosystem has no center. Evolution does not follow any guidelines or directives given by any of its subsystems. Subsystems are not agelitarian or democratic in the sense that each system has a right to make a contribution in determining where evolution goes. Subsystems may compete for survival, and in the long run, most of them will simply dissolve since they cannot plan their own future or the future of the whole. There is no institution inherent in evolutionary processes that a system may appeal to, or for instance, complain to that its extinction is unjust, unfair, or irrational. A social theory that take evolution seriously will therefore not only disappoint, but most likely offend those social theorists who think that even if such institutions may not yet exist or may not yet be perfect, they should at least be aspired to. Evolutionary theory, however, does not allow for such aspirations.
> (Moeller, 2012, 71)

This discussion between Habermas and Luhmann makes it necessary to mention the issue of "steering". Social Systems Theory conceptualized the society as an evolving complex system of differentiated subsystems that function simultaneously independently and interdependently. These systems are independent, since each one of them is operationally closed, and they are simultaneously interdependent, since each of them constitutes part of the environment for other social subsystems. The most important result of this paradoxical situation is that, this complex society of social systems does not lend itself to steering in a deterministic way. Therefore as I stated before, I had to revise my naïve aim of making society more resilient, and as a result let go of any hopes of deterministic investigation or intervention. Luhmann has a specific article on the *Limits of Steering*, in which he

explains why society, as an operationally closed (autopoietic) system, cannot be deterministically steered from outside; but can only steer itself through its own operations during its evolution (1997a). Moeller also makes this point about social systems theory saying:

> The evolution of species […] or the evolution of the climate is not steered from outside, but is self-steering. This self-steering can hardly be called steering, though, since neither evolution nor climate change develop with a specific goal in mind. They are not teleological. While the steering theory of first-order cybernetics is concerned with how to steer systems by certain inputs so that a desired output will be attained, second-order cybernetics assumes that no external steering is possible with respect to autopoietic second-order systems such as, for instance, the climate of the earth, biological organisms, minds, or, for Luhmann, *society*.
> (Moeller, 2012, 129)

Luhmann's theoretical attitude and his assumptions might seem like a paralyzing set of ideas when compared to critical and pragmatic thinkers like Habermas, who pursue a goal of liberation, enlightenment, or progress in their theories. When we are thinking about earthquakes and disasters in general, the liberation can be read as resilience, and Luhmann's might look like a passive perspective when compared to highly active disaster risk management paradigm, which is very fond of plans, policies, and projects to (supposedly) steer society into higher resilience, or a better state of preparedness. However, the very act of observing the social system with the awareness of doing it from within, using the functional method offered by Luhmann, looking for functional equivalents and trying to explain local differences is a means to "open up society for a greater number of alternatives, 'to open up what lies at hand for a sidelong glance at other possibilities' (Luhmann, 1995, 54)" (Knudsen, 2011, 135).

Once we abandon the academic vanity of finding the right variables and correlations that herald the good news about steering the society into more preparedness, mitigation, or resilience, then we have the chance to focus on how the

social systems themselves operate, and work on developing an awareness of the already functioning alternatives, routinely unnoticed under different names and categories as opposed to the established ones. The mindset of social engineering oriented towards the right action, steered through direct and deterministic intervention in society's evolutionary operations, providing specific inputs through policies, plans, or projects and expecting specific outputs from them is not what Social Systems Theory prescribes.

Habermas' *communicative reason*, and the *ideal speech situation* as a goal that refers to the egalitarian democratic participation of all parties in a social discussion process cannot play central and liberating roles in a social world based on contingency, since no system and no specific rationality can be a special savior in the quest towards enlightenment. The same goes for the safety or resilience as well in this sense since "every social system produces its own systemic rationality" (Moeller, 2012, 83). In a sense, the whole situation can be summarized as this; the critical theories give the guidelines for how the society should be and which way it should progress, whereas an evolutionary theory gives us clues about why it does not happen as desired:

> […] for Luhmann, real or ordinary communication was "rough ground" as well. Unlike for Habermas, for Luhmann it made no sense to try and smooth it out so that it becomes an even surface. Wittgenstein said that, in a certain way, a perfectly smooth and icy surface could be called an ideal ground – but it is also a ground that one cannot walk on. If I am not mistaken, Luhmann's constructivist ontology of a social reality based on difference rather than identity opposes attempts by traditional "rationalist" theoreticians like Kant and Habermas to "smooth" society, communication, and reality. Such a seemingly ideal society, he was afraid, might be too *unreal* to be inhabitable. (Moeller, 2012, 87)

This very issue of the communicative process as a ground too smooth to walk on connects to two issues in Luhmann – Habermas debate. The first one is that, such an ideal communication that solved all its problems would have no reason to keep

going; in other words it would conclude and terminate. In this case, that would be the end of society. The reason why communication continues is because it is never conclusive enough, and it cannot be frozen. Just like Derrida's famous "Différance" reveals, communication can only get closer to perfect meaning as long as it keeps flowing (further clarifying what it refers to) but never quite reaches there (Derrida, 1982). Because of the double contingency at the very core of social systems, communication produces further communications only referring to previous ones. There is no perfect, ideal, essential meaning to reach and conclude the communication process. The second connection is to the Kjaer's comparison of Luhmann and Habermas in terms of their central concepts. According to Kjaer, Habermas's version of the concept *lifeworld*

> […] is defined as the context, composed of culturally and linguistically organized patterns of interpretation, within which "sprach- und handlungsfähige Subjekte" ["the subjects capable of speech and action"] find themselves. It is a common ground, comprising "Selbstverständlichkeiten oder unerschütterten Überzeugungen" ["self-evident or unshakable beliefs"], which make it possible for two or more subjects to constitute a common understanding of the world on the basis of an already existing shared interpretation of it.
>
> Nevertheless, the lifeworld cannot just be a ground, but must also be a horizon, since lifeworld is moving ahead at the same pace as the observer. Consequently, the lifeworld must be understood as constituted by the distinction between ground and horizon. According to Luhmann, this concept of the lifeworld, developed by Husserl and adopted by Habermas, is based on a paradox. This is because the lifeworld cannot be the firm ground where all observations and actions are unfolded and, at the same time, an infinite horizon which simply is the WORLD: it cannot be moveable, if it is firm and, if it is firm, it cannot be moveable.
>
> (Kjaer, 2006, 69-70) [Translation, WEB-3]

According to Kjaer, Luhmann's suggestion to overcome this paradox is the distinction between familiarity (for firm ground) and non-familiarity (for moveable horizon) (Kjaer, 2012, 70). The same distinction is at work in distinguishing between what is familiar as an element of the system, and what is non-familiar for the system as a part of its environment (or horizon).

According to the Social Systems Theory, the very existence of modern society is dependent on constant reproduction of functionally differentiated communications and relationsips. Norris et al. summarizes different dimensions of the concept of resilience as adaptive capacities of individuals, of human communities, and larger societies (Norris et al. 2008, 127). The important caveat they make is that "[…] a collection of resilient individuals does not guarantee a resilient community (e.g. Pfefferbaum et al. 2005; Rose 2004). As Brown and Kulig (1996/97, p:43) observed, 'People in communities are resilient together, not merely in similar ways'." (Norris et al. 2008, 128). The Social Systems Theory conceptualizes both differentiation and simultaneous interdependence of reciprocally exclusive function systems in modern society. As opposed to a communal togetherness of whole individuals on a geographical sense, the strength of the society against disasters in a modern setting would be its capacity to handle and regulate its sets of communicational differences. After all, it is the collapse of these systemic differences and reductions that marks the situation of disaster.

d - Earthquakes and Turkey

In Turkey, 149 damaging earthquakes happened between years 1900-1999, collapsing or heavily damaging 578.544 buildings, and killing 97.203 people. According to these figures, once every 7 months a damaging earthquake occurs in Turkey; 5.844 buildings are damaged and 982 people are killed on the average every year (Özmen, 2000a).

On August 17th, 1999, a magnitude 7.4 earthquake hit the north-western Marmara region of Turkey at 03:02 am. Affecting very densely populated and industrialized cities and towns like Sakarya-Adapazarı and Kocaeli-Gölcük. The official numbers reported 17.479 casualties, and 43.953 injured. 66.441 houses and

10.901 workplaces sustained heavy damage; 67.242 houses and 9.927 workplaces sustained medium damage, 80,160 houses and 9.712 workplaces sustained light damage (**Table 2**, page 26) (Özmen, 2000a). The population affected by this earthquake was 15.816.476 according to Özmen's report (2000a). The number of casualties was a topic of controversy after the earthquake. In 2005, Ertan Gönen, the vice chair of Turkish Red Crescent at the time, admitted in an interview with daily newspaper Vatan that the death toll was around 35-40,000 people in reality (WEB-6, Sevimay, 2005).

Table 2. Damage Status after the August 17th Marmara Earthquake

	August 17th 1999 Earthquake - Damage Status					
	Heavy - Collapsed		Medium		Light	
	Housing	Workplace	Housing	Wokplace	Housing	Workplace
Bolu	**3.095**	**649**	**4.180**	**1.015**	**3.303**	**482**
Bursa	63	5	434	19	940	68
Eskişehir	80	19	96	8	314	22
İstanbul	3.073	532	13.339	1.999	12.455	1.239
Kocaeli	19.315	3.031	21.287	3.001	22.452	3.227
Gölcük	12.310	1.870	7.789	886	9.299	1.118
Sakarya	19.043	4.068	12.200	1.963	18.712	1.675
Yalova	9.462	727	7.917	1.036	12.685	1.881
Total	66.441	10.901	67.242	9.927	80.160	9.712

(Özmen, 2000a)

Initial figure on financial loss from direct earthquake damage is reported to be 657.9 million TL. Resulting loss of production is reported to cost another 361.9 million TL., comprising 0.95 % in Turkish industry and 5.81 % in the earthquake area (Özmen, 2000a). It is clear that the human and financial losses were beyond any expectation and the incident was a heavy trauma on the national scale. This was not the first such trauma Turkey sustained; and unfortunately, it will not be the last. Given the rising ratio of the population living in urban centers and the sub-standard quality of the existing building stock, even more dramatic loss in future earthquakes is feared.

e - The Düzce Earthquake on November 12th, 1999

The 12th November 1999 earthquake that hit Düzce just 3 months later was like the reminder of this very fact. 81 % of the houses and 87 % of the workplaces in Düzce sustained damage; the city center almost totally collapsed (WEB-1, Düzce Governor's Office, 2010). There were 12.513 housing units collapsed or heavily damaged, 9.065 housing units with medium damage, 10.222 housing units with light damage in Düzce after this earthquake. The numbers for workplaces were 2.478 collapsed or heavily damaged, 2.066 medium damage, and 1.446 light damage (**Table 3**, page 27).

If we have a look at the **Table 5** (page 29), we can see that by the year 1997, the total number of housing units in Düzce was around 60.000. Comparing with **Table 3** (page 27), we can see that almost half of these housing units sustained some level of damage. More than half of the casualties were in the city center. It was a double disaster for Düzce.

Table 3. Damage Status after the November 12th Düzce Earthquake

	November 12th 1999 Earthquake - Damage Status					
	Heavy - Collapsed		Medium		Light	
City	Housing	Workplace	Housing	Wokplace	Housing	Workplace
Bolu	2.532	218	5.745	757	5.736	828
Düzce	**12.513**	**2.478**	**9.065**	**2.066**	**10.222**	**1.446**
Eskişehir	10	2	71	10	84	10
İstanbul	0	0	2.059	612	2.855	700
Karabük	0	0	74	0	99	1
Kocaeli	2.355	608	10.260	1.599	11.055	1.502
Sakarya	5.675	1.089	6.270	1.804	8.576	1.036
Yalova	3.511	92	3.969	99	1.364	104
Zonguldak	108	6	312	3	953	8
Total	26.704	4.493	37.825	6.950	40.944	5.635

(Özmen 2000b)

With the second major destructive earthquake, the already existing disaster context was exacerbated and the already overstressed local capacities were

challenged even further with more problems to solve. This situation of double earthquake disasters made it necessary to declare Düzce, as a growing and urbanizing sub-province by then, a province separate from Bolu in December 9th 1999 in order to speed up recovery. This fact further indicates that increasing population, growing economic activities, followed by urban development and disaster risks will be even more pronounced in coming years for Düzce. The province and its urban centers are probably going to be even more crowded and Düzce is going to have more to lose in the next earthquake incident. **Tables 3**, **4**, **5** and **6** (pages 27, 28, 29) can be used for a very brief statistical overview of Düzce.

Table 4. Casualties caused by the November 12th 1999 Earthquake

Province	Town	Deaths	Wounded
Bolu	Bolu (City Center)	48	354
Düzce	**Düzce (City Center)**	**463**	**2.800**
	Beyköy	0	120
	Konuralp	0	408
	Akçakoca	2	96
	Cumayeri	0	39
	Gölyaka	1	68
	Gümüşova	0	34
	Kaynaşlı	244	544
	Yığılca	0	42
Kocaeli	Kocaeli (City Center)	1	27
	Gölcük	0	34
Sakarya	Adapazarı	3	168
Yalova	Yalova (City Center)	1	25
Zonguldak	Zonguldak (City Center)	0	189
Total		763	4948

Özmen (2000b)

Table 5. Population and housing status of Düzce by 1997

Düzce	Population (1997)	Urban	Rural	Housing (urban)	Housing (Rural)	Area Km2	Density
Düzce (Center)	**157.582**	**76.038**	**81.544**	**17.203**	**15.045**	**944**	**179**
Akçakoca	37.644	20.398	17.246	4615	3182	439	86
Cumayeri	12.126	7567	4559	1712	841	85	143
Çilimli	14.596	3906	10.690	884	1972	100	146
Gölyaka	17.693	5227	12.466	1183	2300	226	78
Gümüşova	17.270	11.821	5449	2674	1005	155	111
Kaynaşlı	18.463	7166	11.297	1621	2084		
Yığılca	19.987	3138	16.849	710	3109	641	31
Total	295.361	135.261	160.100	30.602	29.539	2590	

(Özmen 2000b)

Table 6. Population of Düzce by 1990, 2000, and 2011

	1990			2000			2011		
	Total	City	Village	Total	City	Village	Total	City	Village
81. DÜZCE									
00. Merkez	**138.560**	**65.209**	**73.351**	**159.690**	**56.649**	**103.041**	**203.095**	**133.551**	**69.544**
01. Akçakoca	32.839	13.582	19.257	43.895	25.560	18.335	37.119	23.424	13.695
02. Cumayeri	11.963	5.193	6.770	13.348	7.434	5.914	12.887	7.983	4.904
03. Çilimli	15.427	3.717	11.710	16.849	7.147	9.702	16.775	6.356	10.419
04. Gölyaka	19.775	4.265	15.510	19.612	8.572	11.040	20.148	8.805	11.343
05. Gümüşova	14.536	5.051	9.485	18.043	12.103	5.940	14.626	6.327	8.299
06. Kaynaşlı	18.308	5.878	12.430	21.639	9.439	12.200	20.485	9.325	11.160
07. Yığılca	22.271	2.939	19.332	21.190	3.728	17.462	17.011	2.985	14.026
Total	**273.679**	**105.834**	**167.845**	**314.266**	**130.632**	**183.634**	**342.146**	**198.756**	**143.390**

(WEB-7, TÜİK, 2012)

The amount of damage and the number of casualties listed so far comprise the anthropocentric part of the justification to study earthquakes in Turkey. We are all humans and we do not want casualties, because we can emphatize and identify ourselves with the victims of the earthquakes and basically avoid pain and suffering instinctively. We would all naturally want to reduce the number of casualties and the financial damage to zero, and feel sufficiently convinced that the same thing is not going to happen to us, and to the people we feel attached to. The S*ocial Systems Theory*, however, does not paint an anthropocentric picture of society. From this perspective, once the society is formed as a social system, it follows its own ways of operating, and it evolves not necessarily in accordance with anthropocentric concerns

but rather in accordance with systemic mechanisms. From a social systems theoretical perspective, what the society is concerned is just to reproduce the communication, which is the building block for itself. The society constantly produces and reproduces communication, using communication again; and therefore is an *autopoietic* system. Every subsystem of society is concerned with just one aspect, or theme, of the individual's communications (*person*), not with the whole individual. The *social system* reduces the complexity and unpredictability of its environment, the human individual as a whole, into functionally differentiated and interdependent spheres of communication. The case of an earthquake, and disasters in general, is a very dramatic moment of collapse of the systemic reductions, a puncture through the boundaries defined and maintained by the system so far. Studying disasters as systemic punctures can be a fruitful sociological enterprise in order to gain more insight about how the society responds to disruptions, and how it forms new ways of resonating through its differences as a part of its evolution.

f - After the 1999 Earthquakes

The 1999 Earthquakes, which happened on August 17th and November 12th in Marmara region of (northwestern) Turkey, marked a turning point in Turkish disaster management history in many senses. We can talk about their impact on social, legal, emergency response, financial, political, and scientific domains in popular discourse. It is possible to read all these changes in different domains, as responses of different function systems to environmental irritations, modifying themselves and developing new ways of resonating with each other. First and foremost, a very lively discussion about the concept and role of civil society and 'civil society organizations' flourished following these earthquakes. The media played an important role in spreading these discussions throughout the country. The discussions on civil society actually started as discussions about the inefficiency of state organization and its departments. These discussions verified both the limitations of social steering and the reciprocal systemic ignorance between functions systems. It was realized that the historical process leading to this major disaster was not so easy to steer centrally at will. The reciprocally ignorant and sometimes conflicting operations of political function

system, economic function system, legal function system, and science created unintended and unplanned consequences. In my opinion, the civil society discussions in Turkey after the 1999 earthquakes grew out of the realization that there is a greater need of resonance between functionally differentiated systems. The increasing number of associations and other volunteer organizations in Turkey points at this need. These organizations enable new interdependency breaks between function systems and contribute to their stability. Secondly, the legal regulations about the production of urban dwellings have been revised to improve the standards of construction and inspection. The legal function system's response to earthquake was in the form of legislation, defining or re-defining what is legal and what is not about construction, zoning, inspection, etc. attaching sanctions these definitions. Thirdly, the official civil defense organization scheme was revised and re-arranged for better emergency response performance in the light of experiences gained after these earthquakes, and AFAD (Afet ve Acil Durum Yönetimi Başkanlığı – Turkish Prime Ministry Disaster and Emergency Management Presidency) was founded in 2009. This can also be interpreted as a self re-organization of the society in response to a disaster. However, since AFAD is a part of the political function system and is located at the center part of a center-periphery differentiated structure (**Figure 2**, page 71). The asymmetry between centralized and local earthquake responses come from this difference of position in the center or periphery. Fourth, in the economic function system, new actuarial alternatives about natural disaster insurance have been introduced to counter the financial risk. In time, a specific form of dwelling insurance (shortly named DASK) was enforced and made compulsory country-wide, aiming to cover all of the dwellings in Turkey's urban regions. And also, the organized capital and major construction companies started to take major role in Turkey's dwelling production. Various repair and construction loans for the earthquake victims were also introduced. Fifth, Turkish urbanization policies have been revised considerably, and urban renewal plans have been put into action to improve the existing building stock, sometimes involving gentrification movements and creating new social vulnerabilities and provoking conflict with the disadvantaged urban population settled in these existing building stock. However, as I stated before, efforts of steering the society suffer from unavoidable structural limitations

of the modern society. And finally, the scientific studies about tectonic geological movements, earthquake-resistant civil engineering, and related information provided by experts gained more and more public attention. Science as a function system produced its own response in accordance with its own mediea of communication, truth. It was very widely emphasized that, in Turkey the ignorance towards scientific knowledge was one of the leading causes of 1999 disaster. This idea of ignorance towards science actually makes a Luhmannian point from a layperson's point of view. The ignorance is not only towards science, but it is built into the very structure of modern society and it influences all systemic relationships.

Although there have been considerable transformation in Turkey in terms of disaster and risk management, it is far from securing a total earthquake safety for all of the human population in the country. Just like the opening quote from Japp & Kusche reminds us, "(safety)…is only a goal worked toward but never reached" (2008, 87). Comfort, Boin & Demchak also make the same point:

> As it is impossible to prevent or foresee each and every catastrophe, we assume that all societies will have to face one sooner or later. Their capacity to absorb these events and to emerge from them with their core institutions intact is at the core of resilience.
> (Comfort, Boin & Demchak, 2010, 7)

This ontological position about the unattainability of an equilibrium, as an absolute and static state, of safety directs attention to the concept of resilience; that is the ability to bounce back after a disruptive impact. I will be elaborating further on the concept, its definitions, and dimensions in the following chapters. Since I will be combining resilience with the self-organizing capacities of the local population in the absence of guidance, the discussions about the concept of civil society will also take some part.

The aim of this study is to investigate the self-organization dimension of resilience; focusing on how the already existing non-specialized organizational connections and structures located within the affected area are re-orienting themselves in the case of a disruption of routine by earthquake disaster. I will be

searching for what organizational decisions were produced about earthquakes by local associations, which are not specialized about earthquakes or disaster relief in general, and later how these past organizational activities relate to the future plans of centralized disaster management. My effort for tracing the connections between local self-organized disaster responses and future plans of centralized disaster management through time is also meaningful in relation to the evolutionary understanding of social systems, since Luhmann stated that; "The basic proposition is that evolution transforms low probability of origination into high probability of maintenance" (Luhmann, 2012, Vol. I, 252). The current efforts of central disaster management and planning are partly trying to introduce new differences, in other words "start anew" with a new perspective and organization scheme. What I am searching for is how far these efforts can recognize and cooperate with the historical, already existing efforts that were put into action by the local population in the last major earthquake.

Considering resilience as a process that does not conclude at any specific point in time, with a constant need for reproduction, observing the changes in organizational decisions and activities of these non-specialized local associations could contribute to our understanding of self-organizing local involvement in earthquake resilience. For this aim, the focus of the study is not on the immediate post-disaster response period or disaster relief in the short run; but rather on the routine functioning of the social systems and local organizations in the long run. In other words, I can say that I will be engaging in discovering the life history of local non-specialized organized disaster communication in response to the earthquakes in Düzce city center.

Generally, the immediate post-disaster context, the social activities relating to search and rescue, and emergency relief are popular focus of attention for studies, as the state of crisis is much more acute in this period. However, my concern in this study is with the long-term communications, decisions, and the resulting activities carried out by the non-specialized local associations. In other words, I will be searching for what earthquake communication wears off, as time goes by, and what remains in the local associations and how it comes to terms with the current centralized disaster management plans. The divergence of these local associations

normally not specialized in disaster-related communication from their routine decisions, engaging in disaster communication and decisions might be interpreted as a temporary case of puncture through their functionally differentiated character, and a temporary violation of the systemic differences. The main problematic of this research is to examine the interaction between functionally differentiated flow of communication processes in the local associations in disaster area, their collapse, restoration, and maintenance through unplanned self-organizing capacities as an aspect of earthquake resilience and their relationships with the centrally steered disaster management planning in the long run. Is it communal unity or functional differences predominant in the process of restoring the routine functioning of the social systems in the case of a disruption of routine by a disaster? Is it an undifferentiated sphere of communication conceptualized as a unifying 'civil society' that is restored by self-organized efforts of the local population, or is it the systemic functional differences that the society predominantly tends to restore and maintain through self-organization during the response and normalization period? Do the established, expanding, extending, and emergent organizations as social systems, establish connections with each other in their definitions of environment with regard to others in the long run? Or do their communications flow separate, along lines of functional differentiation?

CHAPTER 2
THEORETICAL PERSPECTIVE

a - Nature and society

Every theory is basically a set of distinctions. They make distinctions ontologically, epistemologically, and methodologically. They draw lines about what can be known, and how it can be known (i.e. how to observe). Making a distinction is the precursor of knowing and understanding, according to Luhmann; "Observation is any operation that makes a distinction; thus, it is the basic operation of understanding" (1995, 73).

One of the most interesting distinctions, both in my personal opinion and also in terms of the subject matter in this study, is the one between the social sciences and the natural sciences. Especially when we are trying to ask questions and produce knowledge about a topic such as the earthquakes and the disasters that result from them, this distinction between the human and non-human, and more generally, between the living and the non-living gains considerable importance.

Raymond Murphy's article provides a very good discussion of this topic, with a spot-on relevance (2004). Murphy addresses the age-old discussion on nature vs. culture divide, by placing social constructionism and critical realism at the two ends of the theoretical spectrum. The constructionist attitude includes different shades of the assumptions against the existence of an outer reality independent from human consciousness, and takes a stance favouring the primacy of human interpretation and social relations over nature's dynamics (Murphy, 2004, 250). Realist attitude, on the other hand, favours the existence of an independent physical reality out there; and the undistorted knowledge of this reality is to be explored through positive scientific endeavor only (Murphy, 2004, 251). Murphy seeks ways for, and offers his views on how to bridge the gap between these two ends of the theoretical spectrum. Luhmann's Social Systems Theory, as I have stated earlier, is a radically constructivist theory that conceptualizes environment as something constructed by

the system's own distinctions, selections and self-definitions. In short, as soons as a system starts observing itself by drawing boundaries and reproducing its internal operations (*first-order observation*), its environment comes into existence. Moeller states that, "Luhmann's ontology can be described as an outcome of his epistemology" (Moeller, 2012, 80). In this sense, it is not to an outer reality that a social system adapts as it evolves, but it is to its own constructions.

One of the important concepts Murphy mentions is the actant. He very shortly defines actant as "anything endowed with the ability to act" no matter if it's living or non-living, and intentional or not (Murphy, 2004, 252). He gives examples about how unintentional acts of nature's actants such as ice storms in Canada could incite social reaction, and the important part this conceptualization plays in social theoretical discussions for disaster sociology. Murphy states that humans' false assumptions about these actants, or ignoring the prompts coming from these actants could be seen as the underlying causes of disasters, in terms of their consequences (2004, 254). Murphy cites Latour as one of the important names for employing the concept of actant. Building a discussion about the place of things in social theory "…both Latour (2000) and Haraway (1991) argue, non-humans and nature are not just passive resources and constraints for social constructions. Instead, they are actants actively constructing and destroying on their own" (2004, 257). The importance of the concept of actant comes from its emphasis that the relation between the social and the natural is not a one-way flow, but it is an interaction. However, we should keep in mind that the fault lines and the seismic activities of the tectonic plates in Turkey were known long before the 1999 earthquakes; but it was systemic distinctions, reductions and selections of the society that set the stage for the destruction through their exclusion elements of the social system. This very fact shows that although the outer, objective reality (in the form of natural conditions and incidents) has social consequences, it is the social constructions such as human interpretation and social reductions that determine the level of their exclusion and ignorance, therefore leading to a disaster.

The relationship between things, between the living and the non-living, and more specifically, between the human and the non-human is a topic of special interest for Latour. In his article "When things Strike Back" (2000), Latour first

begins by arguing that sociology - science and technology studies in specific - is not just about providing social explanations for things; "giving a social explanation of *any* object is a tantamount to limiting oneself to what is *not* objective, but *only* social" (2000, 111). The society as a source of any social explanations needs explanation itself; and when we try to explain the society itself, "[…] it will be […] through the presence of many other little things that are not social by nature, but only social in the sense that they are *associated* with one another" (Latour, 2000, 113). He makes the point that the seeming divide between social sciences and natural sciences, more specifically, the question around objectivity, is all about giving the "things" their ability to object to what the humans – scientists – say about them, but nothing more (Latour, 2000, 115). That is all the scientists of the biophysical domain do, and the social, as an object of study, includes the very physical things as well.

Latour, in his interview with Nicholas Gane, argues that:

> […] sociology has spoken about objects, but so badly! The notions of fetishism and commodities are among the worst things that have happened to sociology to understand economics, capitalism and objects…Objects have never had a chance in the social sciences because either they are too powerless (and this is exactly the notion of fetish where they are supposed to be just that onto which we project human ingenuity), or too powerful (and they make you do things causally).
> (Gane, 2004, 81)

In Latourian sense, the society does not consist exclusively of humans (Blok & Jensen, 106). Instead, "…Latour always thinks of his actor-networks in materially heterogeneous terms: They consist of both human and non-human actors; humans as well as machines, buildings, microbes and texts" (Blok & Jensen, 106). Basically, the actor-networks are based upon these strands of associations of human and non-human elements, and some parts of these strands of connections are in time condensed into unquestioned default resources, termed as *black boxes*, which could be manipulated by some advantageous actors strategically for their own ends. The more human and non-human elements an actor-network includes, and the more

elements its black box contains, the stronger and more influential it gets. However, the process of network construction is never complete. These black boxes are leaky, and always face the risk of being questioned again and thus taken apart; so it is not possible to mention a static division between micro and macro actors; they are always in the making and their scales might change (Blok & Jensen, 121). The concept of black box and the never-ending construction of networks resemble the constant need for repreduction of social systems in Luhmann's theory. Luhmann also discusses the concepts of micro- and macro- levels of system formation (Luhmann, 1981, 235-236). What distinguishes Latour and Luhmann is that, Latour is more focused on actors as well as the network, while Luhmann bases his theory on evolutionary system formation and the systemic reductions that enable these formations.

The non-human elements such as tools, walls, tables, money, buildings, room divisions, fences, computer networks, classrooms, speed bumps play important roles in framing the human interactions (Blok & Jensen, 115). Blok & Jensen refer to Latour's pseudonym Johnson (1988) to give an example about the importance of a simple event of opening or closing of a door in human interaction (115).

Treating things as an equally fundamental part of sociological theorization is a very important step if we are going to ask sociological questions about earthquakes; and this is very valuable in Latour's approach. We can even draw a parallelism between Luhmann's theoretical attitude of stripping human beings of their privileged position in his sociological theorization, and Latour's consideration of non-living actants as an equally important part of his sociological theorization to strike a balance between the living and non-living in sociological thinking. Latour also argues that the scale of actor-networks and their power to pursue their own ends are in constant flux and could always be challenged since there are many potential detours to be taken by the actors and actants involved in the networks (Blok & Jensen, 2011, 112). These possible alternatives, which Latour calls detours, are quite in parallel to Luhmann's *contingency* principle, which assumes that everything, every selection and every decision could have been made differently than they currently are. For Luhmann, again, the human beings are an unpredictable element of the complex environment for the social system. The social system keeps further

dividing (*differentiating*) itself into functional subsystems, in its effort to reduce the unpredictability (the *complexity*) of its environment (including but not limited to, human individuals) to a manageable (survivable) level of complexity.

Latour does not accept the micro-macro duality, and argues that any so-called macro- actor could lose power and shrink, or any so-called micro actor might grow in power and extend its web of connections. For Luhmann, on the other hand, there are distinct forms of social systems as *interaction*, *organization* and finally *society*. Although these social systems can be classified as micro-, meso- and macro- level systems, Luhmann points at their synchronous reproduction, and states that we cannot talk about prevalence of any, over the others; all these levels of system formation are of equal status. Various mechanisms connect these levels on an ever-increasing level of complexity in modern society. Latour argues that there can always be contingent shifts in the scales of these networks comprising the society; that the micro- level networks can go macro- and the vice-versa is possible as well. For Luhmann, such change in the level would also mean a change in the structure of system formation. Latour recognizes the disintegrating potential of the detours to be taken by multiplicity of actors and actants making up networks. Luhmann recognizes the same potential as well, and that is why he emphasizes a constant need for reproduction of systemic boundaries. Moreover, Luhmann also provides the necessary theoretical tools for recognizing the systemic reductions at play, operating to reproduce and maintain structural differences in the face of actors' and actants' conflicting, unpredictable initiative. The systemic reduction in complexity is what makes the society function according to Luhmann. The *social system* is a reduction of an endless number of possibilities into a finite and manageable number of alternatives. The *system* is always less complex than its *environment*; it has to be.

Latour's recognition of the role of non-human factors in sociology, and granting them a place in his theorization can be seen parallel to Luhmann's recognition of systemic distinctions and structures as non-human factors playing a fundamental role in the formation and maintenance of the society. Neither of these two theoreticians are anthropocentric in their assumptions. However, this similarity is not enough to reconcile Latour's sociology with Luhmann's. Latour's theoretical stance is closer to the formation of a rhizomatic network, rather than to a binding

whole concerned with its consistency. Blok & Jensen very clearly explain that "Latour is not a 'system builder'in any strict sense" (2011, 10). They also quote Latour's own words from interview with Crease et al., in which Latour declares that: "I produce books, not a philosophy" (Crease et. al. 2003, 19; quoted in Blok & Jensen, 2011, 10). Latour's attitude favours "One single explanation to a singular, unique case; and then we throw it away" (Latour 1996, 131; quoted in Blok & Jensen, 2011, 112).

Latour even proposes to abolish the concept of society, arguing that the concept only has an explanatory meaning and power for the sociologists themselves (Gane, 2004, 84-85). His point is that using the abstract concept of society for explaining social phenomena is just a transcendental fiction similar to religion. He proposes using the "social understood as association" (Gane, 2004, 84) in a strictly empirical sense, studying dynamic and ever-changing associational networks of living actors and non-living actants while they last, and thus develop an understanding of these networks. This is one of the most important divides between Latour and Luhmann's theories in my opinion. Latour's networks are strings of associated humans and non-living objects cross-cutting and influencing all the social fabric, whereas for Luhmann society consists of the non-hierarchal interdependence between differentiated communications of *function systems*, and the *structural couplings* between these function systems. Some function systems, such as political function system, can also subordinate and combine with other forms of differentiation such as center-periphery or hierarchical differentiation within themselves. Latour's networks would cut across Luhmann's differentiated function systems, sometimes taking the form of a social system such as an interaction or an organization, and sometimes taking the form of a *structural coupling* between function systems. For Latour, an overarching concept like society has to be discarded; but for Luhmann the concept of society has validity as the totality of all communicative relationships, structured differences and sub-systems. Latour's flexible concept of network is sensitive towards any associational connection between any nodes; and it may be too flexible to recognize systemic boundaries and structures it cuts across.

For Luhmann, one of the most basic theoretical assumptions is that social system is a self-referential (operationally closed) and self-reproducing (autopoietic) system. Every sociological theory of society therefore comes from within the society itself. In other words, sociological theories and concepts are a way for the society to *observe*, recognize, refer to, and reproduce itself.

When we consider the problem of earthquakes in Turkey, we face some systemic factors of importance over the individual actors and individual actants. At this point, especially Latour's discourse on structures seems at odds with the subject matter I will be discussing in this dissertation:

> Latour refuses to accord the question of "actors" and "structures" – that is, the human individual versus the collective order of society – any privileged role in his sociology of associations. In fact, he goes so far as to claim that sociologists ought to completely forget, or rather bypass, this traditional disciplinary "agency/structure" dualism. Instead, it is the relations among human and non-human actants – or more generally, between society and nature – that emerge as a key concern of Latourian sociology.
> (Blok & Jensen, 2011, 107)

I agree with the point that the relations between society and nature should be a concern in sociological endeavor to produce knowledge, especially about an issue like earthquakes and disasters. However, the relationship between nature and society, according to Luhmann, is very closely dependent on the distinctions made and reproduced by the society itself. In other words, the communicative processes and selections within the boundaries of the social system can make or break different actants, the recognition or ignorance of physical environmental factors is a derivation of how social systems operate internally. No social distinction "have to be" made, but once they are made, they make a difference (Moeller, 2006, 41). For the exemplary case of earthquakes in Turkey, it is one thing to have historical, geological, and engineering information on major earthquakes recurring in the country, and it is something else to decide what precautions are taken against this phenomenon, and which are not. The fault lines and their seismic activities can be

actants only so far as differentiated function systems recognize or ignore them and evolve channels to resonate accordingly; in other words, it all depends on whether the society communicates about them or ignore them.

Considering the structural/systemic factors mentioned in Turkey's earthquake history by İhsan Bilgin (1999), it would be more fruitful if we could employ a set of distinctions (i.e. a theory) providing us with a more systemic theoretical frame, and with a higher level of abstraction. Luhmann's systems theoretical framework is a more comprehensive one in this sense, with its dynamic system – environment relationship that can be abstracted to cover a larger territory in terms of society – nature relationship, and also offers a more coherent perspective for a synchronistic treatment of the case in point. Let's first turn to Bilgin's article, to have an idea about the systemic factors influential in shaping Turkey's historical earthquake problem before I elaborate on Luhmann's Systems Theory.

b - Turkish modernization and urbanization

İhsan Bilgin's article (**Appendix – I.**, 215) makes a very important historical and political-economic summary of Turkish modernization in terms of the Turkish society's relations with the natural environment (1999). Bilgin begins by establishing that the cost of urbanization includes more than the construction cost of a single housing unit only; it includes the costs of the pavements, roads, car parks, stations, subways, tunnels, ports, sewage system, utilities like water-power-gas, parks, schools, etc. that make up the urban setting. Even without adding the cost of business and industrial facilities around the city, the price of an average housing unit would easily double itself, combined with the costs of all the infrastructure investment it requires. These infrastructure investment costs must be covered properly to meet the massive demand created by a housing unit in urban setting.

So who is to cover these costs? Bilgin lists three probable candidates to cover these costs as the renters, the house owners in the city, and the companies making use of the labor force provided by the city. Since the renters could not afford to buy a house in the first place, they would indirectly contribute to payment of these costs by paying their rent to the house owners. The house owners would pay the costs

directly through taxes, and purchasing price. The companies would contribute in both direct and indirect ways, like paying utility bills at a different tariff, and paying taxes for example. But still, the expenses of all these three parties would go up dramatically if they were to cover these costs properly. Bilgin gives the example of early 20th century UK, stating that more expensive housing in the city would mean a bigger part of the surplus of the companies would have to be channeled into wages, and bigger part of the wages into rent; so the working class could barely afford renting rooms, let alone houses, in 1920s and 10 % of the population owned 90 % of the building stock; since house ownership is an expensive trait in urban context because of all these costs (Bilgin, 1999, 355).

For Turkey, Bilgin states that from 1950s till the end of 1980s the construction companies and major finance institutions were not involved in the production of urban space and land speculation; whereas the opposite was the case for the European social context. Instead, the capital accumulation in Turkey was realized mainly through house appliances, packaged consumer goods, and intermediary construction materials. Interestingly, this period is also the time of significant population mobility towards the urban centers in the Marmara region, and western Turkey. The population of eastern Marmara went up 15 times in 50 years, from 1 million in 1950s to 15 million in 1990s (Bilgin, 1999, 356).

Bilgin states that this situation is at odds with classical capitalistic modernization process observed in history (1999, 356). He explains this with the emergence of global consumer society in the 1950s coinciding with the launch of Turkey's rapid urbanization trend. While the world capitalism was promoting this new life style, Turkish economy was oriented towards consuming the goods introduced by this new capital accumulation trend (consumerism), and thus did not have enough capital to spare for covering the costs of a proper urban infrastructure and superstructure construction. As a result, the enormous need for new housing in western Turkey was carried out without covering the costs of proper infrastructure and without the involvement of an organized construction sector. Urban housing construction was carried out by the hand of small construction cooperatives involving small contractors. The municipal regulations were modified to open the way for their operations (Bilgin, 1999, 356). This was an easy fix for 100.000 new

housing a year, bringing Turkish cities up to the level of European countries like UK or Germany in terms of house ownership around 60 %. The only cost covered was that of the construction of the buildings themselves, but not the infrastructure. The rest of the capital in the cities was used for filling these new houses with millions of various goods produced and marketed by the modern, international industrial capital (Bilgin, 1999, 357). To sum it up, Bilgin says that:

> This does not mean that "we have been consuming the wrong goods; that we didn't need automobiles, refrigerators, computers, or fancy washing detergents in Turkey". But ask this question and compare; why do our automobiles, our life style and everything look so much alike those in western countries, while our buildings and cities do not? We have decided to modernize without paying the cost 50 years ago.
> (Bilgin, 1999, 357) [Translation mine]

This illustrative summary of Bilgin's points at the historical and systemic connections at play in Turkey. The relationship of the country as a segmentary social system with itself and with the functionally differentiated global communication of the world society shapes its version of relating to its physical environment. One assumption resulting from these relationships in Turkey was that the ground was uniform and stable. In a radically constructivist Luhmannian sense, it is not the actual geological fault lines in the ground itself that the political segment of Turkey within global human society has to adapt to, but it is the social assumptions made about the geological fault lines, and the following differences constructed according to these assumptions. Thus, sub-standard buildings were constructed and population was concentrated without social recognition or consideration of fault lines or earthquakes as factors. We knew that the quality of the ground varied greatly depending on many geological factors, and depending on the natural dynamics (such as liquefaction); and we knew that fault lines produced earthquakes at times, showing statistical and historical frequency for some regions more than others. Of course, these were known back then, but the chains of communications and the resulting decisions to consider or ignore this information when making the assumptions for

development, has social qualities. Moreover, leading to such destruction in cities, the chains of decisions in the political, economical, and legal *function systems* all had their own criteria for validity and legitimation. The scientific discipline of history, for example, had already provided data about the past earthquakes in these parts of the country. Geology and seismology had already provided the locations and seismic activities of the fault lines in these parts of the country. Civil engineers already had a certain level of necessary scientific knowledge for constructing proper buildings. However, the information that scientific function system provided was at odds with how other functions systems operated, such as the communications within economic function system, the political function system, education system or the legal system… All these differentiated function systems had different self-definitions, self-observations and different environment definitions.

Karaman states that the urbanization process of Turkey has not followed the same path as developed western countries, due to its unbalanced level of industrialization and economic activity versus high level of internal migration from rural areas to city centers (2003, 111). From 1950s to 2000s, the ratio of urban population in Turkey increased very dramatically. 32 % of Turkey's population (27.754.820) lived in urban centers in 1960, this went up to 38.4 % of the population (35.605.176) in 1970, then increased to 43.9 % of the population (44.736.957) in 1980, becoming 59 % of the population (56.473.035) in 1990, and 65 % of the population (67.844.903) in 2000 (Karaman, 2003, 112; DİE, 1998, 66; DİE, 2001, 2). Karaman cites Keleş (1996, 47-52) and Kartal (1978, 7-8) as he explains that this massive population mobility took place due to push factors in the rural settlements, some factors enabling easier transportation, and finally the pull factors in the city (Karaman, 2003, 112). The push factors in the rural settlements were increasing population, introduction of technological means in agriculture, unbalanced land distribution, increasing unemployment due to splitting of lands through inheritance, and insufficient educational, health, entertainment services. The advances in telecommunications, and transportation, such as construction of new highways, enabled easier mobility. The pull factors in the urban centers were attractive new policies about industrialization, transportation, education, health, and international relations (Karaman, 2003, 112). There were only a few cities like Ereğli, Kırıkkale,

and Karabük, the urbanization of which depended primarily on industrialization in. The general rate of industrialization in Turkey was seriously at odds with the rate of urbanization, and this was one of the major reasons in the formation of squatter housing in cities, leading not only to spatial inequalities but also vast inequalities in living conditions (Karaman, 2003, 112). Karaman emphasizes that there is an important difference between population mobility towards urban centers, and integration of this population into urban life, as proper urban citizens ("şehirleşme" vs. "şehirlileşme"; "urbanization" vs. "becoming an urbanite"). This rapid urban population increase without a corresponding economic development was termed "fake urbanization" by Tümertekin, a scholar in human and economic geography (1979; 1981). Kıray (1998, 1999), Keleş (1972, 1996), and Kongar (1982, 1996) are only some of many important names discussing the urbanization policies of Turkey from its early periods, then look into urban integration and squatter housing in the literature. For the later trends in Turkey's ongoing urbanization, we can look at Yüceşahin, Bayar, and Özgür's study (2004). They state that not all the urban centers in Turkey grow at the same rate; the bigger cities tend to have an even higher population increase. Small cities and towns (less than 20.000 people) have a yearly population growth rate of 2-2,5 %, medium size cities (20.000-100.000 people) have a yearly population growth rate of 3,5 %, large cities (100.000-1.000.000 people) have a yearly population growth rate of 4-5 %, and finally metropolitan cities (over 1.000.000 people) have a yearly population growth rate of 6 % (Yüceşahin, Bayar, and Özgür, 2004, 23). They point to the fact that, the smaller cities and towns surrounding metropolitan cities tend to create new forms of settlement such as metropolitan towns and villages. These merging centers of settlement will necessitate new forms of integrated planning for future urban development in Turkey (Yüceşahin, Bayar, and Özgür, 2004, 39).

Quarantelli mentions the importance of the development process both for the developing and the developed countries in terms of disasters, emphasizing social processes over individual factors; "[…] the social dynamics and processes of communities and societies are where we should seek answers" (2005, 341). Bilgin's explanations involve some aspects of the Dependency and the World-System perspectives. His interpretation of the whole process as an interaction between

developed and developing countries in favour of the developed ones, reminds the relationship between core and periphery countries discussed in the Dependency School (So, 1990, 107). It is possible to argue that the modernization and development process of Turkey involves some characteristics of associated development, combining the contradictory notions of dependency and development together, serving to the advantage of the developed countries, (So, 1990, 140). World-systemic processes had set up the scene for earthquake-related urban disasters in Turkey.

It is at this point that Luhmann's Systems Theory comes into play with its very highly inclusive level of abstraction and its focus on systemic processes. However, we should note here that Luhman's concept of *social system* is very different than Immanuel Wallerstein's concept of *world-system*. Luhmann's conception of the modern society is also global, but it is a complex multiplicity of functional subsystems, involving a complexity more than just economy at its basis, or one large community of human individuals (Moeller, 2006, 54). Moeller (2006, 55) cites Luhmann's criticism of Wallerstein:

> Immanuel Wallerstein's much discussed concept of a capitalist world system is based on the primacy of the capitalist economy and it thus underestimates the contributions of other function systems, especially those of science and mass media communication…Only when one brings to light in synopsis the very different tendencies of the globalization of specific function systems, can one realize the level of change in comparison to all traditional societies.
> (Luhmann, 1997b, 171)

In this quotation with Moeller's own translation, we see that Luhmann makes his point that there are no central, leading, steering, hierarchical relations between differentiated function systems. The high level complexity both in the environment and in the social systems do not allow for determinate maneuvers anymore; because in a complex system "whenever anything determinate occurs, something else also happens, so that no single operation can ever gain complete control over its circumstances" (Luhmann, 1995, 42). Moeller also makes a good point saying that,

"humans are as little in control of social functions as they are of brain functions" (2012, 23). For example, the political system could provide different policies and implement administrative programs about financing women's refuges, or about making divorce more or less easy, about distributing the financial burdens of divorce; but these are just policies and not the actual effects themselves. In other words, politics do what it does; only do politics (Moeller, 2012, 26). Although our perception of politics put it in a more "central" position; what the political system can actually do is just to irritate other systems to a certain limit. The families, or the economy are still going to be operating in their own logics. The function systems operate at the global level, and their different effects on different parts of the world cannot be explained by their positions with respect to a center anymore (i.e. *center-periphery*) since this would mean to "tackle the problem of modernity with too traditional tools and to overlook the structural differences that separate traditional societies from the era of globalization" (Moeller, 2006, 55). In the same manner, the so-called central policies and solutions to the problem of disasters have their functional equivalents, which are asymmetrically self-organizing at the local level.

For Luhmann, the *center-periphery* differentiation of society belongs to a pre-modern period, whereas *functional differentiation* that shapes and characterizes the modern era. However, this does not mean that center-periphery form of differentiation has disappeared. Any previous forms of social differentiation are now subordinated to functional differentiation and co-exist. The influence of global factors in shaping the historical development of the conditions leading to earthquake-related urban disasters in Turkey is obvious as Bilgin summarizes in his article (1999). The difference Luhmann proposes in explaining this situation is that, the local differences we experience are resulting from different levels of inclusion in these global function systems, or rather, from different *resonant capacities* of different locales. Luhmann also mentions the acceptance of a metacode of *inclusion/exclusion* by the society of the 21st century as the worst case scenario, which would mean the exclusion from one function system would start a chain reaction of exclusion from all other function systems (Luhmann, 1997c, 12; Moeller, 2006, 59; Rasch, 2000, 221). The *structural couplings* developed for *resonance*

between these global function systems make the difference in modern society. I will be elaborating on these concepts in the next section.

c - Niklas Luhmann's Social Systems Theory (SST)

I mentioned that conceptualizing the relationship between society as a system, and the environment it defines for itself in a comprehensive way is an important point in discussing the issue of earthquakes and disasters. Luhmann's SST offers a very comprehensive theoretical frame in this sense, to observe the relationships between the *social system* and its *environment*. We should once again note that the concept of *environment* means more than just the physical environment; it refers to the complex internal relationships between the *society as a system* and its *sub-systems* as each other's environment; a complex circular relationship that results from the increasing internal differentiation of the social system. This conceptual comprehensiveness, and systematic philosophy can provide interesting ways of looking at disasters.

For Luhmann, "society […] is quite evidently a self-describing object. Theories of society are theories in society about society" (Luhmann, 1992; cited in Elliott, 1999). The relationship between system and its environment is based on a systemic reduction of the complexity of the environment outside the system boundaries:

> Further analyses of the difference between system and environment will begin with the *assumption that the environment is always more complex than the system itself*. This holds true for all systems that we can imagine. It is also true for the total social system of society. To see this straightaway, one need only remember that society is composed merely of communications and that the highly complex arrangement of individual macromolecules, individual cells, individual nervous systems, and individual psychic systems belongs to its environment – together with all the interdependencies among these systems on whatever levels […] However complex its linguistic possibilities and however subtle the structure of its themes, society can never

> make possible communication about everything that occurs in its environment on all levels of system formation for all systems. Therefore, *like every system, it must compensate for its own inferior complexity by superior order*. (Luhmann 1995, 182) [Italics mine]

The centralized efforts of disaster management and planning, taken as a system, can never be as complex as the social environment surrounding it, which it is supposed to coordinate and make safer. The local organizational partners that emergency response organizations designate, various strategical and tactical plans they make are far from corresponding with what goes on in the social context they are supposed to be implemented in. To make the case more concrete, I can say that AFAD Düzce office is an extension of the political function system, which is segmentarily differentiated into countries and center-periphery differentiated into state as center and non-state periphery (**Figure 2**, page 71). AFAD is located in the center part of the political administration of disaster-related communications in Düzce. In its periphery, located are the associations. Some of these locally self-organized associations engaged in earthquake-related communications in the last major earthquake disaster, without any central impetus to involve them. These various local associations took initiative and got involved in disaster communications. These are the type III extending associations in Düzce. However, when I look at the list of local associations that AFAD currently recognizes as its local partners in disaster planning, I see that only a fraction of them are included. I argue that, from a perspective of predominance of functional differentiation, these excluded associations should be considered as functional equivalents; because they are different solutions for the same disaster. However, the term functional equivalent falls short of expressing the interdependency between functional differentiation and other subordinate forms of differentiation such as the center-periphery differentiation. Therefore, I propose the term *asymmetric functional equivalents* in this thesis.

One of the most important characteristics of SST is that it is an evolutionary theory, conceptualizing the process of system's changing definitions of and relationships with its environment through its own evolution. First, the system is

differentiated from its environment, and then it applies the same procedure of differentiation within itself to produce sub-systems with even further specialization;

> System differentiation is nothing more than the repetition within systems of the difference between system and environment. Through it, the whole system uses itself as environment in forming its own subsystems and thereby achieves greater improbability on the level of those sub-systems by more rigorously filtering an ultimately uncontrollable environment.
> (Luhmann 1995, 7)

> The reason why the system differentiates further into sub-systems is that

> These sub-systems simplify the complexity of dealing with the environment by specializing in one aspect of it, and also provide intellectual simplifications in their operations by each operating according to a simple binary opposition, e.g. 'true/false' in science, or 'guilty/innocent' in criminal law. *Their operation provides simplification of the environment in that they point up to the things to be taken notice of, the ones that matter*, given the vastly multiple differences between any two things.
> (Cuff, 1998, 111) [Italics mine]

At this point, I would like to elaborate on the evolutionary characteristic of the SST with an illustration. I believe this illustration is the very core of the *Social Systems Theory*, and it would contribute greatly to a better understanding of it. I will base this illustration on Luhmann's explanations in his *Social Systems* (1995, 158-163). According to SST, social order is something extremely improbable; because there are three very difficult obstacles in front of the level of information processing required for a complex social order to emerge. I suggest we now go back in time, to the cavemen in Stone Age, to the point when language and speech had not emerged yet.

The first obstacle is that, the bodies, perceptions, and therefore, minds of two cave individuals are separate and they have no direct access to one another's minds.

Each has their own individual perceptual fields, contexts, and memories. With this reason, it is very improbable that these two cave individuals would understand each other. Luhmann puts *understanding* in center, and calls these two individuals as the *alter* (the one trying to initiate communication) and *ego* (the one at whom the communication is addressed, with an expectation of making sense of it, *understanding*) (1995, 158). The *alter* could be taller and see farther, or shorter and see under things the *ego* could not, the *alter* could be color blind, could be deaf in one or both ears, could be blind in one or both eyes, could sense hot and cold differently due to a different metabolic speed or simply due to having more or less body hair, could be perceiving the notion of weight differently due to being stronger or weaker, could be sick or pregnant at the time, could have been through experiences the *ego* had not, could have a different genetic mutation, could be suffering a fractured bone or just bloating, could be male or female or a hermaphrodite…These examples of possible differences and combinations of them can be extended to an overwhelmingly long list; but the point is that, these two grunting and scratching cave individuals have separate bodies, separate sensory processes, separate perceptual fields and memories, and it is very improbable that they will successfully start and continue a process of communication; instead of just fighting or going their own ways frustrated with failure. Even if they seem to get their Stone Age communication going against all odds, at some point, we should not forget about the factor of mis-*understanding* waiting ready to reset or abort the whole communicative attempt between them. This is not the only source of improbability against communication and social order, but just the beginning.

The second obstacle, which combines with the first one and makes communication and social order even more improbable, is the problem of reaching third parties. Luhmann argues that it is a twofold obstacle; a) "it is improbable for the communication to reach more persons than are present in a concrete situation" (say, to another, third cave individual on the other side of the hill), and b) the improbability grows if we demand that it reaches the third parties unchanged (1995, 158). Let us say that our first cave individual (*alter*) ran into a mammoth on the plains on this side of the hill, and she perceived the animal through her sensory capabilities. The second cave individual (*ego*) came shortly after, to see the

footprints of the mammoth but not the animal itself. Imagine the *alter* trying to express what the animal looked like to *ego*, what she wanted to do with it (e.g. hunt it), and how to do it, and what tools and strategies they needed to do so…The two might establish a minimal level of understanding based on their level of acquaintance, if they have already known each other. However, when *ego* goes out to the other side of the hill, (now becoming the *alter* of a new communicative attempt) to run into another cave individual (another *ego*). Starting with an already questionable level of understanding from the previous communication, depending on what she understood from the *alter* about an animal that she has never seen, now she is going to try to communicate with a third cave individual about it. It is improbable that this third cave individual (*ego*) will be interested in what she (*alter*) has to communicate in the first place, and even more improbable that the *alter* got it right (that is when she was the *ego* before she came to this side of the hill). The situation is pretty much the Stone Age version the game of 'Chinese whispers' in kindergarten, in which a group of children sit in a circle and whisper a certain message into the next one's ear until the last child announces it aloud, possibly containing lots of changes and distortions, and sometimes an entirely different message. First, let us say she got 40 percent of what the first cave person meant, and now she can only transfer a fraction of what she means to the third cave individual. And second, she might not be received with so much curiosity on this side of the hill; because "people elsewhere have other things to do" (Luhmann, 1995, 158). At this point we should also be adding; c) the temporal factors at play. The capacity of individual memory hugely restricts what can be transferred to third parties and how accurately. In addition to the improbability of transferring the same communication unchanged to the cave individual behind the hill immediately, it would probably get even more difficult to transfer it, say, a month or a year later (assuming that she survives to tell the story). The communication has the quality of decaying instantly, let alone every passing second, hour, day or year; and the improbability does not end here.

The third, and final, obstacle to communication and social order is the improbability of *success*. Luhmann says "even if a communication is understood by the person it reaches, this does not guarantee that it is also accepted and followed.

Rather, 'Every assertion provokes its contrary' " (1995, 158). This final point also gives us a clue about the primacy of communication over action in SST. If we were to take 'action' as the building block of society, then we would be missing all the required coordination and information processing that takes place before any social action is intended. According to Luhmann, these three combined sources of improbability also operate as thresholds of discouragement, since "anyone who believes that communication is hopeless lets it pass" (1995, 159).

Having mentioned the obstacles and sources of improbability in front of communication and social order, now we can better make sense of why SST considers all social order as improbable, and why it attributes order an emergent character rather than seeing it as an intended phenomenon. However, in spite of all the obstacles, against all odds, there is social order today. That is firstly because, improbable does not necessarily mean impossible; order emerges as a result of a process of *sociocultural evolution* "reshaping and widening…the chances for foreseeable communication" (Luhmann, 1995, 159). Here, once again, we should remember that the concept of *evolution* does not refer to any goal orientation towards better, or more (i.e. progress); but just adapting to the problems present:

> […] the history of sociocultural evolution based on communication does not offer the picture of a goal-directed progress toward ever increasing understanding. Instead, one could view it as a kind of hydraulic process of repressing and distributing the pressure of problems. Once one problem is solved, the solution of others is even less probable. The suppressed improbability transfers itself, so to speak, into other problems. If ego understands a communication correctly, he has more reason to reject it. If the communication transcends the circle of those who were present at its inception, then understanding becomes more difficult and rejection easier; the interpretative assistance and pressure to accept provided by interaction are lacking. This interdependence of problems works selectively on what comes through and confirms itself as communication.
>
> (Luhmann, 1995, 160)

Now, let us have a look at the evolutionary solutions to each one of these three obstacles in front of communication and social order. The solution to the first improbability, resulting from separation and difference between the *alter* and *ego* is the system of *language*. Language, for Luhmann is "the medium that increases the understandability of communication beyond the sphere of perception" (1995, 160). Using this medium of acoustic and optical signs for meaning helps reducing the complexity by rules for the use of signs, creating a bounded combinatory capability; and "extending the repertoire of understandable communication *almost indefinitely in practice* and thereby guaranteeing that almost any random event can appear and be processed as *information*" (Luhmann, 1995, 160). This solution corresponds with the first type of social system in Luhmann's theory, that is the *interaction system*, which is characterized by the presence of all parties taking part in communication. The two cave people I mentioned previously can now talk about the mammoth, try to describe it, see if they agree or not, and make plans about what to do and how.

Another important aspect of language is that, it is a beautiful example of the concept of *functional equivalents*. As I mentioned earlier, SST argues that all of the distinctions, selections, and decisions made by the social systems are contingent and that it can always be otherwise. Functional equivalents are different solutions for the same problem, using different distinctions, different selective logics, and different decisions. There is no one single correct, or best language on planet earth; but there are only different languages to solve the same problem of coupling the psychic system of the human species with the social system (i.e. *interpenetration*). French is not any superior to, say, Polish in transferring the contents of a psychic system to the social system and vice versa. All the hundreds of languages spoken around the planet now, and thousands of dead and lost languages in human evolutionary history, are just different local solutions to the same problem; they are *functional equivalents*. Every language makes different distinctions, therefore loses some different bits of information as it gains others advantages. For example, some languages have certain words that no other languages ever have, or expressions that are never possible in other languages, or some tenses and modalities expressed totally differently or non-existent in still other languages; but they evolved as solutions to the same problem. It is as if the social system keeps growing different tentacles, just like a giant

organism, to perceive its unpredictable environment of human species and highly variable content of their psychic systems. As a result, there is not one single and best way to make linguistic distinctions and establish rules; none of the rules are principal or inevitable. However, once a specific set of distinctions is made, it starts making a difference on the future distinctions to follow.

The evolutionary response overcoming the second obstacle of improbability was the emergence of *media of dissemination* as a result of *language*. The means for spreading the communication to third parties, such as writing, printing, and later different forms of broadcasting developed (Luhmann, 1995, 161). Of course, we should keep in mind that, evolution just displaces and distributes the problem, transferring them to other problems; so while the *media of dissemination* addresses the problem of transferring the communication to the third parties, who are not present at the time of initiation, new problems arise resulting from the peculiar selectivity of this media about what can and what cannot qualify for selection for dissemination:

> The media used for dissemination have their own technique for making selections; they create their own possibilities of maintenance, comparison, and improvement, which can be used via standardization. In comparison with oral transmission, which is bound to interaction and individual memory, this greatly extends, and at the same time constrains, which communication can serve as the basis for further communication. (Luhmann, 1995, 161)

The third and final evolutionary solution addresses the success of communication; *symbolically generalized communication media.* The basic function of this evolutionary achievement is to match communication with the intended behavioral outcome. Luhmann states that these "standardized 'basic values' […are] generalizations to symbolize the nexus between selection and motivation" (1995, 161). To give examples, truth (for science), love (for intimate relationships and family), money (for economy), power (for politics), jurisdiction (for legal system), faith (for religion) constitute *symbolically generalized communication media*. These

are the basis for the formation of *codes*, according to which *function systems* can operate, specify and select relevant communications and behavior.

All differentiated *function systems* operate in terms of their own codes, and reproduce themselves through communication about themselves through their mediums in an *operationally closed* manner. Some of the function systems and their codes could be seen in **Table 7**.

Table 7. Some Function Systems, their functions and operating codes

System	Function *(conceptual)*	Efficacy *(applied)*	Code *(distinction)*	Program *(code operationalization)*	Medium
Law	elimination of the contingency of norm expectations	regulation of conflicts	legal / illegal	laws, constitutions, etc.	jurisdiction
Politics	making collectively binding decisions possible	practical application of collectively binding decisions	government / opposition	programs of political parties, ideologies	power
Science	production of knowledge	supply of knowledge	true / false	theories, methods	truth
Religion	elimination of contingency	spiritual and social services	immanence / transcendence	holy scriptures, dogmas	faith
Economy	reduction of shortages	satisfaction of needs	payment / nonpayment	budgets	money

(Moeller, 2006, 29) [Italics mine]

Quite in parallel to the three obstacles in front of communication and the three evolutionary achievements to solve these problems, Luhmann identifies three types, or levels of *social systems*. These are the *interaction*, *organization*, and the *society*. Here are the concise definitions of these concepts:

> Social systems are autopoietic systems that reproduce themselves on the basis of communication. Their elements are communications that produce further communications.
>
> [...]
>
> Interaction systems are a particular type of social system, which produces itself on the basis of particular communications: communications among

people present. They presuppose the participants' reflexive perception of their physical presence.

[...]

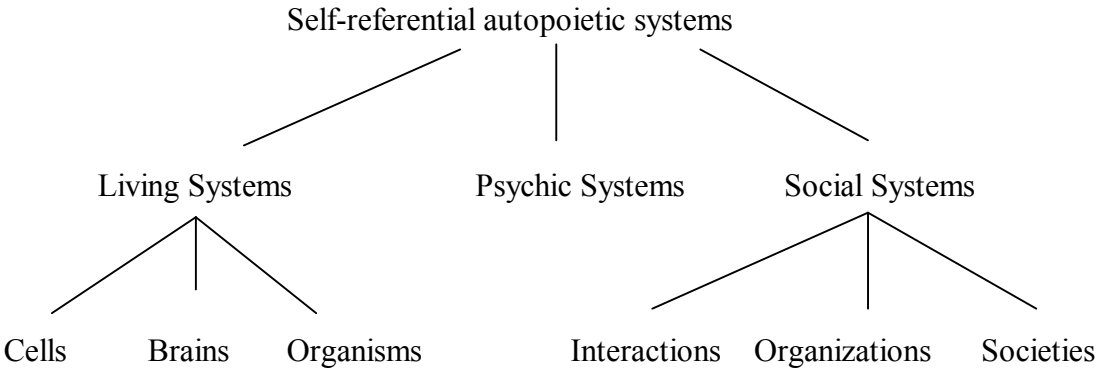
Organization is a particular type of social system that reproduces itself on the basis of decisions.

[...]

Society is a particular type of social system, which includes all meaningful communication and is always formed when communication refers to other communication. All other types of social systems take place within society. Besides reproducing themselves, they always reproduce society.

(Seidl & Becker, 2005, 407-410)

Figure 1. Self-referential autopoietic systems



(Luhmann 1986; cited in Seidl & Becker, 2005, 65)

We should note that, in these definitions, the individuals are not the building block of any of these the *social systems* for the SST, but its *environment*. Villadsen emphasizes that; "functional systems are abstract systems of communicative logic that exist in modern society. They have no specific location or physical boundary since any organization system or interaction system can communicate through, or one might say 'activate', their codes" (Villadsen, 2008, 67). However, this should not mislead us to think they have their own consciousness; as Lee states "Systems […] cannot be reduced to some transcendent consciousness. Systems exist as the

historical and contiuning relations between things." (Lee, 2000, 323). Another important point made by Lee is that "individuals seen as separate entities, are socially meaningless. One does not locate society *inside* individuals but *between* them." (Lee, 2000, 322). Luhmann clearly puts forth his position about the place of individual human individual (the traditional 'subject') saying "a person's consciousness is environment for the social system" just like the chemical system of cells is environment for the brain (Luhmann 1995, 179). We can ask what constitutes social system if humans are only the environment; the answer is *communication*. As Lee puts very consisely that the "individuals are always more outside of society than inside it" (Lee, 2000, 322). The idea of locating society between individuals, rather than inside of them inspired this study as well. In this thesis, I am trying to locate the earthquake resilience between individuals; in the way they produce decisions to engage in earthquake communications by their already existing voluntary local organizations (associations), and in the way centralized disaster management (AFAD) connects to these local self-organized structures in the long run.

Considering that communication constitutes social systems, then we should add that "communication is possible only as a self-referential process" (Luhmann 1995, 143). In other words, we can say that only communication can produce further communication; human beings are only part of the environment in which communication emerges. *Autopoiesis* is the term used for this characteristic of systems for Luhmann. It means that, the reproduction of the constitutive elements of a social system (i.e. communication) is carried out only by the very operations of the system itself. *Autopoietic systems* are self-referential systems on the level of their elements (Luhmann 1995, 35). Every communication refers to previous communication. As a result of *autopoiesis* (the self-referential reproduction) the social system is *operationally closed*.

Operational closure is the basis of maintaining the distinction *system / environment*. This means that the environment does not, and cannot, directly interfere, change, or manipulate the system; only the system can do these to itself through its own mechanisms. The environment can only interact with the system through ways defined by the system to interact with it. This takes place through

channels of *irritation* and *resonance*. The relationship between the system and environment is not a simple direct input-output type of relationship, but the system sees the environment in terms of its own operating codes. Actually, it is not the best idea to use the terms input and output for the SST; because what goes into the system is not what you put in (i.e. it cannot be deterministically controlled). What we intend as an input might not be received the same way by the addressed function system. The environment's input can only enter the system through the channels defined by the system, and this input has to be transformed into a recongnizable form using the system's code. Only the system can define how the initial input is processed and made sense of; so for an operationally closed complex system, the traditional term input stops being what it is anymore "for all these systems, input is also the output and vice versa" (Moeller, 2012, 129). Luhmann calls this *resonance*; and it requires *structural coupling* to work. Structural coupling means that, "there is no causal determination of the state of one system by another; but there is simply a channel of reciprocal irritation" (Rasch, 2000, 208). Moeller explains it with the example that:

> Systems such as politics and the economy can be 'connected' in such a way that the operations of one system more or less continually 'aim' at the operations of the other system…[e.g. taxes and tariffs]…Structural coupling does not violate the operational closure of systems; rather it establishes specific interrelations between different autopoietic processes.
> (Moeller, 2006, 37).

Only once a structural coupling is established, can the system *resonate* with its *environment* (remember that all social subsystems are the environment of each other). Again, what you will get cannot be determined externally, but it is determined by the systems' internal operations. And the flipside of the coin is that, once a structural coupling is established, it never works one way; this means, "a system that irritates another cannot, in turn, avoid being irritated" (Moeller, 2006, 39). Luhmann gives this example for the process:

> Just as the brain is almost completely isolated from everything that occurs in the environment by the extremely small physical capacity for resonance of eye and ear, so too the system of society is almost completely isolated from everything that occurs in the world – with a small range of stimuli which are channeled through consciousness. What applies to the brain also applies to the society: this almost complete isolation is the condition of operative closure with the possibility of the construction of high internal complexity.
> (Luhmann, 1992)

In this sense, modern, central disaster management and planning as a social system, based on another systemic difference (not health, not education, not military, etc. but disaster management and planning) is also almost completely isolated from everything that occurs in the world; because operational closure by reducing its horizon into systemically relevant communications only is the primary condition to identify itself as a system separate from other systems. The "world" outside this system includes the very locale where such plans are to be implemented. The only way to overcome this systemic blindness is to establish channels of resonance with the environment. Just like the brain resonates with the outside world through senses of sight, sound, touch, smell, and taste, the central disaster management and planning can only resonate with its environment, by means of establishing channels to recognize other possibilities and alternative solutions to its own problem. Since we are talking about a centralized effort (AFAD), as the part of political system, the locality and hence the asymmetry plays a role in this process of recognition. This is the reason why I propose calling these local self-organized non-specialized disaster efforts *asymmetric functional equivalents*.

When introducing the general systems theory, Cuff et al. say that "a system is less complex than its environment since, after all, the environment is everything which is not in the system, i.e. everything else" (1998, 110). However, the environment for Luhmann is not just everything else outside the system. The system and its environment should be taken together as a unity, since "the system is neither ontologically nor analytically more important than the environment; both are what they are only in reference to each other" (Luhmann, 1995, 177). In a sense,

environment is not just everything else outside the system, but every other relevant thing outside the system. For Rasch, in Luhmannian sense:

> Environments do not preexist systems but are called into being, through exclusion, by the systems they thereby help define. There is no system from which one can observe all others, tally their features, fit their "edges" back together, and come up with the "whole" from which these "parts" were originally cut. Rather, systems, when they define themselves in distinction from everything else (their environments, which may include other systems), "actualize" a world. Thus "world", for Luhmann, designates the unity of system and environment, but there is no way to "see" this world, not even imaginatively, as a whole constructed of parts, because to see it would require making another "cut", another system – environment distinction…
> (Rasch, 2000, 88)

Perhaps, the notion of complexity that Luhmann's conceptualization tries to capture could be summarized in his own words best; "Everything that happens belongs to a *system* (or to many systems) and *always at the same time to the environment of other systems*" (Luhmann, 1995, 177). Since there is always a synchronic and simultaneous operation in a complex system, "whenever something happens in the world, Luhmann asserts, it happens many times" (Lee, 328; Luhmann, 1997b, 599). An old mosque collapses in Düzce (Merkez Büyük Camii); for the local people who regularly pray in that mosque that means the loss of a public service building and should be immediately re-constructed; for the General Directorate of Foundations, that means the loss of a historical artefact and valuable property, so it should not be rushed for a proper historical restoration; for the municipality that means more debris to remove; for the court of law, it means a conflict of interests between the mosque association and the General Directorate of Foundations.

In terms of disaster planning, we can say that the local associations that I study in this research are the environment of various organizations including each other and government agencies (e.g. AFAD). They are also engaged in multiple

function systemic communications (legal, economic, political, scientific, cultural, artistic, sportive, educational, etc.) within their own organizational boundaries at the same time. Centralized state organizations can sometimes become significant hindrance in front of timely local disaster response, as in the case of Merkez Büyük Camii reconstruction. The same selective asymmetry is valid for facilitating, as well as hindering, local organized activities (e.g. National Olympics Committee providing sportive aid to local karate club). In an evlotionary sense, I argue such centralized social systems possess an asymmetrical position in processes of evolutionary variation and selection/stabilization. Thus, I argue that the type III extending local associations can be interpreted as the *asymmetric functional equivalents* of specialized government agency in terms of disaster response and planning.

The issue of structural coupling is also important for its effect of increasing system complexity. According to Moeller;

> If a continuous irritation-resonance relationship between two systems is established, then increases in the structural complexity of one system will bring about increases in the structural complexity of the other…Through structural coupling, systems cannot steer other systems or directly interfere in their operations. They can, however, establish relatively stable links of irritation that force other systems to resonate with them.
> (Moeller, 2006, 38-39)

The impossibility of steering *society* through a central subsystem, and the impossibility of directly determining input-output relationships for the social systems involve a very fundamental difference of the SST from most other sociological theories in terms of its conception of the *society*. For the SST, like Moeller states, "society is not *composed* of social systems; it is the reality that results from systemic differentiation." (2006, 40) [italics mine]. Luhmann dismantles the idea that the society is based on unity, and the conception of the society as a whole composed of parts. For him, society is based on differences and distinctions; "Society is not made up of small units that constitute a larger unit, it is rather based on differences that constitute more differences". (Moeller, 2012, 25; Moeller, 2006, 40). It is very ironic

that the boundaries created by the differences and distinctions for separation, are at the same time points of contact. The boundaries are, like Luhmann says, "separating yet connecting" (1995, 29).

The quotation below explains the importance of difference and distinction for society over unity; and also I believe, it marks the point of fundamental difference between Luhmann, and his former advisor Parsons (I will elaborate on this issue later):

> Society emerges on the basis of contingent differences drawn by emerging systems. The economy becomes the economy by operating economically in a noneconomic environment. It starts creating an economic world by treating things and communications in its environment (the fruits on the tree, their consumption, their exchange, for instance) economically. It distinguishes itself from other communications and things outside communication and thus establishes itself within society. It becomes another difference within differences already made. None of these differences "have to be" made, but once they are made, they make a difference. There is no principal need for establishing a social system of economy, education, or politics. The existence of society is not by its "nature" dependent on these systems.
> (Moeller, 2006, 41)

This importance of *difference* as the very basis of the modern *society*, has its effects of differentitating, and therefore thematizing the whole human individual into her relevant communicative aspects for every single function system, and making her a modern 'person'. As Seidl & Becker puts it, persons are expectation-structures thematically divided by and for communication (2005, 182). Luhmann himself states that the success of function systems depend on neglect:

> And what can we expect when we know that the very success of the function systems depends upon neglect? When evolution has differentiated systems whose very complexity depends upon operational closure (and the

> paradigmatic case is, of course, the brain), how can we expect to include all kinds of concerns into the system?
> (Luhmann, 1997c, 10)

This has to be the case, since the level of complexity in the environment exceeds the possibility for a one-to-one correspondence to be reproduced inside the system's boundaries, and the system has to counterbalance this *incomprehensible complexity* with a *structured complexity* (Luhmann, 1995, 26-27). The *structured complexity* is carried out by "exploiting…its [system's] pattern of selections" (Luhmann, 1995, 27); and "the very condition of seeing *something* is not to see *everything*" (Moeller, 2012, 72). Complexity, for Luhmann means, "being forced to select; being forced to select means contingency; and contingency means risk" (Luhmann, 1995, 25). Lee makes the same point using the discipline of Sociology itself as an example of systemic boundary setting;

> Sociology, like any other social system, becomes a society at the expense of narrowing its field of vision. In this sense, Luhmann's perspective is phenomenological. Consciousness is always intentional, it is always consciousness of something and not everything.
> (Lee, 2000, 324)

The social environment of the modern society is significantly more complex when compared with the previous periods, with a much bigger population and an explosion of the means of communication. In other words, the incomprehensible complexity has increased dramatically in the modern period, and keeps increasing. As a result, the structured complexity within the system had to increase as well. The system is still less complex than its environment; only a fraction of all the communication potential, or all possible combinations are realized in today's global society. However, system's internal complexity keeps increasing in a structured way to keep up with its environment. The selections of communicative channels and connections is structured primarily on a functionally differentiated basis.

Having mentioned the importance of the distinction *system / environment*, *functional equivalents*, *codes*, *3 types of social systems*, *operational closure*, and *structural coupling*, and the fundamental role of *distinction*, I should now elaborate on different types of differentiation Luhmann mentions in SST. The most basic form of differentiation is *segmentary differentiation*. This was the dominant form of differentiation in the archaic societies, where the actual physical human individuals were distributed, living in groups such as families, households, and clans (Seidl & Becker, 2005, 36). Just like the independent segments of an earthworm, these segments were able to survive independently on their own. As these families, households and clans gathered together in time, clustering in the form of towns and cities, a new form of differentiation emerged; the *center-periphery differentiation*. The physical distribution of the whole pysical human individuals is still dominant, and it starts to make a difference where one is located. As the relationship between the center and the periphery advances, we witness the emergence of a new type as the third one; *stratificatory differentiation*. Different strata and classes are formed with a hierarchial relationship between them, and now human individuals are physically distributed among the strata. The inherited rank and status become attributed to each stratum. The caste system, or the medieval aristocratic classes are examples of this one. The fourth, and the last type, *functional differentiation* came up around the 18th century with the emergence of the modern society (Seidl & Becker, 2005, 36). With this one, the most important change took place as disintegration of the human individual into communicative aspects to be distributed among differentiated function systems. While the human individuals in their wholeness were physically distributed among segments, locations, or strata in all three previous types of differentiation, now the communicative aspects of human individual were taken apart, thematized and distributed among functionally differentiated communication systems such as the economy, politics, law, religion, and so on (Moeller, 2006, 46). Moeller (2006, 47) quotes from Luhmann about this fundamental change in the logic of differentation:

> When society changes from stratification to functional differentiation, it has to dispense with the demographic correlates of its internal pattern of

differentiation. It can no longer distribute the human beings who contribute to the communication of its subsystems as it had been possible with the schema of stratification or with center/periphery differentiations. Human beings cannot be distributed to the function systems in such a way that everybody would only belong to one system so that one would, for instance only take part in the legal system, but not in the economy, only in politics, but not in education, etc. This leads finally to the consequence that one can no longer claim that society consists of human beings, since human beings can obviously not be located in any social subsystem, and thus nowhere in society.

(Luhmann, 1997b, 744)

This is the fundamental reason why Luhmann does not favour holistic, undifferentiated and anthropocentric concepts such as 'community' or 'civil society' in his theory of the modern society. I will be elaborating on Luhmann's refusal of the concept of 'civil society' later. The concept of community suggests a physical distribution of the whole human individuals, and according to the SST, this conception of human beings is irrelevant for the routine functioning of the modern society. Şimşek warns about misunderstandings, stereotypical judgments and oversimplifications about these two concepts:

> […] the concepts of civil society and community have been understood as if they were synonymous. Presumably, civil society consists of the groupings of free individuals; whereas community is a more natural group of people into which individuals are born. In reality, it is actually very difficult for individuals to leave the binding community life and step into the associational life of civil society.
>
> (Şimşek, 2004, 47)

Even though Şimşek does not relate to the SST in his warnings, he goes on to indirectly describe what Luhmann explicitly states in his refusal of 'civil society' as

an umbrella term incapable of recognizing functional differentiation and complex modern systemic boundaries:

> […] civil society is generally understood as a single, homogenous society. This is not actually true. There are different civil societies, or more precisely, different groups in civil society. These groups may have variegated interests and exhibit separate political attitudes.
> (Şimşek, 2004, 47)

Functional differentiation leads to a reciprocal neglection and exclusion of all function systems from one another as irrelevant streams of communication, while each function system in itself aims to be universally inclusive for all communications using their respective medium and codes. The 'whole individual' means loss of universality from the modern social systems' point of view, because processing all the complex unpredictability of individual can only be made possible through more and more specification by functionally differentiated systemic codes. The only system in which an individual can be referred to in her wholeness is the family, and intimate relationships based on the symbolic media of 'love' in modern society;

> [...] love operates according to the counter-condition that the individuality of the experiencing person is not neutralized but is turned into the very point of reference of the reductionist process [...] love lacks the condition of universality which is attracted to [e.g.] truth, and that is why it is able to confirm a more concrete, proximate world (Nahwelt) [...] more restricted selection which can no longer be applied to everyone.
> (Luhmann, 2010, 12)

However, the case of an earthquake disaster is an important moment of collapse of the modern systemic reductions based on functional differentiation. Disruption of the routine functional interdependence among the function systems, and the collapse of the routine systemic reductions in communication force the persons to be individuals again in a premodern sense, although temporarily.

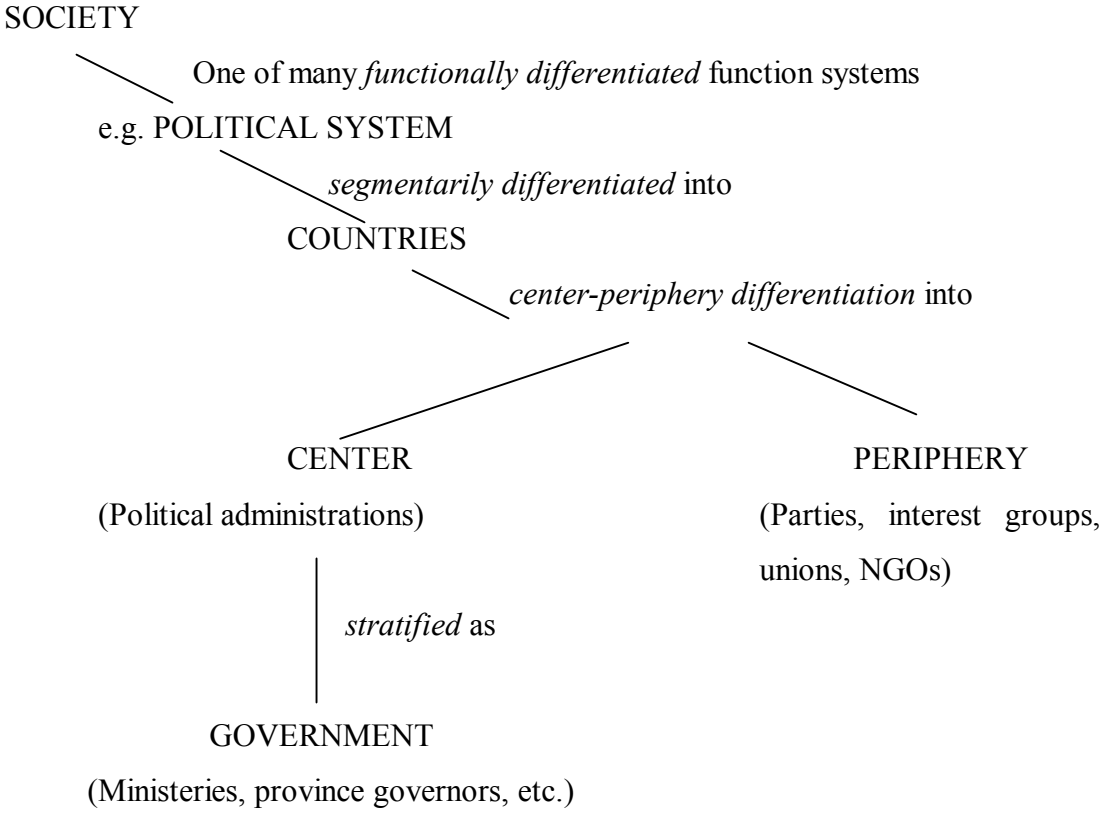
Luhmann clearly states in an interview that, "[…] it would be a catastrophe for modern society if we go back to a stratification or segmentation. This could only be the outcome of a technical catastrophe, or an environmental catastrophe" (Rasch, 2000, 203). The disaster context can be thought of as a flashback in evolutionary process only for a limited period. The historical flow of the sociocultural evolution process I mentioned earlier using the cavemen analogy, from segmentary up to functional differentiation, can be observed in fast-forward after a disaster. Interaction systems with physical presence gain critical importance all of a sudden immediately after the time of first impact, since all other social structures momentarily fail to function in the first hours and sometimes days of disaster impact, families, neighbours, friends, and sometimes complete strangers present at the scene react and respond to the earthquake. In the following days and weeks, and sometimes months, these interactions might give rise to new, emerging organizations or the existing ones might restore their organizational communications and procedures. And in the long run, like years and decades, the earthquake-struck population's inclusion in the larger social systemic communication processes (education, economy, etc.) is slowly restored. None of these processes can be managed exclusively by central plans, but definitely rely on recognition and cooperation with the already existing connections of the local stakeholders. The macro-level, central planning and "steering" efforts are hanging up in the air without the recognition of local efforts in the same direction, their micro-level footing; their *asymmetric functional equivalents*.

From a systemic percpective, the functional differentiation is a way to reduce and handle the increasingly complex social environment of the modern world; because "when the number of elements that must be held together *in a system* or *for a system as its environment* increases, one very quickly encounters a threshold where it is no longer possible to relate every element to every other one" (Luhmann, 1995, 24). The modern society came with an explosion of the opportunities in telecommunications, travel, transportation of humans and goods, variation of services, the venues of interaction, a boom in population; in short with an avalanche of complexity that exceeded the existing communal capacity to handle. Now the entire human species was connected around the planet; complex relations and

interdependent needs emerged. The trade off was that, such a complexity could not be held together if the complex whole of the human individual was not reduced into its communicative aspects on which to build expectation-structures. Division of the whole individual into communicative aspects and the functional differentiation of the society and were evolutionary responses, in order to solve the problems of complexity.

It should be emphasized that the emergence of functional differentiation does not mean disappearance of the previous forms of differentiation. They still exist, but only as subordinate forms. To clarify the picture, let us draw a world picture using SST and different forms of differentiations used by Luhmann (**Figure 2**, page 71). In the global level, we have *functional differentiation*, as an abstract global logic of thematizing all communication and matching actions/behaviors of persons with these themes of communications (e.g. economy, science, politics, etc.). The first example is that you have to take money with you to wherever you go on the planet as a tourist, knowing that payment/non-payment is the action code for even the most trivial financial transactions (there are always exceptions as subordinate forms of transaction, such as occasional gift exchange; but the dominant generalized media for economic trans*action* is still money in modern society). The second example is that of science system. No matter in which part of the world a scientific article is written, in which scientific discipline, and by whom, the validity of that article is judged according to the code true/untrue. There can always be stratificatory power relations influencing and interfering its publication; manipulating structural couplings and violating functional differentiation. These are cases of *de-differentiation*, and they violate structural expectations like all other cases of corruption. However, these exceptions still cannot change the scientific validity of the article.

Figure 2. Exemplary world scheme for Political Function System according to SST (based on Seidl & Becker's explanation; 2005, 184).



One of the global function systems is the *political function system*; and the political system is segmentarily differentiated into countries, which are separated by arbitrary political borders. The countries on the other hand, are internally differentiated into *center-periphery*. The periphery holds the parties, interest groups, unions, and organizations outside government, while the center is internally differentiated into *stratified* layers holding the political administrative elements, all of which are related to each other with a relative power and hierarchy (government, ministeries, province governors, municipalities and so on) (Seidl & Becker, 2005, 184). **Figure 2** (page 71) provides my visual presentation of the world scheme based on Seidl & Becker's explanation (2005, 184).

d- Functional Structuralism of Luhmann, not Structural Functionalism of Parsons

As we have already seen, functional differentiation is the prevalent form of differentiation in the modern society according to SST. This functional concern might make it necessary to point at the difference with Parsons' Structural Functionalism. Parsons and Luhmann worked together for a year in Harvard in 1962, Parsons being Luhmann's supervisor. Bechmann & Stehr summarize the difference of Luhmann's theoretical thinking from Parsons as

> In contrast to his early mentor Talcott Parsons, who defined systems by means of the presence of collectively shared norms and value patterns, Luhmann proceeds from a system concept shaped in a strictly relational manner.
>
> […]
>
> Such a research strategy is due to an elementary conviction of the improbability of the emergence of social order. *Everything could in principle be different*. From Luhmann's perspective, social structures have nothing self-evident to them: they require permanent new social construction from the view of their existence and of their determined shape. In contrast to the functionalism of the Parsonian persuasion, Luhmann is not committed to the preservation of social systems. On the contrary, the *contingency* and complexity of the social is the starting point of all of his theoretical efforts.
> (Bechmann & Stehr, 2002, 70) [Italics mine]

Their sense of theoretical scale was also different:

> Luhmann acknowledged that "society" is the most difficult concept sociology has inherited from its past, but he rejected his doctoral supervisor Talcott

> Parsons' earlier notion of a system of societies by declaring that global society represents one system in and of itself.
> (Luhmann 1997b, 67; Mitchell, 2007, 107)

> The second prejudice which blocks conceptual development consists in the presumption of a territorial multiplicity of societies. China is one, Brazil another, Paraguay is one and so too then is Uruguay. All efforts at accurate delimitation have failed, whether they rely on state organization or on language, culture, tradition. Of course there are evident differences between living conditions in these territories but such differences have to be explained as differences within society and not presumed as differences between societies. Or does sociology want to let geography solve its central problem?
> (Luhmann, 1992, 68)

As we can see, the most important divide between their theoretical structures is the factor of contingency, that everything has a potential to be otherwise. While Parsons conceptualized the society as a system that sought to fulfill certain specific functions to exist and to integrate all sub-systems in a linear and normative manner, Luhmann accepts that there is no blueprint to follow (i.e. all distinction made by the system are contingent) and that everything is produced again and again on the basis of differences, with the chance to dissolve at any time if this reproduction ceases at any moment. The incident of a major earthquake leading to a large-scale urban disaster disrupts the routine reproduction of systemic communications and boundaries, and in a sense reveals this need for constant reproduction. While Parsons' conceptualization of social functions revolves around a normality to acquire and maintain, for Luhmann normality is an improbable and only emergent phenomenon (1995, 114), and all functions have *functional equivalents* indeed. The fact that some things are the way they are because they are successful solutions to some problems does not mean that there cannot be other equally successful solutions for the same problems. For Luhmann, this phenomenological reduction lies at the heart of scientific curiosity and analytic interest (1995, 114). In Luhmann's terms, reducing the complexity of the environment mandates selection, and being have to select leads to contingency since a different selection is always possible (Ritzer,

2000, 186). The structure comes into play referring to the relations between these emergent functional chains of decisions in society; not as an ideal, essential, meant-to-be, ultimate scheme to be carried out sooner or later. What structure suggests from SST perspective is that once a distinction is made in a certain way, the following distinctions are influenced by it. In short, we can say that while Parsons was conceptualizing a structural functionalism, Luhmann conceptualized a functional structuralism. And the level of abstraction for Luhmann is much higher when compared to Parsons' rather conservative and classical approach, replacing *normality* with *contingency* and thus opening the door to alternatives and functional equivalents. Luhmann's conception of society, or the social system, includes the whole world population.

Yunus Yoldaş also mentions the important theoretical separation between Parsons and Luhmann in his work. He concisely states that for Parsons, "The existence of a system principally depends on certain functional prerequisites […] and every system aims at an optimal balance [equilibrium]" (Yoldaş, 2007, 24). The most important criticism about Parsons is that his theory is biased and conservative, and that this conservatism is a result of his lack of a theoretical explanation for power struggle, conflict, and change (Yoldaş, 2007, 38). Parsons starts with the question "Which specific functions need to be fulfilled in order to secure the existence of future social relations?"; thus the specific structures determining the social systems are seen as prerequisites, maintaining social order with their functioning (Yoldaş, 2007, 49). For Parsons the functions dictate certain specific structures, whereas for Luhmann society is a self-organizing and self-reproducing (autopoietic) system (Yoldaş, 2007, 50). Parsons' approach is similar to arguing that all living organisms must breathe in order to live, and only a limited number of corresponding structural arrangements are dictated by breathing function. For Luhmann, the structures are not dictated by their functions, and no functions are essential for the existence of society as a system. Life, as in the case of anaerobic organisms, does not dictate breathing, just like evolution has no preset aim to reach. It is just an accumulation of solutions from moment to moment. There is not a norm to conform with, and the distinctions are contingent; there is always a chance for a distinction to be made otherwise, and therefore the functional equivalents can emerge.

e - Social Systems Theory, Ecological Communication and disasters

In a sense, I can summarize Luhmann's point like this; the *society* does not see the nature directly, but sees it through different definitions it makes of the nature. Just like the brain does not see directly; but senses light through eyes indirectly and then interpret. What the human eye can see is only fraction of electromagnetic radiation spectrum, and there are many other different eye formations in nature, all sensitive to different wavelengths of light. Apparently, all of them have some limitations. Luhmann's work *Ecological Communication* (1989) makes the exact point, while discussing the ecological movement from the systems theory perspective. Fuchs' review of the book very concisely summarizes Luhmann's point:

> Modern society reacts to environmental crises mostly through its functionally differentiated subsystems, such as law, politics, science, and the economy. […] All of these systems employ "binary codes" to structure their operations, such as legal/illegal (the law), true/false (science), and the holding/nonholding of office (politics). […] A system can react to the environment only in terms of its code. For example, the binary code of the economy, payment/nonpayment, forces communications to be expressed in the language of prices and profits. This means that the economy can react to the environment, but as an autopoietically closed system it can do so only if it translates the language of nature into that of payments and prices. Whatever cannot be expressed in this language cannot be processed by the economy qua autonomous system. As a result, the transactional time frame of the economy is not coextensive with natural time, a situation that creates a structural blindness toward problems that cannot be translated into economic problems: "Even if, for example, fossil fuels deplete rapidly it may 'still not yet' be profitable to switch to other forms of energy" (Luhmann 1989, 57).

> Similar restrictions apply to all the other function systems and their limited resonance capacity Luhmann discusses (law, science, religion, education, politics). Functional differentiation means that no system has privileged status and that no system can impose its way of dealing with the environment on others. There is no one formula for solving ecological problems, only various systems with limited resonance. Modern society has no center and is thus "homeless." The new social movements complain about the loss of meaning and demand new values that escape the contingency of systemic choices. They introduce permanent anxiety as an irrefutable substitute a priori, but this only creates inarticulate excitement, not realistic ecological perspectives. The pessimistic message of this book is that "we" can do nothing and the systems, very little.
> (Fuchs, 1990, 748)

This summary tells us why it is difficult for ecological messages to be received and responded to by the social system as a whole. It is because every function system in the society operates in terms of their own code, sometimes indifferent to or conflicting with each other, and these function systems can only perceive and respond to ecological communication to a certain limit. Since “society per se is not very receptive to environmental disturbances but concerned primarily with its own internal processes” (Fuchs, 1990, 747), society’s adaptation to its own autopoietic character shapes ecological communication, rather than its direct adaptation to nature. At this point, I can argue that the issue of earthquakes is another variant of the issue of ecological communication. Political system makes and modifies urban policies, legal system produces laws about it, economy comes up with ways to value and compensate the financial losses, science produces theoretical and applied knowledge about earthquakes, and so on; but all these systems are primarily concerned with their own self-reproduction within their own codes and horizons. These sub-systems refer primarily to the previous elements they produced themselves, and those contingent elements and selections are the constituents of the very problems we have today about earthquakes and disasters.

Since communication is the basic unit comprising the society and all social systems, it would be a meaningful pursuit to investigate how communication about earthquakes finds different ways of *irritation* and *resonance* with the social systems. In other words, I am trying to investigate how society develops solutions to handle the complexity resulting from earthquakes, through which different logics it gets *irritated* and how it *resonates* through its differences about the earthquake as a problem. This is what the *functional method* suggests that we seek for.

f – Why organizational communication and disasters?

The type of social system I will be focusing on in this thesis is the *organization*; to be more specific, local associations. The most important reasons why I focus on organizations is firstly, that the organizations absorb uncertainty and partly solve the problem of *attribution* in an increasingly complex system as addresses of communication, secondly, they also provide interdependency breaks between functions systems, and thirdly, organization is the only type of social system which can communicate directly with its environment. Let us elaborate on these reasons.

For the first reason, we should note that while the modern society, as a social system, gets more and more complex internally, the decentralized structure makes it impossible to represent the society to itself in its entirety from within (Drepper, 2005, 180). The society has to change, adapting to itself (Lee, 2000, 327), evolving by means of its own internal mechanisms, not by external steering (Moeller, 2012, 57) and develop ways of attributing decisions to stable communicative addresses. Drepper states that;

> What we hear everyday are the voices of spokespersons who hold key positions in organizations and whose boundary roles are heavily promoted by the modern system of the mass media: representatives of modern states, representatives of trade and labor unions, representatives of medical unions and so on. The process of becoming a communication address and of

> developing professional and organizational structures and standards can often be noticed in cases of social movements aiming at political goals.
> (Drepper, 2005, 182-183)

The interaction systems are too short lived for such an attribution, and the function systems are too abstract. Let us use the example of sport as a function system, with win/lose as its code (Wagner, et al., 2010) and 'trophy' as its symbolically generalized media of communication. The decisions about the rules, preparation of the competition fixtures and schedules, management of violations of these rules, decisions on sanctions at the international level cannot be attributed to just a group of guys gathering every now and then (interaction system) or to the spirit of fair play (since every sports person has a highly differing view on ethical limits of competition, which necessitates establishment and enforcement of rules). The unpredictability and improbability of random invidiuals gathering to decide about soccer rules have to be reduced in complexity, and this reduction has to be embodied in the form of an organization, say FIFA for soccer. As a result, representation of soccer within a global function system of sport is enabled and collectively personified; the relevant decisions can now be attributed to FIFA, to national federations, to national clubs, and to local clubs, and not just to random unpredictable group(s) of individuals. The unpredictable individual is reduced to a certain title and position (international federation chair) in FIFA. The individual who is momentarily in that position might resign, get sick, die, get involved in corruption, or any other unpredictable incidents or behavior, the 'persona' (e.g. the federation chair) created by the organization remains; another representative can always be delegated to carry out the same role. Thus, as Drepper states:

> Organizational decisions allow and demand the attribution of communications to visible roles and persons who act as decision-makers and are embedded in manifest authority and hierarchy structures. Luhmann points that organizations function in the communication processes of modern society as relevant attribution points and addresses for uncertainty absorbtion.
> (Drepper, 2005, 180)

This attribution and the resulting absorbtion of uncertainty put the organizations in an advantageous position in terms of acting collectively as well. For Luhmann, "organizations are the only social systems in modern society that can be addressed in communication processes as collective actors" (Drepper, 2005, 182). In other words, we can say that organizations are a means of localizing and operationalizing the abstract logic of the function systems. The specific form of communication that we can track in an organization is *decision*. If we are to study a systemic problem like earthquake-related disasters, then the organizational decisions about earthquakes should be our focus. That is why a local karate club/association's decision to offer charge-free karate and fitness sessions to earthquake victims is within my field of inquiry in Düzce. This local organization enables the combination of sportive communication with earthquake recovery, and it provides a stable address for inter-organizational communication and partnerships for future planning efforts.

I can use two example cases from Turkey to see the importance of formation of stable communication addresses. The first example is the Gezi Park resistance and demonstrations throughout Turkey, starting on May 28th 2013 to wax and wane for months afterwards. During the course of protests and demonstrations against the corruption and repressive policies of Erdoğan government in power, it was not possible to clarify who represented the group of protesters because of a lack of organizational structure and membership criteria throughout the country, and it was equally difficult to make a clear list of demands from government. No clear list of decisions or demands could be produced by the crowds in the streets. The government members turned first to different non-governmental organizations, platforms, and delegations in their efforts to specify a stable address of communication and to negotiate decisions. Some delegations to represent the protesters were formed; however none of them had an outstanding influence due to a lack of organized structure. The chances of any permanent impact in the long run decreased, because it was difficult to formulate a definition of organizational membership or an agreement on list of demands for the Gezi movement. The very diverse and complex environment that included many different themes and orientations of communication participating in the movement could not be attributed

to any single specific existing or emergent organizations in the form of clubs, platforms, associations, companies, lobbies, political parties, etc. It was not possible to reduce the movement to any of these. The discussion about the disadvantages of disorganized character of Gezi movement was a popular topic among protesters. People could not stay in the streets forever, or able to formulate and maintain claims without organizing and coordinating all the related communication. An attempt for founding a political party few months after the demonstrations began, with a claim to represent the Gezi spirit and maintain the struggle. This attempt was probably the clearest indication that the modern system desperately needs stable addresses of communication to operate, in other words, to resonate with the demonstrators. Luhmann defines exactly the same chain of events in his masterpiece *Theory of Society* while discussing protest movements as a potential fourth type of social system;

> Just as an organization secretes "politics" to deal with residual problems [i.e. absorbing the uncertainty produced by its own internal opposition after each and every decision], protest movements only secrete "organization" for the same purpose. Without organizing a "representation" of the movement, it can only act, only exist, but not engage in outward communication.
> (Luhmann, 1997b; Luhmann, 2012, Vol. II, 155-156) [Brackets mine]

The second case that indicates the need for stable communication addresses was the 1999 earthquakes. Immediately after the earthquakes, there was an avalanche of individuals trying to reach the disaster area by their individual means to bring supplies and aid material. However, lack of coordination of these individual aid attempts restricted their effectiveness seriously. Not being able to communicate about who needs what, where, and when significantly limited the philantropist individuals' virtuous venture to help the earthquake victims. What happened as days passed after the earthquakes was a channeling of all these aid attempts, resources and activities into organizational platforms, since coordination required stable addresses of communication during recovery. Majority of individual philantrophists cannot quit their jobs and keep commuting back and forth to the disaster area forever; they

circulate and communicate uncontrollably and disappear in the long run. Organized decisions about what activities to maintain and how, remain as dependable alternatives in the long run when compared to individual efforts.

As these two examples suggest, Luhmann's conceptualization leaves no room for an undifferentiated communication space. In other words, the civil society and community are predominated by systemic boundaries in modern complex society. Andrew Arato gives a very good summary of Luhmann's arguments against the concept of the civil society and its equivalent predecessors (1994). Luhmann argues against the oldest predecessor of civil society, the Aristotelian concept of *politike koinonia* (political society) in ancient Greek context, saying that the concept sounds like it refers to just one particular type of society among many, whereas in reality it only refers to the all-encompassing social system of *polis* itself; and therefore it is a misconception resulting from the recent emergence of political rule in that time, replacing the primacy of archaic, kinship-based association and power of religion with political office and political procedure as an evolutionary stage of human development (Arato, 1994, 129-130). Luhmann also criticizes the theory of bourgeois society, as a theoretical mistake similar to the one in Aristotelian perspective. For Hegel, concept of civil society was "a confusing and oppressive phenomenon" and Marx's position was that "civil society is a kind of bourgeouis obscurantism for the proletariat's revolutionary consciousness" (Şimşek, 2004, 47). This time the *bourgeois society* is the social arena in which all relations of production take place with the bourgeoisie as the politically ruling segment. The political society is now conceptually replaced by the economic society and the same conceptual mistake, "*pars pro toto*" (taking the part for the whole) is repeated once again and the economic society is used to refer to the whole society (Arato, 1994, 131). The liberal concept of a duality between the state and civil society (still equated with economy) corrects the error of taking a societal part for the whole, but makes the mistake of conceptualizing the whole as a simple duality according to Luhmann (Arato, 1994, 131). The state can at best refer to a part of the political system for Luhmann, and civil society just loosely describes the entire environment of the state; but it cannot represent the differentiated subsystems of religion, law, family, science, culture, art, etc. on its own. (Arato, 1994, 132). In this study, we can

see that the local associations about sports, religion, professions, ethnic identities, etc. all formulate their responses to earthquakes through differentiated organizational horizons, designating different organizational partners depending on their engagement in systemic communications in society. While a football fans' association cites Gençlik ve Spor İl Müdürlüğü (Provincial Directorate of Youth and Sports), and Fenerbahçe Sports Club as their primary organizational partners, a mosque association cites mufti's office and Diyanet Vakfı (Foundation of the Religious Affairs). These local associations are both differentiated from each other, and also from the Düzce office of the state agency AFAD in their earthquake responses despite their geographical proximity.

Even though Luhmann might accept the possibility of an undifferentiated intellectual public during the Enlightenment, a full differentiation of it into various expert publics such as science, art, and law happened long ago (Arato, 1994, 133). In Luhmann's perspective, a concept like civil society can only refer to the whole society as in 'human civilization' and its systemic reductions as a result of sociocultural evolution. Following Lee's summary of Luhmann's *The Society of Society*, 'civil society' in modern society can at best refer to a society of "different social systems constructed to carry on conversations about different subjects" (Lee, 2000, 324); and the "different self-descriptions of society [...] are not compatible with each other since they communicate differently and on the basis of incommensurable codes, programs, and so on" (Moeller, 2012, 49). We cannot come up with a universal criteria to label interaction systems as the civil society as a collective communication address; interaction systems tend either to dissolve quickly or evolve into differentiated organizational bodies with membership criteria, orienting their programs toward the codes of different function systems in modern society. Luhmann makes a similar point in his *Ecological Communication*;

> How can environmental problems find resonance in social communication if society is differentiated into function systems and can react to events and changes in the environment only through these? After all, in such a system there is communcation that is not coordinated functionally or coordinated only ambiguously – the communication of the streets, so to say, or in

somewhat more high-sounding jargon: 'life-world' communication. Communication that affects society, however, depends on the possibilities of the function systems.
(Luhmann, 1989, 36)

In his masterpiece *Theory of Society*, Luhmann argues that the semantics of 'civil society' used in the modern society today do not mean that the concept still has its structural counterpart in practice. The concept has become obsolete long time ago and therefore these residual semantics do not refer to any updated versions of the Aristotelian understanding of the concept. Rather, these are manifestations of the demand for direct access to function systemic communications without organizational membership and organizational boundaries of the internally hierarchical political system (Luhmann, 2012, Vol. II, 152).

The second reason why I focus on organizations in this thesis is that, they provide *interdependency breaks* between function systems. As the society gets more and more complex, differentiating itself further into subsystems for increased thematization and selection of communications resulting in functionally differentiated action, the system also becomes more prone to crisis. As Luhmann clearly states, "Every function system can only perform its own function. No one can in the event of a crisis or on a continuing or supplementary basis sit in for another one" (Luhmann, 1997b, 763). The function systems are independent on how they operate within their limits, however, they are also interdependent on the functioning of the other function systems as their environment. The disturbance in one function system would irritate all other systems. Organizations provide a buffer on the subordinate level. For example, there are different companies (organizations) engaged in different sectors of economic communication. The variation provided by the organizations economic system prevents any sectoral market fluctuations from irritating the whole economic system directly and instantly. The second example is the political parties representing different ideologies and decision programs such as liberalism, conservatism, or socialism within the political function system (Drepper, 2005, 186). This gives the system a higher chance of adaptability to changing conditions of its environment. The formation of departments within organizations is

another type of interdependency break, which contributes to stabilization of system structure. *Interdependency breaks* and *structural couplings* are mechanisms for balancing the interruption and connectivity for the social system (Drepper, 2005, 186-187).

The third reason why I choose to focus on organizations in this thesis is because organizations can communicate directly with their environments. Since *organization* is a type of social system between *interaction* and *society*, it has this advantageous position for external communication. The *society* cannot communicate with another society, at least for now (say, with an alien civilization from outer space), and *interaction* exists only as long as the participants are physically present. However, *organizations* bundle interactions, specify communicative addresses, coordinate collective activities and communicate them to other interactions, to other organizations, and to the society in the form of decisions. They copy and use codes of different function systems, and communicate with the society; meanwhile creating interdependency breaks between different function systems within society, contributing to its stabilization.

For the function systems, the two sides of a code are of equal value, because communication within operationally closed function system happens by oscillation between these two equal poles. The codes in themselves do not serve as the criterion for selection; for example, "falsity can have a much more positive effect upon the advancement of science than the establishment of truth" (Luhmann, 1989, 40). Which value to choose (i.e. setting a criteria) is actually based on *programs*; and this is what organizations use. The possibility of external communication and coupling of an operationally closed function system to its environment is made possible by organizations' combining closure and openness in their programming structures:

> The difference between code and criteria for correct operations (or coding and programming) makes possible the combination of *closure and openness in the same system*. In reference to its code, the system operates as a closed system; every value like 'true'and 'false' refers to its respective counter-value alone and never to other, external values. But at the same time, the programming of the system makes it possible to bring external data to light, i.e., to fix the

> conditions under which one or the other value is posited. The more abstract and technical the coding, the richer the multiplicity of the (internal) operations with which the system can operate as close and open at the same time, i.e., to react to internal and external conditions. One can designate this as an increase in resonance capacity. But no matter how 'responsive' the system may be structurally and no matter how sensitive its own frequencies, its capacity for reaction rests on the closed polarity of its code and is sharply limited by this.
> (Luhmann, 1989, 40)

Therefore organizations are positioned in a privileged position to communicate with their environment, and localize the abstract logics of function systems. Drepper points at this ability of organizations;

> Neither the heterogenous modern society as a unit nor interactions as simple systems have the capacity to communicate with their environments, so they cannot be addressed as collective actors. Orgnizations are the only social systems in modern society that can be addressed in communication processes as collective actors. This feature makes organizations comparable to *persons* as authors and addresses of communication. Persons are expectation-structures of and for communication.
> (Drepper, 2005, 182)

When an organization puts the codes of a function system into practice, it has to take local factors into consideration in its program. Every organization can be conceptualized as contributing to a different channel of irritation-resonance (structural coupling) between function systems and the social environment. For example, the schools, private tutoring schools, education fairs, certification programs, and testing centers all produce differentiated decisions and contribute to couplings between economy, politics, science, and education systems. The function systems cannot act themselves, or directly connect to the persons, but they have to establish this connection through organizations and act through them. For another

example, the banks, companies, factories, shops, etc. contribute to the economic system's making sense of its highly complex environment of many other functions systems and their couplings. When this complex social environment irritates the economic system, we can observe resonance such as banks working on new credit schemes so as not to disrupt the operations of payment, companies restructuring their investments, or shops announcing major discounts. Decisions of commercial organizations are oriented towards reproducing their own economic communications, and these organizations contribute to the economic system resonating with its environment of media, law, politics, science etc. translating the communications of these diverse function systems into economic communication according to the code payment/non-payment albeit in a limited capacity. Drepper summarizes this aspect of organizations:

> According to Luhmann organizations *condense* structural couplings and *contribute* to the structural couplings between subsystems (Drepper 2003, pp. 237 ff.). Organizations are not structural couplings in themselves, because structural couplings are institutionalized on the level of society. Nevertheless, structural couplings would not be able to achieve the necessary complexity for linking the autonomous subsystems to each other without organizations that have the capability to develop external communication, reap information, and bundle communications (Luhmann 2000c, p. 400).
> (Drepper, 2005, 187)

Their ability to bundle communication is related to how organizations maintain their boundaries; as Luhmann explains

> Some systems have acquired a not negligible significance in modern society as "formal organizations", which regulate their boundaries primarily by membership roles and admission to membership and which handle themes as something that can be expected from the system members because of their membership.
> (Luhmann, 1995, 196)

Even if the members of a formal organization occasionally talk about other things than the specified themes (such as their home life, their new cars, or the attitude of managers, etc.), such informal organization and its divergent themes do not change the boundaries of the formal organization system. On the contrary, Luhmann argues that informal organization contributes to the securing of motivation of members in a formal organization system (Luhmann, 1995, 543). Moreover, Luhmann argues that formal organization provides chances for the emergence of new different informal organization systems within itself thanks to "increased channeling of the spontaneity of further differentiation" (Luhmann, 1995, 540). A formal organization such as a local association or local sports club, which is not normally specialized on disasters, search and rescue or emergency relief, might still contribute to the formation of alternative connections and networks between persons. Kalaycıoğlu, Rittersberger Tılıç, et al. state that:

> …during the earthquake, social networks of the individuals, though seemed to be disintegrated to some extent, was found to be the most significant indicator, providing the people with a variety of support facilities. Social network mechanisms decreased the effect of disaster and supported the coping strategies of individuals.
> (Kalaycıoğlu, Rittersberger Tılıç, et al., 2006, 1)

As a result of their capability of communicating externally, the organizations can communicate among themselves as well, either in the form of inter-organizational interaction or they can also form organizations of organizations (Hasse, 2005, 256). Both Hasse (2005, 256) and Moeller (2006, 31) emphasize that organizations are becoming increasingly important in modern society. In this thesis, I will be investigating if any of the local associations that engaged in earthquake-related communications and activities in Düzce city center after 1999 earthquakes were engaged in inter-organizational communication or involved in an "organization of organizations" about earthquakes in the long run. The connections between these local associations and other local established, expanding, and emergent organizations

about earthquakes will be investigated to see if a local organizational environment has been constructed since the 1999 earthquakes. If these organizations recognize each other as a part of their environment, communicate about earthquakes with each other in the form of coordinated decisions, and act together about earthquakes in a coordinated manner, this could be the evidence of an increasing complexity, and the inclusion of asymmetric functional equivalents in traditional disaster plan. In addition to the inclusion of established and expanding organizations in the traditional disaster plan, the inclusion of the extending local organizations can provide more alternatives for the society to resonate with social environment in terms of earthquakes and other disasters in general. These local type III extending associations are normally specialized in non-disaster fields of activity, therefore I propose calling them *asymmetric functional equivalents* for the centralized and specialized disaster management system. Talking about asymmetry, Luhmann's position about the mico- and macro- levels of social analysis should be made clear at this point;

> The theory of social systems will allow us to make this distinction between micro-area and macro-area somewhat precise. What we have here are *different levels and processes of system formation being realized at the same time and with reference to each other*. […] *The micro-area and the macro-area are of equal status; neither can prevail over the other.* […] The general theory of social systems is, rather, so conceived that in every analysis *one is forced to specify the 'system referents' which one is going to use in carrying out the analysis*. What this means is that one must choose (and this choice means giving up claims to universality) *what, for a particular analysis, will be the system and what the environment*. Only in this way can the analysis be guided by the difference between system and environment; only in this way can functional analyses be made concrete; and only in this way can we give substance to such general statements as, 'systems reduce the complexity of their environments'.
>
> (Luhmann, 1981, 235-236) [Italics mine]

As we can see, the multi-centered and multi-contextural character of the modern society is not only valid for function systems, but also for different levels of social forms from micro- to macro-. Since all levels are reproducing themselves simultaneously with reference to each other, neither micro- nor macro- level of social forms can be in a predominant position in an ultimate sense. However, once we decide to "make a cut", it is then we need to specify the referents of the system and its environment. In our case, as a part of the political function system, AFAD specifies the elements of a centrally designed and steered disaster management system by its plans. When these policies and plans are to be implemented in the local setting, the local associations are automatically located in its environment. During this process, systemic blind spots interfere and lead to exclusion of some historically relevant local organizations that still exist in the environment of this central disaster management system.

There are two interacting structural factors creating and maintaining this blindness. The first one is that, the political function system subordinates center-periphery differentiation under itself, creating an image of central control by defining relationships between the steering and the steered parties. Second, this hierarchical image is constantly interacting with the systemic blindness of functional differentiation and systemic reductions. Anyone would commonsensically agree that AFAD is more important, or more strategical than a local sports club or a mosque association in terms of disaster management. However, at the conceptual level, AFAD is just another systemic boundary, and an interdependency break introduced by the political system and nothing more. It is the variety of different local occasions for participating in function-systemic communication that makes up the daily life for the local population; AFAD on its own cannot plan and control the restoration of the totality of daily life. In other words, daily life is made up of "strategically less important" communications that orient themselves to various funtion systems, manifesting in various organizational boundaries, which are dramatically reduced by any central plans and system formations. I propose the term *asymmetry* for pointing out the situation that central disaster management plans have no immunity or exceptions to systemic blind spots, and indeed they suffer a double blindness due to their position in the center. As a result, they come to the point of excluding what

they are supposed to steer in terms of disasters and just introduce and impose their own boundaries. As a result of functional differentiation, the center-periphery structure of the political function system becomes paradoxically *asymmetrical* to its own claim of steering the society.

In the case of Düzce Earthquake, the local organizations I will study are Associations (Dernekler). The point of this selection is to be able to grasp the resonating communication between these local organizations and the disaster management system in the long run. After the incidents of earthquake and the resulting disaster situation, some local associations modified their processes of decision-making with disaster-related concerns. How and why these chains of decisions about earthquakes start, and how and why they stop in these local organizations and if they relate to the centralized disaster management structure in the long run are my points of curiosity in this study. These local associations provided already existing forms of local organizational networks, and with this reason they were *de facto* elements of the disaster management efforts in the case of last major earthquake disaster even though they were not defined as such by any external steering agency. That is why I set out to investigate their relations with the future disaster management plans 14 years after a major disaster. This provides us a chance to investigate how the society observes de facto historical situation as it makes effort to plan itself and form new systemic definitons for the future disasters.

For Luhmann, functional differentiation is an important characteristic of modern society (Rasch, 2000, 199). This form of differentiation "enables new forms for *reducing* complexity" (Luhmann 1995, 192). The associations can be interpreted as a specific type of formal organization within society. The definition of an association has been specified through the legal system, and by definition associations are separated from commercial enterprises, foundations, political parties, unions, and cooperatives. Associations are non-profit organizations specified by the law item 5253 in Turkish Legislation. The function of associations, from SST perspective, is reducing the complex communicative environment of hobby and interest groups (and their demands). Doing this, they contribute to the structued complexity of social systems through different combinations of decision programs about how to strategically employ systemic codes for their ends. They also provide

local addresses for attributing related decisions and the resulting collective actions, by bundling local themes of communications into recognizable groups for the function systems. The associations are indeed constructed as the social environment of different social systems, as a part of society's adaptation to itself during evolution.

The formation of professional search & rescue teams, and the very formation of AFAD as a differentiated emergency management agency were also systemic responses through functional differentiation. In this study, I will be studying a puncture through system boundaries in this sense. The associations routinely differentiated for various non-disaster issues engaging in action about disaster can provide an opportunity to see how the puncture in system boundaries is handled. I will also be contacting the local associations, which are already specialized in earthquake disaster response, emergency management, or search & rescue (Kızılay, Dep-Der, or search & rescue associations) with the curiosity if they cooperate with any non-disaster specialized local association in their current activities or future plans. My main curiosity in this study is about the ones which normally specialize on non-disaster-related activities, but nevertheless got involved in earthquake-related activities after the 1999 Düzce Earthquake. The selection of non-disaster specialized local associations also serves another important theoretical relevance; that is the concept of *de-differentiation*. Social Systems Theory designates increasing level of *differentiation* in modern society as a process of increasing resonance capacity of society. This should be the case from SST perspective about the earthquakes as well. Every function system should respond within the horizons of its own codes, defining and reacting to different risks, solving these problems, but meanwhile creating further problems along the way, for other functions systems to solve. Similarly, the organizations that copy the codes of certain function systems should be limited to their horizons. The non-specialized local associations widen their normally differentiated horizons of communication in the case of an earthquake and engage in earthquake communication (i.e. de-differentiate) temporarily. In this study, I will be investigating the long-term interplay between de-differentiation and differentiation in the case of local associations' decisions and activities about earthquakes in Düzce. Investigating into these processes, it would also be possible to discuss the role of concepts such as 'civil society', which refers to a social context of undifferentiated

communication, and 'community', which emphasizes physical distribution and proximity of individuals as opposed to functional and organizational differentiation.

g- Organized response to disasters and long-term social resilience

The typology developed by Russell R. Dynes at Disaster Research Center (DRC), which was founded by Enrico L. Quarantelli and Russell R. Dynes at the Ohio State University in the US in 1963. Later, this research center was moved to University of Delaware in 1985 (Webb, 1999, 2). Although this typology had first been introduced in late 1960s and early 1970s (Dynes, 1970), its importance and relevance continues well into late 1990s (Webb, 1999) and into late 2000s (Kreps & Bosworth, 2007). I used the DRC typology as a guide to classify and specify the types of organizations I will be dealing with. According to DRC typology the organizations can be divided into 4 groups according to the organizational adaptations they manifest about the disasters:

- *Type I: Established* – They exist prior to an event and much of what they do is expected (e.g. hospitals, law enforcement and fire fighting units, public untilities, departments of public works, mass media, military units, etc.)
- *Type II: Expanding* – While much of what they do is expected as well, their core structures change from a small cadre of professional staff to a much larger unit of volunteers. (e.g. local community emergency management agencies, Red Cross chapters, etc.)
- *Type III: Extending* – While they exist prior to an event, much of what they do is not predetermined (e.g. other governmental agencies, small businesses, larger firms, social clubs, public service organizations, religious organizations, etc.)
- *Type IV: Emergent* – Both their existence and activities are ad hoc and therefore unique to the event.

  (Dynes, 1970, 141-149)

  (Webb, 1999, 3)

  (Kreps & Bosworth, 2007, 299)

This study is going to be focusing on a sub-group of the type III extending organizations. Extending organizations are not normally active about disasters, but they made a decision to take action, channeling their routine functioning into the domain of disaster recovery, and they do this without any external steering or previous guidance of disaster management policies and plans. I will be tracking their self-organized disaster activities not only immediately after the earthquake, but also during the years following the earthquakes for tracing their decisions and activities related to earthquakes. I take the type I (established) and type II (expanding) organizations as elements within the system of established disaster plan, and investigate if there are new couplings between these established actors in the system of disaster plan and the type III extending organizations as a part of their environment. The type III extending type of organizations comprise an important point of connection to the social systems theory; because they provide a chance to observe self-organizing functional equivalents outside of the established elements of the centarized, established disaster plan. Thus, they manifest the systemic potential for the formation of new irritation-resonance relationships between different social systems and therefore a new internal adaptation of the society to itself, contributing to the resilience against earthquakes by self-organization for restoring routine functioning of the society. By investigating these connections between non-specialized local associations, which are normally differentiated for communication other than earthquakes and disasters, and the specialized (i.e. *functionally differentiated*) elements of the disaster management system; we can have more insights about the systemic blind spots to overcome in disaster management. The self-reorganization of the already existing local associations with a new orientation towards disaster would be an important step for increasing the structured complexity of disaster management plans and organization scheme. A higher capacity to self-organize is one of the constitutive dimensions of a more complex response; and also it is important in another sense as well. According to Luhmann, the higher complexity of an "ultimately uncontrollable environment" (Luhmann, 1995, 7) leads to increased system complexity as well; "[…] society can never make possible communication about everything that occurs in its environment on all levels of

system formation for all systems. Therefore, like every system, it must compensate for its own inferior complexity by superior order" (Luhmann 1995, 182).

This explains why Social Systems Theory foresees an increasing functional differentiation within system boundaries. The ordered complexity (functional differentiation) within the system is a way of developing more sophisticated and more specialized means of handling the ultimately higher complexity of the environment. The fundamental research question I ask is "How does a functionally differentiated society handle its own blind spots, as it adapts to itself in response to and in preparation for earthquakes? What blind spots can be discovered during this process, especially between centralized efforts of steering and self-organized local efforts related to disasters?" Remembering the cavemen analogy, the efficient cooperation of isolated individual psychic systems in terms of communicating the information and motivation succesfully requires structural connectivity between elements for a social system to emerge and reproduce. A study on society's adaptation to itself in terms of earthquakes and disasters in general requires the investigation of clues about the re-organization and connectivity through systemic boundaries. The conceptual construction of SST, when combined with the research question above, helps producing the observation criteria listed below:

1- Attribution of earthquake resilience communication to specialized organizations is expected.

A functionally differentiated society would produce a number of reciprocally neglecting, uncoordinated, sometimes conflicting solutions to earthquakes through operationally closed function systems. Different organizations borrowing codes of different function systems produce different solutions. The state, as the stratified organizational center of the center-periphery sub-differentiation within political function system, defines the elements of disaster response and preparedness plan, as a system in itself, from its own perspective mainly through top-down processes and it attributes

communication to specialized organizations by further differentiating itself in an effort to establish stable channels of irritation and resonance with its environment; to guide and coordinate all those autopoietic system responses.

2- Unsteered functional equivalents not recognized by the system of central disaster management plan (I propose the term *asymmetric functional equivalents* for these).

The centrally planned and steered disaster management is one solution to the problem of earthquake disruption of routine systemic communications and systemic boundaries, but it is not the only one; the centrally planned solutions cannot be all-inclusive. There could always be functionally equivalent solutions for this problem. The centrally prepared and imposed 'disaster management plan' is not the one and only possible solution, since this plan as a system has to reduce the number of possibilities it can include. Therefore, its selections are not necessarily the best ones. The locally self-organized efforts to restore the routine functioning after the earthquake may cover some blind spots not covered by this plan. The type III local associations were functional equivalents that emerged in an un-steered manner after 1999 earthquakes, outside of established disaster plan (involving type I and II organizations). After all, non-disaster specialized local associations were not designated by any prior disaster response plan, but nevertheless they self-organized and undertook activities for restoring the routine functioning in different domains. In other words, these local associations functioned through borrowed codes of different function systems, through different reductions and selections than those covered by the central disaster management plan today.

3- Not 'resilience' but 'resiliences'…a lot of them!

The content of a centrally planned and steered top-down disaster management would be different compared to locally organized bottom-up responses to

restore routine functioning; because their definitions of environment are different. In other words, there are different things that need to be restored back into function according to different social systems; each system has their own disaster, and each is concerned with bouncing different things back.

4- Not unitary and communal, but differentiated local resilience.

Local responses and efforts to restore routine functioning are supposed to be functionally differentiated, not communally unified. There would not be one single undifferentiated thematic roof under which all local engaged organizations recognize each others' earthquake activities and cooperate for earthquake-related activities. Just having the same legal status (as associations) or being located in the same geographical area, or responding to the same act of nature is not a unifying factor for local organizations. Modern society responds by and through differences, not through unity.

5- Associations are primarily concerned with reproducing themselves as systems, not making society more resilient.

Type III local associations' earthquake-related activities should disappear in the long run, after the routine functioning is restored (possibly with their contributions as well); because their main aim is to reproduce themselves as systems. These systems aim to maintain their communications with orientation to certain function systems (e.g. religion, sports, etc.). Each one of the type III local associations is a separate system per se, with their own orientation to a certain function system, with a certain program for making selections, and for producing decisions. Associations produce their decisions to maintain their own flow of communications in a specific horizon. The same applies to the central disaster management plan as well. The connections it establishes are primarily oriented towards self-maintenance.

The complexity within any social system is increased through the structural couplings established with its environment. The more ties the social system establishes with its environment (be it the physical environment or the social environment) the more elaborated ways it can develop to correspond with the relatively higher complexity it has to face in its environment. Luhmann argues that "a system's internal organization for making selective relations with the help of differentiated boundary mechanisms leads to sytems' being indeterminable for one another and to the emergence of new systems (communication systems) to regulate this indeterminability" (Luhmann, 1995, 29). It is the formation of new structural couplings, what Luhmann refers to, through his complicated language. If we aim to observe increasing complexity and resonating capacity of the social system, we should look for new connections developing between established actors of the central disaster plan and self-organizing non-specialized local organizations. The second thing to look for is if these connections are stable enough to enable a continuous communication (resonance) between different social systems. Moeller very concisely states this postulate:

> Structural coupling establishes specific mechanisms of *irritation* between systems and forces different systems to continuously *resonate* with each other. The two concepts of irritation and resonance are used by social systems theory to explain how operationally closed systems "interact" […] If a continuous irritation-resonance relationship between two systems is established, then increases in the structural complexity of one system will bring about increases in the structural complexity of the other.
> (Moeller, 2006, 38)

If we apply this systemic context of irritation-resonance relationship between subsystems to the case of earthquake disasters, it would be a meaningful quest to look for any signs of increased complexity in terms of self-organization and connections about earthquake-related communications and coordinated action. The more alternative connections the local organizations develop for thematizing earthquakes, the more chances and possibilities for alternative contributions and

social participation will occur. This is an attempt by the system to increase its level of internal complexity in the face of higher environmental complexity that it can never match as a one-to-one correspondence but only as a more elaborated representation within its systemic boundaries, its membrane, so to speak.

According to the Systems Theory, it should be the case, since earthquake is a source of increased complexity within the environment. When an earthquake happens in geographical proximity to a social system, all established communication channels are severed, all reductions and codes are out of order suddenly and the level of unpredictability increases. The disruption of communications and increasing unpredictability that manifests during and after an earthquake incident could be related to infrastructure (loss of buildings, roads, bridges, power grid, telecommunications, other utilities, etc.), technical issues (following industrial accidents after the earthquake, loss of information networks of banking, legal, health systems, maybe nuclear leaks in the future, etc.) and social relations (damaged familial ties, friendships, professional alliances, neighbourhood groupings, social services, etc.). Disaster response to restore and maintain communications basically depends on resonance capacity of the system with its environment. The systemic communications within and between organizations, and couplings between social systems are challenged in the case of a disruption of routine, since every system is also the environment of another. Every social system within society perceive disaster according to their own internal operations and respond accordingly. For example, while the law (legal system) is concerned with the property rights of the earthquake victims (code: legal/illegal), the insurance companies (a type of organization within the financial sub-system; code: payment/non-payment) would be concerned with the amount of compensation they will have to provide for the victims, the stock market (another type of organization within the financial sub-system) would consider the production loss of the companies hit by the earthquake and its influence on profitability of shares, and religious institution would be involved in funeral services and promoting a discourse for social condolence (e.g. “deprem şehitleri”; code: immanence/transcendence), and so on (see **Table 7**, page 57).

Some of these sub-systems might look like overlapping in some of their functions; but this seeming overlap is termed as *structural coupling* by Systems Theory and it is exactly what enables these sub-systems to operate together, recognizing and resonating with one another's functions. Structural coupling takes place between the system and the environment. This includes the relationship between system and the sub-systems, and the relationship between the sub-systems themselves, since all these are part of the environment of all the others. Structural coupling means that the structures of the system are adjusted to the structures of the environment to reciprocally influence one another's processes (Seidl & Becker, 2005, 24, 150). The *structural coupling* is very closely tied together with the concept of *autopoiesis*, since "…environmental events can trigger internal processes in an autopoietic system but the concrete processes triggered…are determined by the structures of the system" (Seidl & Becker, 2004, 24). The earthquake can be the catalyst of a re-organization in political system; however, how this re-organization is going to take place entirely depends on the internal operations of the political function system.

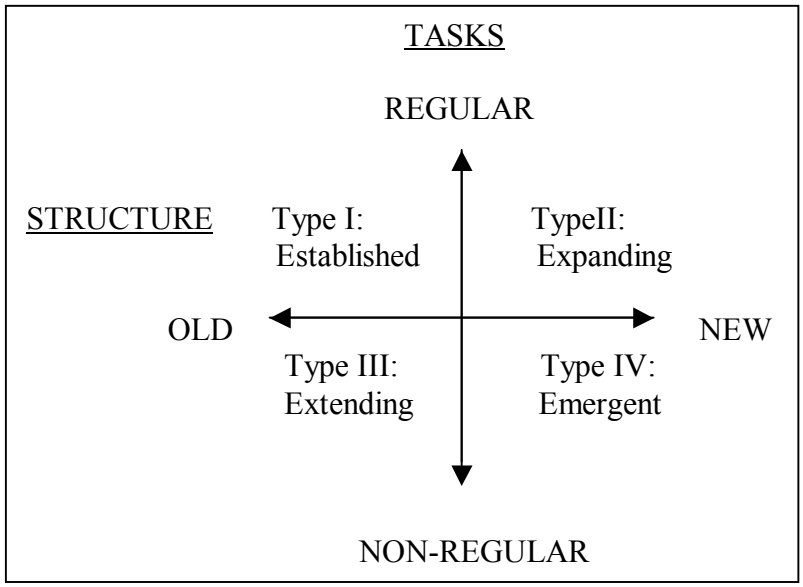
For example, the legal system provides part of the environment for the financial system, and vice versa. The compensation of the earthquake damage is an example of structural coupling between the financial and the legal function systems. Both systems are concerned with the earthquake damage; but both according to their own codes; legal/illegal for the legal system, and payment/non-payment for the financial system. The legal system could modify itself for better reference to financial issues concerning a disaster; but this modification has to be carried out according to the legal code itself, in the form that the legal system operates. The financial system cannot have a direct manipulation over the legal system, but only trigger the inner structure of the legal system for self-modification. Similarly, the legal system cannot have a direct manipulation over the financial system; it does not make sense to decide where to invest on legal grounds instead of financial grounds. It is important not to mistake the criminal sanctions put on certain financial sectors and activities for a violation of *operational closure* of separate function systems. Activities in some sector could be illegal according to legal system code, but still be profitable according to the financial code. To exemplify, the legal system might

declare sanctions on narcotic transactions; but this is irrelevant regarding the profitability of the sector. Moeller reminds us that *operational closure* does not prevent a function system from referring to another function system (2006, 37); however, "what makes sense for one species ['profit' from the point of view of narcotics sector] does not necessarily make sense for another ['profit' from the point of view of law]" (Moeller, 2012, 76) (brackets mine). What makes sense for legal system about narcotics sector is that it is illegal. Again in the case of earthquakes, in 1999 Marmara Earthquakes, we have witnessed that all construction permits could be complete for a building according to the legal code, and it could have been substantially profitable to construct buildings and cities without the cost of infrastructure (see **Appendix – I.,** page 215) according to financial code, but still, the building could be in poor quality according to scientific code, and collapse in the incident of an earthquake. The legal, political, scientific, religious, and financial systems have all modified themselves at some level according to their own codes after the 1999 Marmara Earthquakes, to improve the resonance between the system and the environment, by improving the adjustment of their structures for reciprocal influence on one another's processes. Please note once again that the term *environment* does not only refer to the physical, geographical, ecological environment; but it also refers to the environment of social sub-systems viewed from each other's perspective.

At this point, I should lean on the concept of *resilience*, in order to make it clearer why I am particularly interested in long-term activities and adaptations. Miller & Rivera quote from UN report on disaster reduction for definition of resilience as:

> The capacity of a system, community, or society potentially exposed to hazards to adapt, by resisting or changing in order to reach and maintain an acceptable level of functioning and structure. This is determined by the degree to which the social system is capable of *organizing itself to increase its capacity* for learning from past disasters for better future protection and to improve risk reduction measures. (UN/ISDR; 2004)
> (Miller & Rivera, 2011, p: XXXVII) [Italics mine]

Figure 3. DRC Typology of organized responses



(Dynes, 1970, 138)

(Webb, 1999, 15)

(Kreps & Bosworth, 2007, 298)

The local associations already existing in Düzce before the 1999 earthquakes are self-organized bundles of local communcation with orientation to higher abstract logics of function systems. This social capacity of the local population to organize itself and engage in disaster-related communcation in the recovery process is what I conceptualize as an aspect of resilience as self-organization in the lack of guidance (i.e. designation of any specific disaster-related connection, cooperation, duties or responsibilites by a disaster plan, and since these are local associations, lack of guidance from a headquarters in another city or country). In this study I will be investigating the change these local organizations underwent in order to adapt to the earthquake hazard and the resulting disaster context. These organizations will also be the part of the next disaster event, and I would like to see if they developed an already existing channel of communication with specialized organizations in a self-organizing manner for future earthquakes. In the setting of a disaster, when the level of uncertainty is significantly high, the organizations have even higher importance; because organizations, by their nature according to Luhmann, operate by "absorbing uncertainy" (Luhmann 1995, 110).

Organizations already have to solve a paradox about decision-making in their routine functioning. For Luhmann, the very idea of a decision is paradoxical (Seidl, 2005, 45). Briefly, the paradox of decision is that, as long as a decision can be made, the otherwise of that decision is also possible, and the decision that has been made carries its alternative with itself after the decision; so all the decisions an organization make have to be deparadoxified. Indeed, this paradox – like all real paradoxes – can never be solved, but can only be deferred (i.e. moved out of sight) (Seidl, 2005, 46). Rules about decisions are made up for this purpose. This is similar to Luhmann's explanation of sociocultural evolution as a hydraulic process of repressing problems to move them somewhere else, since every problem solved creates new and more complex ones. Moreover, most problems in organizations are directly or indirectly the result of this paradox for Luhmann, so "most structures and processes function as a means of deparadoxification" (Seidl, 2005, 46). In this regard, it would be meaningful to search what self-organized solutions the type III local associations developed in the face of a disaster, and what organizational connections are established and maintained between these past self-organized solutions and future centralized disaster management plans.

Comfort et al. state that "*the collective capacity of a community* to take informed, *coherent action* in the face of danger is a measure of that community's resilience" (Comfort, Namkyung, et al., 2010, 39) [italics mine]. By focusing on adaptations maintained in the long term, and studying the organizations that normally are not specialized in disaster activities, I try to follow an this lead, since "increasing the resiliency of a community can be done by recognizing the resources of organizations that are not a part of the traditional disaster plan" (Miller & Rivera, 2011, p: XLIII). This important lead is the result of a study by Bethany L. Brown, made about women's shelters battered in Hurricane Katrina, and it shows how important any type of non-emergency organizations can be, for helping at-risk populations to adapt to a suddenly changing environment, and become an important part of the solution and the resilience process (Brown, 1996/97, 74).

One very important point to bear in mind about the concept of resilience is that it should be considered as a process, rather than a trait. And as Comfort, Boin & Demchak states, "resilience is a dynamic process that balances risk against

resources" (2010, 275). The distinction between a dynamic process and a trait is very important in the sense that Ingrid Schoon explains for psychological resilience as:

> […] although individuals may manifest resilience in their behaviour and life patterns, resilience is not a personality characteristic. Adaptive functioning in the face of adversity is not only dependent on the characteristics of the individual, but is greatly influenced by processes and interactions arising from the family and the wider environment. Individual development is continually produced, sustained and changed by the socio-historical context experienced.
> (Schoon, 2006, 16)

In this thesis, I am not attributing resilience to any essential characteristics of the organizations I am studying; but try to investigate them in relation to their environments regarding disaster communication. Searching for signs of new stable channels of irritation and resonance between local associations and their functionally differentiated organizational environments of communications in the long run would help to gain more insight on relationships between different self-observations of society and different patterns of self-organization for bouncing back systemic communications the next time they are interrupted by an earthquake.

Explaining the resilience of a population through certain characteristic traits would lead to a static conception of it. A static conception of resilience would mislead us into thinking that some systems with some traits would always be more resilient than others in a deterministic manner. However, the system, system's elements, and its definition of environment are being constantly re-*produced*. This re-*production* is carried through a reduction of complexity, and this reduction is carried out by distinction. As long as there is a distinction, there is contingency; i.e. nothing has to be the way it is. Any distinction can be made differently at any time. This is why I am not searching for a specific content, characteristic feature, or essence determining resilience once and for all, but only new, relational channels of

communication emerging in society to handle its own differences, sending and receiving information to adapt to the conditions.

Taking resilience as a process that needs constant reproduction is very similar to the conception of the system, which has to be reproduced all the time. And what is vital for the system is reproduction of its most basic element – communication – through meaning;

> The theory of self-producing, autopoietic systems can be transferred to the domain of action systems only if one begins with the fact that the elements composing the system can have no duration, and thus must be constantly reproduced by the system these elements comprise. […] the system would simply cease to exist in any, even in the most favourable, environment if it did not equip the momentary elements that compose it with the capacity for connection, that is, with meaning, and thus reproduce them.
> (Luhmann 1995, 11)

Resilience is not an easy process to maintain; it reminds us of Luhmann's remark about the notion of system in an interview that "[…] it is more probable that the system would collapse than it can be maintained" (Rasch, 2000, 217). Once again, I do not define resilience as either presence or absence of an intrinsic quality, but instead, as establishment of new and stable channels for any information (including the need for a change, or maintenance of status quo) to flow back and forth between previously not connected, uncoordinated social systems and their communications about earthquakes. After all, this is what resonance is; it means matching the frequencies of two separately vibrating bodies. The better the frequencies of two separate bodies are channeled, the better they can resonate together; without assimilating into one another, without causing interference, without cancelling out each other, or destroying the equipment. However, once again, it should be noted that we cannot make the society evolve into being more resilient; just as we cannot evolve our brains by effort. We can provide variety and redundancy in policies, discover and provide connection alternatives, generate different decision programs compatible with different function systems (and their

organizational extensions) at best. However, it is up to the social system itself to select and stabilize these variations as they fit or not. We cannot say "such and such policies make society more resilient" until we see to which factors those policies are blind to, and what new problems they create as they solve the existing ones, introducing unpredictable consequences in each case. We cannot know it until we see it.

I have already mentioned that differentiated function systems cannot sit in for another one in the case of a crisis (Moeller, 2006, 48). Just as the immune system does not have a specific seat or center in the body (Moeller, 2012, 63), there is no specific center in society, from which resilience against earthquakes, and other disasters and emergencies can be steered. Every social system produces its own systemic rationality (Moeller, 2012, 83) and therefore creates its own blind spots. They create risks that can be referred to and dealt with, within their own systemic rationality; but they are blind to dangers that they do not recognize. Take this situation, and multiply it by the number of different function systems, multiply again with the number of different organizations applying different programs based on various codes, and multiply the number of permutations of possible interactions again, and remember that everything is happening at the same time. Modern society constantly keeps opening and closing different contingent selections at every moment based on previous contingent selections, ignoring or recognizing different conditions and thereby producing unique permutations of blind spots. We cannot make society resilient, we can just brush the dangers under the carpet and try to figure out how to handle risks for the time being. Although the role of type III organizations might look insignificant in the process of earthquake resilience when compared with the type I and type II organizations, we should note that it is the flexibility of an airplane wing that keeps it from breaking in the stormy flight, not its rigidity (Moeller, 2012, 91). Moeller uses the term "stability by flexibility" referring to Luhmann's remarks on "*stabilization of a relationship* of redundancy and variety"; and gives the example that democratic system establishing this relationship with periodical replacement of government and opposition (Moeller, 2012, 91) [italics mine]. As long as disaster management, planning and response are seen as the task of only the specialized agencies and organizations, the resilience process is going to

be partial. If we are to talk about a system for disaster management, we need to talk about the unity of the difference, system-environment. Neither the system nor the environment on their own can become what they are; they are what they are in relation to one another, no matter how asymmetrical their relationship might be sometimes.

Earlier, I mentioned that Luhmann's theoretical perspective might look like a paralysing or passive set of ideas, however as it does not give us any misplaced hopes about steering society into anything, it relieves us from the burden of fears as well;

> Luhmann's theory […] confronts humankind with the "sociological insult," the insight into the limits of social steering. We are not at the center of cosmos, we are not the "crown of creation," and we are not the masters of our own minds; nor are we the autonomous creators of the social world. Previous attempts to use philosophical insights and wisdom to improve society have failed spectucularly. […] Theory does not equal a fatalistic pessimism, but a Stoic acceptance of the basic "human condition" of exposure to an uncontrollable environment. […] The insight of theory into its inability to take control in the world and steer society towards a land of milk and honey does not lead to mental paralysis or defeatism, but to relaxation and alleviation. […] That no ultimately decisive decisions are possible makes coming to a decision less difficult, not more so. […] It distrusts utopian programs and agendas, and because that is so, it can ally itself rather easily with realist and pragmatic approaches to politics that try to avoid the traps of either overenthusiastic hopes or numbing fears.
> (Moeller, 2012, 116-117)

Although the critical theoretical perspectives imply a strong conformism in the SST, the very core concept of contingency keeps our eyes open for alternatives regarding the social reality. SST does not assume any norm, any laws of nature, any central governing body or factor that dictates the social reality we experience today. Everything could have been another way, and still can be. As a result of letting go of

all misplaced hope, which is falsely based on the premise that "we" can steer the society succesfully and effectively, I can say that many other possible selections unfold for doing research about disasters using SST. At first, the topic of disasters puts immense pressure on the researcher to "steer" the society into greater resilience by making the right 'cut' to uncover the correct tools for that. However, none of us can deny the fact that the established projects, policies, and (type I and type II) organizations specialized in the field of disasters, are far from being conclusive in long-term disaster preparedness, mitigation and resilience both in Turkey and around the world. With that in mind, choosing to focus on functional alternatives such as the type III local associations that already functioned along established organizations for restoring the routine social functioning after 1999 earthquakes, and investigating their organizational involvement towards the next earthquake is an attempt worth 'wasting' my time, to say the least.

The focus on type III organizations is actually an attempt to think outside of the established disaster planning, an attempt to produce second-order observations to see new differences regarding earthquake disasters. Luhmann states that;

> Settled system differentiations stabilize the possibilities for reproduction by constraining conditions on the comprehesnsibility of communication and the suitability of behavioral modes. But the meaning surpluses that must be produced alongside provide ever *further chances for innovative system formation*; in other words, they provide the *chance to include new differences and new constraints* and thus to increase the ability to constrain the initial situation via differentiation. Only thus can system complexity increase.
> (Luhmann, 1995, 189) [Italics mine]

CHAPTER 3
METHODOLOGY

a - Social Systems Theory and the Functional Method

In his *Social Systems*, Luhmann explains his theory of functional differentiation using differences, which lie at the conceptual foundation of his theory. One of the important differences is the one between the distinction of *system / environment* and the distinction of *element / relation* (Luhmann, 1995, 20). The first distinction refers to formation of subsystems by repeating further system / environment distinctions inside the system for further system differentiation (also called as *re-entry*) (e.g. rooms inside the house); whereas the second distinction refers to the elements and relations within system referring to system complexity (e.g. cinder blocks, beams, nails, etc.). Luhmann states that this difference between two distinctions make it possible to conceptualize that an increase in system differentiation leads to an increase in system complexity (Luhmann, 1995, 21). The elements can be counted, quantified and the number of possible relations between them can be determined mathematically as the "mathematical world picture of the early-modern period"; however, the paradox is that elements become the elements of a system only by referring to one another; in other words, elements of a system become elements only relationally (Luhmann, 1995, 21). Once we go beyond quantification to focus on qualification, to discover how systems qualify their elements by selecting their relations, we realize that all analytical units of measurement, and standards can be chosen arbitrarily for the purpose of application (Luhmann, 1995, 21). The quality of being an element is constituted "from above", according to Luhmann, since "elements are elements only for the system that employs them as units" (Luhmann, 1995, 22).

The *functional method* basically assumes this, and operates accordingly. Basically, any level of social order is assumed to be extremely improbable by the SST, and as I explained earlier, all communications are coordinated into themes and

codes to solve certain evolutionary problems. We cannot talk about a solution without a problem. Therefore the functional method operates through the unity of the distinction of problem / solution. According to Luhmann;

> The fruitfulness of the functional method and the explanatory value of its results depend on how the relation between problems and their possible solutions can be specified. Specifying means setting increasingly restrictive conditions of possibility. For empirical science, this means an appeal to causality. To be sure, the functional method does not consist merely in discovering law-governed causal relations, with the goal of being able to explain that, when specific cases occur, specific effects are inevitable (or sufficiently probable). The insight of functional method lies, so to speak, athwart [across] causalities: it resides in comparing them. […] *the functional method is finally a comparative one, and introducing it into reality serves to open up what lies at hand for a sidelong glance at other possibilities*. In the end, it ascertains relations among relations: it relates something to a viewpoint on a problem in order to be able to relate this to other problem solutions. Accordingly, "functional explanation" can be nothing other than the ascertainment (in general) and exclusion (in particular) of functional equivalents.
> (Luhmann, 1995, 53-54) [Brackets and italics mine]

Moeller emphasized that complex system-environment relationships cut through causal connections, according to Luhmann's perspective (Moeller, 2012, 65). He gives the example of a medical drug, to explain the notion of *effect* along with *side-effects*, saying that social systems theory looks at the cause-and-effect relation primarily as an ascription; causes and effects are not objective categories but systemic constructs (Moeller, 2012, 66):

> Causes and effects that are observed are, like all other observations, dependent on the observing system and its means of observation. The effects of taking a medical drug will be observed differently by the doctor, the

> patient, the pharmacological company, the medical insurance company, and so on. There is no such thing as *the* effect as such. […] What they [effects] are depends on the observational capabilities with which the various systems perceiving the effects are equipped. None of the effects can be labeled the central or proper effect as opposed to side effects. *Such an ascription depends entirely on what is classified as central and peripheral by an observer*. Side effects, like root causes are semantic or ideological constructs. […] Medical professionals […] have also abandoned the belief that they can take control of what they are professionally dealing with. Instead, they operate with *probabilities*. […] the probabilities with which they are working are only probable probabilities.
>
> (Moeller, 2012, 66-67) [Brackets and italics mine]

These statements about effects and side effects in medicine remind Voltaire's words; "doctors are men who prescribe medicines of which they know little, to cure diseases of which they know less, in human beings of whom they know nothing" (WEB-9). After all, the society and social order are themselves very improbable probabilities played out in reality. Therefore, we should once again remember that we cannot impose an ultimate hierarchy among probabilities indeed; because improbable does not necessarily mean impossible. The methodological attitude of the functional method towards discovering functional equivalents as alternative solutions to same problem lies at the heart of my approach in this thesis. The asymmetry between the functional equivalents that I investigate in this study comes from the classification of AFAD as the central organization of coordination for disaster planning and management by the first order self-observations of the society in daily life. The observations that I am doing in this thesis are second order observations. In other words, I am observing the first order self-observations of the society to discover other, peripheral, less centralized possible solutions to the problem of earthquake disruption. I am trying to observe society's observations with regards to earthquakes.

In this study I am focusing on *asymmetric functional equivalents*, which are considered as less important or vital when compared to more established and

mainstream solutions for disasters, but which are regardlessly produced in an unplanned, un-steered, self-organizing manner by the society for restoring the routine social functioning. I take the disruption of routine communications and systemic boundaries due to earthquake as a problem, and look for possible alternative solutions. The empirical examples of this disruption include disruption of almost all financial transactions in the disaster area (e.g. cannot use money to purchase, cannot collect debt in the case of commercial enterprises, cannot pay loans back to banks, etc.), disruption of schooling (e.g. problematic quality of education in tent classes, student stress levels interfering with educational motivation, etc.), disruption of legal procedures (e.g. slow and chaotic processing of legal applications and petitions, prolonged disputes on property rights, etc.), disruption of transcendental meanings produced by religious system (e.g. questioning religious beliefs after the loss of loved ones, lack of or shortage of religious services for funeral, etc.), and disruption of political legitimation (e.g. questioning the effectiveness of governor, mayor, etc.) to name a few. I search for relations among relations, by trying to investigate the relationship different solutions for the same problem. The earthquake-related decisions and activities of non-specialized type III organizations are studied as asymmetrical functional equivalents to more established, centralized, and specialized organizations on the local level. The reason why I am limiting my study with the local associations is because I want to exclude the possible interference or influence of a national or international central office, headquarters, or such a governing center over local associations' decisions. This would help me distinguish the orientation of their decisions towards the local 'community', or towards the abstract logic of function systems and organizations within their thematical horizon . The importance of functional equivalents is that they are sources of redundant possibilities, and they pose a mechanism to offset the uncertainty of selection by providing some guarantee that not all possibilites are exhausted yet (Moeller, 2012, 60).

Stitchweh mentions the problem-oriented attitıude of the SST, saying that Luhmann inverted Parson's approach, which starts theoretization of society from given social structures and then moves on to analyse their functionality. Luhmann begins with social problems as functional references of solutions, and then moves on

to structures of difference (Stitchweh, 2011, 10). Luhmann's own remarks on methodology clearly show this;

> What is at issue here is not an interest in recognizing and curing, nor an interest in preserving what has been in existence, but first and foremost an analytic interest: to break through the illusion of normality, to disregard experience and habit, and, in this sense (here, not intended as that of transcendental theory), to effect a phenomenological reduction.
>
> The methodological recipe for this is to seek theories that can succed in explaining normal as improbable. From the functionalistic perspective, this can occur with the help of problem formulations that make it possible to represent the normal experiential contents of the lifeworld as an already-successful solution to the problem, but one that could also, perhaps, be otherwise.
>
> (Luhmann, 1995, 114)

Besio & Pronzini also state that Niklas Luhmann's functionalism is very different than that of Parsons' since Luhmann does not assume a given set of functions that must be fulfilled for a system's survival like Parsons does (2011, 32); "[…] if for example a specific structure is used by an organization, then it contributes to its reproduction. This means that it helps to reduce complexity, without fully eliminating it" (Besio & Pronzini, 2011, 32).

Using the functional method as his modus operandi, Luhmann analyses social structures in their capability to contribute to resolution of problems and he prefers "historical and comparative functionalism which always compares alternative structural or institutional patterns in their ability to contribute to the solution of relevant social problems. […] articulates a preference for comparative studies against a conventional preference for the causal reduction of observed events" (Stitchweh, 2011, 10). The importance of a historical concern in Luhmann's methodological approach is also emphasized by Moeller:

> Inequalities and social inclusion and exclusion in modern society have to be analyzed with more adequate and less anachronistic theoretical means. […] Social systems theory can historically analyze the relation between social structures and the semantics of a time. […] "The structural change of society is beyond the observation and description of its contemporaries. Only after it has been completed and when it becomes practically irreversible, semantics takes on the task to describe what now becomes visible" […]
> (Moeller, 2006, 49-52)

Knudsen sums up functional method as an observational technique that generates its observations by means of the distinction between problems and solutions (Knudsen, 2011, 128). In this sense, "*the task of analysis is to find solutions to the problem and compare different, relevant aspects of these solutions to one another*" (Knudsen, 2011, 129) [italics mine]. Besio & Pronzini list techniques to inquire into pre-existing solutions to past problems and alternative courses of action; interviews, participant observations, conversation analysis, document analysis, content analysis, frame analysis, and discourse analysis (2011, 23, 26, 28, 30).

Having mentioned the functional, historical, and comparative methodological orientation of the SST, we should note the suggestions of Besio & Pronzini are significantly parallel to the discussions on the methodological approach to take in disaster studies. Gary Kreps, for example states that:

> A life history perspective is essential for studying disasters because they are social constructions […]. This means that any social system vulnerable to disasters should be examined before as well as after an event occurs (Shrivastava 1987; Drabek 1989a; Perry 1989b). […] Thus, *disasters have life histories which can be designated in time and space*.
> (Kreps, 1995, 34) [Italics are mine]

Anthony Oliver-Smith agrees with Kreps' line of thought and also states that:

> In line with Kreps' suggestion that *the study of disasters should be informed by a life history methodology* […], I would suggest that the life history of a disaster begins prior to the appearance of a specific event-focuseed agent. Indeed, in certain circumstances disasters become part of the profile of any human system at its first organizational moment in a relatively fixed location or area.
> (Oliver – Smith, 1998, 188) [Italics mine]

One of the popular criticisms against Luhmann's theory is that it is primarily descriptive. However, considering its capability to show the pragmatic limitations of steering and social engineering attempts, and revealing the theoretical shortcomings of the moralistic and ideologically biased assumptions of the liberating and prescriptive theoretical perspectives is a very strong position against these criticisms. Basically, what Luhmann does is to liberate his own theoretical construction from providing false hopes about the future of the society;

> The most basic diference between Habermas's and Luhmann's theory is a methodological one. Habermas intended to improve society by making it communicate more rationally, while Luhmann's theory was not only primarily descriptive, but tried to show the limitations of attempts at social steering. […] the ensuing criticisms of Luhmann that either came directly from authors of the Frankfurt school or were similar with respect to their line of attack. […] A modified version of the various criticisms listed by King and Thornhill [204] would accordingly accuse Luhmann with:
>
> - his refusal to see communication as an instrument for progress in society,
> - his failure to account for human agency in communication,
> - the failure of his theoretical ideas to offer anything more than a new brand of conservatism,
> - his rejection of rationality as a universal arbiter of the validity, value and legitimacy of communication, and

- his reluctance to engage in debates over current political and social issues related to communication

(King & Thornhill, 2003, 204)
(Moller, 2012, 135)

However, basically the strongest defense against these criticisms is that, in contrast with most critical theories, the SST does not formulate pleasant utopic projections of society's future, but instead recognize social systems' indifference to humanistic concerns in their actual operations;

> It cannot be known where this new way of looking at the world will lead, but it might be worth exploring, if only for the sake of trying something less boring. Social systems theory does not deal with fabricating new hopes, new promises, or new utopias, but it is also not afraid of letting go of hopes that cannot be fulfilled, promises that have never been kept, and fairytale visions of a golden future. It dares to introduce a nonhumanist paradigm shift in social theory – one that may "perturb" society in a profound and (obviously) entirely contingent way.
> (Moeller, 2012, 31)

> This attitude is not to be mistaken for a sheepish obedience or submission [...] its power consists in making sense of and in the world rather than in deliberately changing the world into something altogether different.
> (Moeller, 2012, 117)

b –Approaches to disasters in Turkey

The field of disaster studies in Turkey is covers a wide spectrum both in terms of time and their units of analysis. For example Balta's thesis research on Afyon-Dinar after the 1995 earthquake used a combination of quantitative surveys and in-depth interviews with the victims of this earthquake using individual responses as a unit of analysis (Balta, 1998). She argued that the "disaster had an

effect on the socio-cultural habits and life spaces of Dinar community" such as religious feeling and behavior, social activities, housing patterns, changing composition of neighbourhoods and friendships, and gender-based differences (Balta, 1998, 123). In her thesis, Balta emphasizes the special importance of Quarantelli's works in the field of disasters and refers to Quarantelli (1987) about the importance of studying disasters through collective behavior and organizational theory. In her conclusions, she pointed at the problems about the hierarchical structure of the disaster management system in Turkey (Balta, 1998, 124).

Karancı & Akşit should be noted as two leading names in Turkey in this field of research. They also employed a combination of qualitative methods like in-depth focus group interviews and observations from field trips to Dinar after the 1995 earthquake, and extensive questionnaires to assess the impact of earthquake, the level of satisfaction with the recovery process and psychological aspects; their unit of analysis was individual (Karancı & Akşit, 1998). They emphasized the importance of organizing locally to prepare for and cope with disasters, and the involvement of local organizations in disaster preparedness activities. As they tried to apply their conclusions from Dinar to Bursa, they observed that the municipality had problems in involving the local people in newly founded disaster-related organizations in Bursa as part of the project Local Agenda 21 by the UN, suggesting that the existing forms of local organization could contribute to community participation (Karancı & Akşit, 1998, 39).

Rüstemli & Karancı carried out a survey on a random sample of individual residents of Erzincan, who experienced the 1992 earthquake, to assess the relations of earthquake-related cognitions and preparedness behavior (1999). They discovered that "[…] damage anticipation was related to height and perceived strength of residence unit as well as to perceived control and trust in officials. Severity of past experience did not appear to have the predicted effect on quake cognitions and preparedness." (Rüstemli & Karancı, 1999, 91). This was an assessment on household and individual level, not organizational.

Bozkurt was another name discussing the social dimensions of disasters in Turkey. He interpreted the social context in Turkey leading to destruction in 1999 earthquakes as the result of an incomplete modernization, lack of rationality, lack of

accountable state and accountable politicians (1999, 20-21). He links this with the authoritarian culture in Turkey resulting in a lack of strong civil society and citizen initiative to call authorities to account for their decisions (Bozkurt, 1999, 29). He argues this authoritarian influence is also manifested in the behavior of earthquake victims' religious submission to one's fate, also referring to the similar observations in Karancı, Akşit & Sucuoğlu's (1996) work on Dinar earthquake (Bozkurt, 1999, 47).

Karancı & Akşit's another study discussed the importance of increasing the community awareness in local stakeholders in terms of earthquake risks in Bursa (2000). They primarily used in-depth and focus groups interviews "to uncover local views on disasters, mitigation, preparedness, and multisectoral collaboration and participation" (Karancı & Akşit, 2000, 404). After this first phase, they observed and participated in the process of bringing stakeholders together as a part of Local Agenda 21, to promote community involvement in preparedness and mitigation efforts. They discuss the problems experienced during the program as a result of the lack of anxiety and acceptance of risks by the stakeholders in the local level. Since the efforts from outside the community to promote active earthquake preparedness were observed to be short-lived, they concluded that, "Old forms of community participation should be unearthed, and new forms should be devised and implemented" in order to achieve long-term earthquake mitigation and preparednesss action (Karancı & Akşit, 2000, 414). Actually, what I am aiming to do in this study precisely overlaps with this remark of Karancı & Akşit; I aim to unearth the past forms of self-organized disaster activities by the local society after the 1999 earthquakes in Düzce. The term disaster-resistant they use in their study ties very closely to the definition of resilience concept as self-organization in the lack of guidance to restore routine social functioning. The problems they stated with promoting local participation to disaster-related activities is a manifestation of limitations of external social steering. The representatives of local organizations were part of participants invited for the disaster-related activities they studied. These local organizations had never been engaged in earthquake-related activities before; however, the ones I am studying in Düzce are the ones that took initiative about disaster-related activities in different periods after the 1999 earthquakes.

Toksoy did a thesis study on the role of civil society organizations after the August 17th earthquake (Toksoy, 2000). The field research was carried out in Yahya Kaptan temporary housing area in İzmit-Kocaeli. Her unit of analysis was family households, and the method was in-depth interviews with 26 household heads (12 females, and 14 males) selected through a probabilistic random sampling of the 802 temporary housing units in the area (Toksoy, 2000, 74). The interviewees were assessed in terms of their perceptions of the civil society organizations, and their relationships with them in the context of post-disaster recovery. Majority of the subjects of this study perceived organized civil society only as aid organizations (Toksoy, 2000, 161). The organizations, which mostly came from other regions outside the disaster area for aid activities, did not have a sustainable impact on the local population due to a lack of variation in their projects to promote local participation volunteerism (Toksoy, 2000, 162). These remarks show the importance of local-self organization and direct participation in disaster recovery activities. Rather than relying on external help and aid, the self-reliance of local population on its own organizational structures tends to me more sustainable in the long run.

Kasapoğlu & Ecevit's study covered a research universe of 39.928 temporary housing units in Kocaeli, Sakarya, and Düzce after the August 17th and November 12th earthquakes (2001, 22-23). They used a proportional stratified sampling for these 3 provinces to choose a total of 250 households living in temporary housing areas. In these households, 250 females and 250 males, married with children, were interviewed through structured interviews and group interviews along with participant observation, and they were given statistical surveys to combine multiple research techniques (Kasapoğlu & Ecevit, 2001, 27). Their questions included items on demographic indicators, changes in victims' living conditions, stress indicators, responsible behavior, verbal commitment, locus of control, alienation, and traditionalism (Kasapoğlu & Ecevit, 2001, 27-32). Among all, one of the most interesting findings they presented was the comparison between the actual support and perceived support that earthquake victims received from civil society organizations, state, and their kins. If we look at the highest response rates, 20.2 % of the respondents said state was their primary source of support, 14.3 % said it was their kins, and 9.9 % said it was civil society organizations, whereas 80.2 % said they

expected support from state, 7.2 % said they expected support from kins, and 2.7 % expected support from civil society organizations (Kasapoğlu & Ecevit, 2001, 85-87). These responses were interpreted as indicators of traditional and closed social characteristics of the sample. In their conclusions, they point at the need for improvement of modern individual and social responsibilities, since kinship and communal relations based on fellow townsmanship on their own would be insufficient during recovery from the heavy impacts of such a major disaster and preparing for another one in future (Kasapoğlu & Ecevit, 2001, 90).

Akşit, Tabakoğlu & Serdar's study used a statistical cluster analysis measuring the attitudes of different civil society organizations' (CSO) members in regard to certain Likert type items on questions about the political, organizational and daily life agenda in Turkey, in an attempt to classify the organizations according to the tendencies of their individual members (2002). The organizations they covered included a very wide variety ranging from trade unions, to foundations, to associations organized mostly on the national scale. They did not have a special focus on disasters; but their survey sample included disaster-related associations too, such as Adapazarı Dep-der, AKUT, Arama Kurtarma Dernekleri Ortak Ç. G., Avcılar Dep-der (Avcılar-Gümüşpala Dayanışma Derneği), Bekirpaşa Dep-der, Deprem Derneği, Düzce Dep-der, Gölcük Dep-der (Gölcük Mağdurlarla Dayanışma Derneği), Kızılay, Yalova Dep-der and 911 Arama Kurtarma Derneği (Akşit, Tabakoğlu & Serdar, 2002, 12-13). There are a number of important points made by this study. Akşit, Tabakoğlu & Serdar report the perceptions of members and managers of civil society organizations about the concept of civil society. The members and managers tend to consider the existence of a civil society to be possible through civil society organizations (2002, 308). This piece of information they reported in their study confirms the Luhmannian interpretation of the modern society in which no undifferentiated generic civil society exists anymore and that organization as a form of social system gains strategical importance for representation and addressing in systemic communication. The major antagonism seems to be between the state and the civil society organizations according to this study, and it defines the positions of these organizations as closer to center or further from the state in the periphery depending on their ideology and political orientation.

This can have some consequences regarding the discussions around disaster management efforts. For example in the tactical plans (TAMP) prepared by AFAD, the Ministry of Family and Social Policies (Aile ve Sosyal Politikalar Bakanlığı) is designated as the main stakeholder for psychosocial support activities in the case of a disaster, and the affairs about associations (the expression "civil society organizations" is used in the plan) are to be managed by this ministry (AFAD, 2013, 20). Here, the organizations with closer connections to the center (sharing similar organizational horizons and decision programs), closer to the government ideology and conforming with the decisions of state might have a an asymmetrical advantage over rather oppositional associations placed farther in the periphery in terms of inclusion in the plan and coordination of activities. Akşit, Tabakoğlu & Serdar's factor analysis divides 34 different organizations (chambers, unions, associations, foundations) into two main groups, the first one being the mainstream/traditional civil society organizations, and the second being oppositional civil society organizations (2002, 141). This division according to oppositional attitude of the organizations against the state is perhaps the most significant of their findings; and it emphasizes the importance of this ideological divide. In this regard, the centralized plan for disaster management (TAMP) might suffer a systemic blindness in terms of ideological reproduction of government ideology. In other words, a disaster management plan as a system is supposed to be concerned primarily with safety, however in this case it might be interfered with and biased by the ideological concerns of the state. The contradiction between decision programs of the government in power and local associations could create inclusion bias and asymmetry between centrally approved and ignored organized efforts in disaster management. It is reported that not all of the civil society organizations are antagonistic with the state and some can conform and cooperate better with the state policies and ideology (Akşit, Tabakoğlu & Serdar, 2002, 309). This is part of why I propose using the term *asymmetric functional equivalents* for alternative self-organizing disaster-related efforts along with the centrally planned and steered ones. Another important imformation in Akşit, Tabakoğlu & Serdar's study is that their interviewees from a very wide spectrum of different types of organizations such as unions, chambers, associations, platforms, and foundations stated their opinions

supporting the specialization of the civil society organizations (2002, 311), which points at the functional differentiation trend advocated by Luhmann.

In her 2002 work Jalali argues that, "an ideal response system, which fully addresses the needs of victims, can only be based on state–civil society relations that are both collaborative and adversarial" (120). Jalali quotes Habermas in his ideas that the public sphere must use its influence over the parliamentary complexes "to oversee the further treatment of problems that takes place inside the political system" (Jalali, 2002, 122; Habermas, 1996, 359). Although she uses the concept of civil society in her arguments stating that "it provides a buffer between state and citizen" (Jalali, 2002, 129), it gets clearer through the text that it is always through the organizational forms (systemic boundaries and differentiation) that this concept has to manifest itself. In parallel with Luhmann's arguments, civil society is more like a ghost, which can only be stabilized indirectly through organization systems. Jalali quotes Warren about the importance of associations and organizational formation:

> [Associations, which are housed in civil society] play key roles in communicating matters of public concern within civil society, states, and markets...Because they are often closely connected with individual's life worlds, associations are especially sensitive to emerging problems and difficulties. They have the capacity to 'signal' the concerns of individuals directly, whereas states and markets at best can do so only indirectly because they are sensitive in the first instance to power and money.
> (Warren, 2001, 78).
> (Jalali, 2002, 129-130)

In the above quotation Jalali made from Warren, the selective sensitivity of the state to power and markets to money resemble Luhmann's differentiated political function system and economic function system respectively. Having built her work on observations, and a survey of the news media throughout the 1999 earthquakes, Jalali concludes her study saying, "Turkey must develop innovative ways to foster synergy between state and society so that disasters become a predictable and manageable feature of its environment" (Jalali, 2002, 136). Even though she gives

no reference to Luhmann, her recognition and suggestion for establishing more channels of communication between the state and volunteer organizations is closely parallel to a resonant communication capacity between different social systems in an SST perspective. In my study, what I am investigating is the asymmetrical connections between the political function system's hierarchical solutions to earthquakes and the self-organizing solutions in its periphery; those of the local associations.

Inelmen et al. studied the participation lethargy of the residents of an İstanbul neighbourhood to disaster preparedness organizations on the basis of shared values, norms, and practices (2004). They used a combination of qualitative techniques of group interviews with members of the organizations, and then quantitative surveys for non-members on a probabilistic basis. They handled community-based organizations (CBO) and non-governmental organizations (NGO) as different types of organizations, CBOs being closer to grassroots local neighbourhood activity and NGOs being more institutional organizations like foundations (Inelmen et al., 2004, 133, 149). Their study focused on the participation behavior of non-members into these organizations. They explained the lethargy with a cultural phenomenon of "high power distance" from decision-making authority, and "low future orientation" that marks a fatalistic attitude (Inelmen et al., 2004, 153). One point they make is important for this study; "trust can be developed in part through citizens working together in voluntary organizations (Fenton, et al., 1999) and that it could lead to higher levels of participation in preparedness efforts" (İnelmen et al., 2004, 143).

Karancı et al. (2005) carried out an impact analysis on the participants of a community disaster training program in Çankırı. They compared 400 trained individuals who participated in the program and 400 local random non-participants one year after the training was complete. They used detailed survey items and statistical analysis methods. Whereas the disaster-cognitions of the participants was markedly higher than the non-participants, the reported preparedness behaviors were still quite low for participants as well (Karancı et al., 2005, 243). Their conclusion was that being male, having higher education level, smaller household size, worrying about future disasters, and participating in a disaster training program contributed to

disaster preparedness behavior; but still it proves to be difficult to facilitate long-term behavioral change (Karancı et al., 2005, 255-256).

Yarar's research about the transformation of the "civil society organizations" in Düzce after the earthquakes is another important study (Yarar, 2006). She contacted 13 associations and foundations in Düzce to investigate their organizational characteristics and their transformation in the social setting after the 1999 earthquakes. She exclusively used in-depth interviews with the members and managers of these 13 organizations in Düzce for her data. Yarar also focuses on the local character of these organizations, and she divides these organizations into 2 groups as the traditional civil society organizations (CSOs) and the new CSOs. The traditional CSOs existed before the 1999 earthquakes and were closely entwined with local political groups and interest groups in Düzce; they were also rather nepotic and closed to widespread inclusion (Yarar, 2006, 58). On the other hand the new CSOs were founded after the 1999 earthquakes and they showed more tendency towards social inclusion and participation in their discourses, projects and long-term plans; although not totally immune to systemic problems of exclusion in practice (Yarar, 2006, 58). Yarar concludes stating that even though they are far from perfection, the trends in political and social life are towards higher inclusion of the social groups previously excluded from the modernization process in Turkey (Yarar, 2006, 58).

Kasapoğlu discusses disasters in Turkey from the perspective of social traumas (2007). She points at the dissolution of communal ties after major disasters as a result of these mass traumas, and refers to Kai Erikson (1994), saying that the society either responds through "corrosive" or "therapeutic" solidarity efforts (Kasapoğlu, 2007, 10). Kasapoğlu also points at the same mechanisms that Bilgin explained for Turkey as an underdeveloped country engaging in disadvantageous relationships with the global economic system, channeling its capital into overpriced goods and services from abroad while it sells its underpriced labor abroad (2007, 58-59). She recognizes the importance of systemic factors creating disaster conditions, how important local networks and complex organizational adaptations can be for disaster response (Kasapoğlu, 2007, 60, 65-68).

One of the most important points emphasized in Kasapoğlu & Ecevit (2001, 8), and Kasapoğlu (2007, 195) was the evolution of an earthquake culture. They cite

Dynes' (1970) definition of earthquake culture as the totality of experiences a society learned from the last major earthquake. In this study, my concern is to investigate how the organizational aspects of these experiences are connected with the future planning efforts in order to live with earthquakes.

Özceylan & Coşkun's study (2012) looked for a correlation between the level of socio-economin development (SED) and the level of socio-economic vulnerability (SEV) in provinces of Turkey. The index of social and economic vulnerability in their study was previously developed by Özceylan (2011). For measuring social vulnerability, it used variables such as population density, vulnerable groups (aged, disabled, females), preparedness (education, insurance, disaster NGOs), capacity of health services and alternative services. For measuring economic vulnerability, it used employment, and welfare-related indicators (Özceylan & Coşkun, 2012, 2-3). For socio-economic development of provinces, they used Dinçer et al.'s index (2003) including demographic variables, education variables, health variables, infrastructure variables, other welfare variables, economic variables, construction variables, agricultural variables and financial variables (Özceylan & Coşkun, 2012, 3-4). They found that SEV and SED were positively correlated (ρ=0,523) and that the correlation between development and vulnerability was statistically significant (p=0,01) (Özceylan & Coşkun, 2012, 12). They stated that the deeper the level of analysis got, from correlation to categories, and down to single provinces, the differences based on sub-indexes became more apparent and further studies were needed to understand multi-faceted concepts of development and vulnerability (Özceylan & Coşkun, 2012, 12). For my study, I should emphasize that Düzce and Yalova were categorized to be more vulnerable than Bolu, Kocaeli, and Sakarya. Düzce was also categorized as the least developed of the 4 provinces hit by the 1999 earthquakes (Özceylan & Coşkun, 2012, 7).

c – *Local associations in Düzce and their organizational histories in the context of earthquakes*

The question why this study is about local associations can be answered in many different ways. No choice is the best choice or no categorization is ultimately

the most inclusive one. I will use functional method in explaining why I choose to focus on local associations, by telling which problems this contingent selection is a solution to.

Firstly, as I stated earlier, the abstract logic of function systems and the social systems' definitions of their elements work from top to bottom, from abstract to concrete, and from global to local. The focus on the local character of these associations is a deliberate choice to show this contrast. Since these are local associations, they have no ties to distant national headquarters so I can observe without interference how they are coupled to larger social systems. Secondly, in a legal sense associations form a category of organizations clearly differentiated from foundations, unions, or private sector (private sector is included in some studies about civil society, since the economic sphere is considered a dimension of civil society according to some definitions; however, for the SST economy is a function system differentiated from others long time ago). Categories such as civil society organizations (CSO), non-governmental-organizations (NGO), or community-based organizations (CBO) fit too loosely on SST's functionally differentiated conceptualization of the social context. For the local associations in this study, the closest term seems to be the NGO; but it is still ambiguous when compared to specific organizational title "association". This was also acknowledged by Akşit, Tabakoğlu & Serdar (2002, 38) by quoting Ahrne's emphasis on the importance of organizational formation when discussing the concept of civil society; "the quality of civil society cannot exceed the quality of its organizational forms" [Translation mine] (Ahrne, 1998, 93).

In this regard, instead of tyring to bundle organizations under general categories such as CSO, NGO or CBO, using the specific name denoting the type of organization would be more precise. Thus, the definition 'association' specifies the legal and economic characteristics of this organizational form much more clearly. Associations are subjected to different legal and financial definitions, limitations, rights and responsibilities when compared to unions, chambers and foundations, therefore comprising a category of organizations in themselves. Commercial and industrial organizations and facilities can be mentioned as still more different categories in terms of their size, sector, and profit orientation. Akgüngör's study on

two cement factories in Hereke and Darıca after the 1999 earthquake (with a total of 28 in-depth interviews) is an interesting one in this sense, showing that commercial-industrial production complexes are a different category in private sector with a whole different set of risks for example (Akgüngör, 2011). Thirdly, the collective character of associations and their ability to act is an important aspect. It takes at least 7 people to start an association, whereas in private sector, for example, single-owner and single-employee enterprises categorically interfere with the participation and inclusion. For example, Gülfidan's study specifically focuses on the micro-size local commercial enterprises in Düzce and takes these enterprises as a separate category in themselves (2006), just like Akgüngör did with the industrial complexes. The optional and collective quality of associations is an important difference from industrial and commercial organizations in the case of disaster management. Although economical function system is argued to be a part of the civil social sphere in some conceptualizations, in a Luhmannian sense we see that social systems are today in a far more complex state, and society is functionally differentiated. As I mentioned earlier, the concept of "civil society" is too general to be a part of Luhmann's functionally differentiated view of the modern society; therefore it can only refer to the whole society and human civilization in a global sense at best. Fourth, the themes and membership criteria of the local associations are optional constructs to engage for persons in the local scale. In other words, people can live without being an association member, but some people still become one. And still some of these associations, in this case, choose to engage in earthquake-related decision-making and collective action with their own initiative. This optional character of associations brings us empirically closer to the concept of contingency, indicating that nothing in society has to be the way it is right now and that things have the potential to change at a moment's disruption. Fifth, the rather optional, volunteer characteristic of a local association and the positive (as in positing certain action to other parties, imposing) characteristic of centrally planned and steered differentiated disaster operations is a functionally fruitful way to compare functional equivalents for earthquake communications and activities. In other words, I can compare what the government wants the society to do, and what the local society itself does without direct government guidance and steering. The local associations I

study in this thesis took place in earthquake-related activities using their own initiatives without any external push or steering, however, a central plan tries to make others do things. Finally, although it might appear like a mismatch in terms of scale to focus on local associations as opposed to centralized planning, in practice any cenralized plan has to localize sooner or later when it comes to application. In other words, the local associations of Düzce produce collective action in and for Düzce; just like the centralized disaster plan has to localize its actions when it is implemented in Düzce. Moreover, regardless of their scale, both solutions are developed for the same problem. A commonsensical judgment would lead one to think that centrally coordinated disaster plans are more important when compared to little and uncoordinated local organized efforts; but still, it is important to investigate the relationship between central and local efforts to restore routine social functioning since neither of them can work in isolation. I propose calling these *asymmetric functional equivalents*, in order to emphasize the asymmety between central steering and local self-organization.

d – Field research procedure

The ideal research technique for this thesis study on local organizations is to carry out a document analysis of the local associations, accessing to organizational statutes and logbooks of local associations to observe all their routine and disaster-related decisions, activities, cooperation links, meeting reports, founding aims, membership criteria and all. However, in Turkey, it is an overly optimistic expectation to find regularly kept association logbooks and other regular archiving of organizational documents in the local level. Moreover, generally the local associations in Düzce are not so willing to open their existing records to a researcher, due to the volatile nature of the political agenda of the country. The never-ending debates about covert investigations of regular people and organizations for dubious intelligence purposes are comprise a popular reason for their unwillingness. Moreover, recent political lawsuits in the country and the resulting ideological deliberation produce significant unwillingness to provide access to organizational

records (if any), and the association representatives and managers persistentently prefer to keep the research at the level of interviews and conversations.

As a result, the research technique employed in this study is mainly semi-structured in-depth interviews with the association managers and representatives regarding the general characteristics of the association, the routine activities and the earthquake-related activities decided and then organized by their local associations. Most of the local association representatives did not even give consent for voice recording, and they only let notes to be taken during the interviews. The purpose of collecting these life histories of earthquake recovery was to compose an alternative life-history of locally self-organized recovery after the 1999 earthquakes and restoration of the routine social functioning in Düzce as opposed to centrally implemented and externally steered recovery activities. The current earthquake-related activities and organizational connections of these local associations were also probed during these interviews to assess the situation in Düzce today.

In the earlier stages of my consideration of the field research, my primary focus was on my hometown Sakarya-Adapazarı. However, the unmanageably high number of associations, and the rather reluctant attitude of the Governor's Office to cooperate in providing data about the associations in this province led me to consider alternative provinces hit by the same earthquakes. 82 km. from Adapazarı, Düzce had also been hit by both of the major destructive earthquakes in August 17th and November 12th in 1999. Düzce had a more manageable number of associations in the city center, and the Governor's Office cooperated better by providing contact information of all associations in Düzce Central (Merkez) sub-province. The first field visit to Düzce was in 2010 in order to interview a representative of the Düzce Depder (Düzce Depremzedeler Derneği – Düzce Earthquake Victics Association). This was a preliminary interview before designing my study.

During my research for literature on earthquakes and Düzce, I discovered that there were a total of 774 associations in Düzce province by the year 2006, including 8 sub-provinces Merkez, Akçakoca, Cumayeri, Gölyaka, Gümüşova, Kaynaşlı, Yığılca, and Çilimli (Yarar, 2006). In September 2011, I requested the list of names and contact information of all associations in Düzce Merkez (Central) sub-province from the Governor's Office. The Merkez (Central) sub-province held 423

associations in its 73 villages and 48 neighbourhoods. A concise picture of the sub-provincial divisions in Düzce can be seen in **Table 8** (page 129).

Table 8. Sub-provinces, Districts, Villages and Neighbourhoods of Düzce Province.

Sub-province	District	Villages	Neighborhoods
Merkez (Central)	Merkez – City Cent.	73	48
	Beyköy	---	5
	Boğaziçi	---	6
	Konuralp	25	7
Akçakoca	---	43	8
Cumayeri	---	21	5
Çilimli	---	20	7
Gölyaka	---	21	10
Gümüşova	---	18	6
Kaynaşlı	---	20	7
Yığılca	---	39	4
Total		280	113

(WEB-2 – Düzce Governor's Office, 2013)

Out of 423 registered associations in Düzce Merkez sub-province, 131 are located in the villages surrounding Düzce city center, and 280 are registered in the city center. My main concern is with the city center, where multi-storey urban construction is the most intense and the 1999 earthquakes caused the biggest destruction in the whole province (see **Table 3**, page 27**; Table 4**, page 28).

Between October 2011 and March 2012, I did an initial telephone survey of 220 associations out of 423 in the Merkez sub-province, regardless of their location in the actual city center or in the villages. This was a preliminary assessment to see return rate and verify contact info on the list. In this telephone survey, I asked a single question; "Has your association ever organized, participated, or engaged in any sort of earthquake-related activities whatsoever"? 78 out of 220 calls replied to my telephone calls. Out of 78 replies, 15 associations answered positive for any sort of earthquake-related activities (see **Table 9**, page 130).

Table 9. Associations responding positive to "Has your association ever organized, participated, or engaged in any sort of earthquake-related activities whatsoever?" in preliminary telephone survey in Düzce Merkez sub-province

1	Düzce Tahsil Çağıdaki Talebelere Yardım Derneği
2	Türkiye Kızılay Derneği Düzce Şubesi
3	Düzce Hacı Davut Camii Yaptırma ve Yaşatma Derneği
4	Konuralp Gölcükbaşı Mevki Cami Yaptırma ve Yaşatma Derneği
5	Abhaz Kültür Derneği
6	Konuralp Gazi İlim ve Kültür Derneği
7	Musababa Köyü Kozluk Mahallesi Cami Yaptırma ve Yaşatma Derneği
8	Hamidiye Mahallesi Altmış Evler Cami Yaptırma ve Yaşatma Derneği
9	Düzce Lisesi Mezunları Derneği
10	Düzce Depremzedeler Derneği
11	Düzce Gazeteciler Cemiyeti Derneği
12	Albayrak Gençlik ve Spor Kulübü Derneği
13	Çağdaş Yaşamı Destekleme Derneği Düzce Şubesi
14	Çengeloğulları Yardımlaşma ve Dayanışma Derneği
15	Düzce Fenerbahçeliler Derneği

During this preliminary telephone survey on associations, some trips to the field were carried out in November 2011. During these field trips I visited the Governor's Office and the local AFAD office. I carried out interviews with 2 deputy governors and 1 AFAD representative in order to have an understanding of how the centralized state organizations relate to the local associations in terms of earthquake communications, plans and activities in the long run, during routine flow of life.

Having observed the low levels of overall response rate from associations during the preliminary telephone survey, I noticed that an important majority of the local associations on the list only exist on paper. This situation is very well known in the circles working with associations and it is called "signpost associations" ("tabela dernekleri"), not updating their contact information and not manifesting any sign of

regular organizational activity in reality. With this reason, rather than relying only on telephone survey for scheduling my interviews, I decided to look for the associations with actual offices in Düzce city center and contact them directly during my field vists. Majority of association interviews took place in November and December 2013, after I finalized the theoretical background, key concepts (autopoiesis, operational closure & blind spots, and functional equivalence) and the design of my research.

I started my field visits trying to contact the 15 associations that responded positively in preliminary telephone survey. Some of these associations were in other districts and villages, outside the city center, so I left them out. Some of the associations in the city center were not willing to make appointments despite my efforts and some openly expressed their unwillingness about getting involved in the study. I was left with 8 associations scheduled for interview out of 15 from the preliminary telephone survey. I used snowball sampling, starting from these 8 associations and took into consideration the referrals made in the interviews with established organizations in terms of their partnerships with local associations. During my field visits, I visited associations in the Düzce city center that were not covered during the preliminary telephone survey and discovered some more associations that engaged in some sort of earthquake-related activities in their organizational history. At the end, a total of 27 face-to-face in-depth interviews were conducted with 15 different associations, 2 government agencies, municipality, and various relevant participants in Düzce City Center. The breakdown of interviews can be seen in **Table 10** (page 132).

Table 10. List and breakdown of field interviews according to types of organizations

Type I established organization interviews
- Governor's office (2 interviews with 2 deputy governors) - AFAD (Prime Ministry Disaster & Emergency Management Presidency) (2 interviews with the training department) - Düzce municipality (1 interview with public relations department)
Type II expanding organization interviews
- 1 with Kızılay (Turkish Red Crescent) (2 representatives: branch office manager and training personnel)
Type III extending organization interviews (managerial board members)
o Hacı Davut Camii Yaptırma ve Yaşatma Derneği (2 representatives) o Cedidiye Camii Yaptırma ve Yaşatma Derneği o Merkez Büyük Camii Yaptırma ve Yaşatma Derneği o 60 Evler Camii Yaptırma ve Yaşatma Derneği (2 representatives) o Düzrad – Düzce Telsiz ve Radyo Amatörleri Derneği o Düzce Bedensel Engelliler Derneği o Düzce Gazeteciler Derneği (3 representatives) o Düzce Fenerbahçeliler Derneği (2 representatives) o Düzce Muhtar Dernekleri (3 associations) (3 representatives) o Albayrak Gençlik ve Spor Kulübü Derneği (2 representatives) o Çengeloğulları Yardımlaşma ve Dayanışma Derneği o Düzce Adıge Kültür Derneği (former Kuzey Kafkas Kültür Derneği) (2 representatives) o Kadın Dayanışma Derneği (2 representatives)
Type IV emergent organization interviews (managerial board member)
- Düzce DepDer (2 interviews)
Miscellaneous interviews with relevant participants from the field:
- Former social service provider who worked at Kızılay's Toplum Merkezi (Social Center) after 1999 earthquakes - Former social service provider who worked at Kızılay's Toplum Merkezi (Social Center) after 1999 earthquakes and currently Nilüfer Kadın Çevre Kültür ve İşletme Kooperatifi (Nilüfer Women's Environmental Cultural and Business Cooperative) manager - Neighbourhood headman (muhtar) in permanent housing area (Kalıcı Konutlar Bölgesi)

The interviews on **Table 10** (page 132) were not only with the type III extending associations, but also with type I established, type II expanding and type IV emergent organizations in order to have a better understanding of how they relate to each other, and how type III associations are perceived by other types of organizations in terms of earthquake communications and activities. As I mentioned above, in AFAD interview, the training department members briefed me about the disaster management plan and their local partnerships with 3 local associations. Similarly, in Kızılay I interviewed the local branch manager and the training department employee simultaneously to see the cooperation links with the local associations in terms of earthquake related activities, and discovered the Toplum Merkezi (Social Center), which was an interesting temporary undifferentiated solution to puncture of systemic differentiations after the 1999 earthquakes. Such information could not have been obtained by interviewing the type III associations only. Contacting different types of associations and other organizations contributed to snowballing my sample.

All of the type III extending association representatives in **Table 10** (page 132) were asked the questions in the **Appendix – II.** (Field Interview Questions, page 219). Other types of organization representatives and miscellaneous interviewees in **Table 10** (page 132) were also given the same questionnaire and were asked about their organizational membership and involvement about earthquakes with any associations in Düzce. I made sure that I interviewed at least an active managerial board member in each association on **Table 10** (page 132). The miscellaneous interviews consisted of interviewees who had past membership in relevant organizations such as the Toplum Merkezi (Social Center) or the City Council.

Once again, I should note that in this study I focus on the type III extending organizations and discuss the asymmetric systemic blindness towards them. However, in order to study their relationship with the established and centralized disaster management system, I had to interview other types of organizations as well. The main aim in all these interviews was to see the blind spots in organizational definitions of environment and blind spots in organizational recognition between

non-specialized type III extending organizations and the other 3 types with regards to earthquake responses and disaster planning. We cannot study the systemic blind spots only by contacting type III organizations, but we should include all types in our investigation in relation to each other as elements of a system for better understanding.

I tried to capture how self-organizing organizational efforts are asymmetrically ignored while bouncing back different functions in the society after a disaster impact, and also during the preparation and implementation of a disaster management plan in the long run. I tried to investigate if these patterns of division and ignorance follow systemic boundaries in parallel with functional differentiation, as opposed to a communal pattern of undifferentiated local participation. Having engaged in Luhmann's theoretical frame and functional method, in-depth interviews were carried out with the aim of discovering the routine activities, earthquake-related activities, cooperation and partnerships, organizational recognition of other organizations, and the relationships of the type III extending associations with the specialized central organizations about disasters.

The society does not reproduce and restore itself only through the established organizations and plans after a disaster; but on the contrary the established organizations make effort to promote and sometimes temporarily imitate the routine functions of other systems outside their own respective systemic boundaries. We should not forget that majority of the routine functions to be restored are outside the centrally controlled (steered), established, specialized disaster management plans, no plan can perfectly represent the external social environment inside its reductionist boundaries, no plan can make routine daily life happen by itself. Outside the reductionist boundaries of a central plan, lies the variety provided by the type III extending organizations comprising the variety in the daily routine, which the plan aims to restore in the first place. The central, established disaster management logic aims at steering the other social systems outside its boundaries, but paradoxically it cannot avoid the operational closure and it ignores some part of what it aims to steer. This study tries to point at to this asymmetry between the autopoiesis (self-creation) of the established disaster management elements and the autopoiesis of the

differentiated self-organizing local efforts where the disaster management plan is to be actually implemented.

The interviews I carried out were not concerned with the individual features of the interviewees; but rather aimed to assess the organizational history of the earthquake-related activities and local cooperation. After the field vists and interviews, I had the qualitative historical data to compare the conflicting differentiated organizational horizons, decisions, and priorities about the same local disaster event from the established and extending perspectives. I tried to discuss the Luhmannian concept of *functional equivalence* by investigating the relationship between alternative solutions to the problem of earthquake during the planning period, and proposed that the asymmetry between the centrally steered and locally self-organizing/self-steering solutions should be referred by the term *asymmetric functional equivalents*. The operational closure of social systems create this asymmetry through systemic blind spots, since each and every social system (be it a function system, or an organization) is primarily concerned with its own reproduction and recognizes its environment only through its own internal processes and definitions, only partially recognizing its environment based on reciprocal systemic interdependence for its own survival.

CHAPTER 4
FINDINGS AND DISCUSSION

The point in the sampling of this study was not to cover exclusively all local associations in Düzce in a statistical sense, or to reach a statistically significant number for yet another mathematical world picture, with a claim to universal correlations, to suggest academic prophecies based on probable probabilities, and prescribe social engineering projects. The point was to seek for and point out the functional equivalents to the central, established disaster management plan and show how separate these all could be, despite their spatial proximity in a communal sense. As we have seen, even a brief phone survey of the local associations in a disaster area brings out a whole new alternative spectrum of self-organized responses to earthquake in order to restore (or bounce) different things back to functioning in society. Interviews with these responding local associations show that they have their own definitions of organizational environment, their own definitions of disaster and they respond differently to it.

I might have failed to contact still other associations in the area during my field visits, which engaged in yet more various self-organized earthquake-related activities outside of the established disaster management plan, and outside of what I was able to cover in this study. The main point is that unsteered, unplanned, self-organized responses to disasters in a functionally differentiated society always exist as functional equivalents, not in a unified but in a differentiated manner, and their asymmetric position as self-organized responses can be the very reason of systemic blindness against them. Sometimes these problem-solutions triggered by the same act of nature are completely unaware of one another despite their geographical proximity. Sometimes they do not even interpret theier own communications and decisions as a part of society's capacity of earthquake resilience, because they are primarily concerned with maintaining their own systemic boundaries and systemic streams of communications by referring to their earlier communications. These local associations were oriented towards a functionally differentiated and therefore

reduced horizon; this is what a system does after all, it reduces. The interesting point in all is that, while the society attempts to bring about non-existent, ideal disaster responses through specialized plans, it ignores the already existing ones in these plans; creating the asymmetry. This is the most convincing evidence in arguing that it is not the society's adaptation to its physical environment, but its adaptation to itself, its own distinctions and selections that matters in modern functionally differentiated society.

a - The centrally planned disaster management (TAMP) and local associations as partners of AFAD in Düzce

After the 1999 Marmara Earthquakes, the General Directorate of Natural Disasters (Afet İşleri Genel Müdürlüğü) and the General Directorate of Civil Defense (Sivil Savunma Genel Müdürlüğü), which operated under the Ministry of Internal Affairs, were transformed into Disaster & Emergency Management Presidency in 2009 (T.C. Başbakanlık Afet ve Acil Durum Yönetimi Başkanlığı - AFAD), which operates directly under the Prime Ministry. Today, AFAD is in charge of preparing national plans for disaster and emergency response. The general and long-term goals are listed in AFAD Strategic Plan for 2013-2017 (AFAD, 2012), and more tactical details of application are covered in Disaster Response Plan for Turkey (Türkiye Afet Müdahale Planı – TAMP) (AFAD, 2013). In the 2012 edition of the strategy plan, the need for a system of accreditation of "civil society organizations" (CSOs) (AFAD's use of the term) and the need for a specification of relationships between AFAD and civil society organizations is emphasized (AFAD, 2012, 60). In the same plan, it is suggested that a 5-year strategical communication sub-plan should be prepared for establishing communication channels between AFAD and different CSOs and immediately put into practise (AFAD, 2012, 43).

This thesis study, in a sense, investigates an aspect of the variety of local organizations to be contacted by AFAD during the implementation of such a strategic communications plan, in a social setting where operationally closed functional differentiation is the predominant form of social differentiation. Such a general expression as "communicating with CSOs" assumes an undifferentiated

social domain; however as we can see every association I contacted during my field visits has a differentiated organizational horizon, concerns, aims, and decisions depending on which function systems' codes they copy and combine in their own decision programs.

AFAD as an organizational system, defines the elements of the system of earthquake resilience with the plans it makes. As we already know by now that every system is based on selections and it has to narrow its horizons down to its own operations through reductions; thus "the range of communicative variations is reduced, thus increasing efficiency, but also raising the risk of excluding relevant communicative selections" (Qvortrup, 2005, 4). In other words, any disaster resilience system also runs the risk of excluding the relevant communications during its reductions and narrowing of its horizons. In this thesis study, I will be investigating for the relevant and included versus relevant but excluded local associations by AFAD plans. By relevant, I mean those local associations only occasionally organizing earthquake-related activities as a characteristic of being type III extending organizations, which routinely are not specialized on disaster-related communications and activities.

I mentioned that AFAD has a long-term general strategical plan. Other than a general and long-term strategical plan, AFAD also has a more tactical plan for disaster response, the Disaster Response Plan of Turkey (Türkiye Afet Müdahale Planı – TAMP). This countrywide plan specifies organizational partnerships with government, private and volunteer organizations by designating main and assisting stakeholders from state departments, forming emergency service groups and plans the cooperation between these in the case of a disaster. Locally, emergency response teams are formed in different departments of these organizational partners, and these teams are called in for emergency training. There are 18 service groups specified by the TAMP such as the Psychosocial Support Service Group, Shelter Service Group, Nutrition Service Group, Evacuation-Settlement and Planning Service Group, Transportation Service Group, etc. Teams from different government and private organizations and departments are trained accordingly. As a part of this thesis study, I asked AFAD Düzce office if they had any local associations in Düzce as their partners. AFAD Düzce office replied that they have protocols signed with 3

associations, which are Kızılay (Turkish Red Crescent), Düzrad (Düzce Telsiz ve Radyo Amatörleri Derneği – Düzce Radio Amateurs Association), and DAKE (Düzce Arama Kurtarma Derneği – Düzce Search and Rescue Association). However, AFAD Düzce office did not consent to sharing the details of the local operational plan. Let us now turn to the local associations partnering with AFAD. I was able to interview Kızılay and Düzrad, but not DAKE due to intense job schedules of the association members.

During my interview with Kızılay, the most important information I gathered was their joint project with AFAD, "Toplum Liderleri Projesi" (Leaders of Society Project). In this project, selected school teachers, mosque imams, neighbourhood headmen, and recently the community police department officers were called in for seminars on emergency procedures in public service. These seminars aim to train the selected officers working in public settings about what to do and how in the case of an emergency such as an earthquake, flooding, or fire. The school teachers are expected to instruct their students about possible emergency situations, and safely evacuate students in their working locations in the case of an emergency. İmams are expected to instruct their fellow mosque-goers about emergency procedures, and spread the information in friday prayers, for example. Local neighbourhood headmen are instructed about how to collect information about their territory of responsibility and what agencies and what officers to contact in the case of an emergency. The community police is a recent addition to the list of trainees. The Kızılay representatives said that the lists of participants and training content are updated every few years. For example, floods, avalanches and forest fires were the latest additions to the training package.

There were mainly three challenges reported about this project during the interview with Kızılay. The first challenge is that the high level of circulation in teachers, imams, and in the police officers, if not in neighbourhood headmen; because these lines of work involve a high level of horizontal mobility. Teachers, imams and police officers are appointed to other provinces every few years and the locally trained human resources about disasters is lost over time. Although these officers would supposedly contribute to their new duty posts in other provinces, their circulation is a matter of concern about Düzce. The second challenge reported is that

tracking and measuring the effectiveness of these training sessions is not possible. The trainees of this program are not tested in theoretical or practical aspects after training is completed and after they return to their routine posts of duty in Düzce. The feedback mechanism needs further elaboration in this sense, in order to enable any necessary consolidation of information and correction of errors. The third challenge reported was the low motivation of some trainees although that is in a limited number. Since the trainees are not volunteering but are appointed for this programs by their superiors, sometimes they might ditch some sessions or drop out entirely. However, despite these challenges, the Kızılay representatives reported that these training programs are worth pursuing, since:

> Of course, there is the fact that our target audience is highly variable. Let us assume that we started training program in all schools this year. The people we train go away, the children graduate [referring to their seminars oriented to school students], new students come in. This training is without an end. *You can never say "I'm done, I've informed the whole society", because everything constantly changes*. Our Leaders of the Society Project is also like that. You train a teacher, but she is appointed to some other province in a year or two; but she takes that information with her to wherever she goes. (Kızılay Interview) [Translation mine, italics mine]

One of the important points made by Kızılay representatives was that this project was not limited to the groups mentioned above. They stated that they are open for cooperation with any local or national organizations in terms of emergency training. However, their initiative as a branch office is considerably dependent upon their headquarters:

> We organize these training sessions here according to the plans of the headquarters. We cannot just say "come on let's update the training package". But of course, if a request is made from us for training, we are ready for that all the time. It still depends on the requests; but we would certainly help with training if some parties make such a request from us.

(Kızılay interview)

In the theory section I mentioned that complexity for Luhmann means, "being forced to select; being forced to select means contingency; and contingency means risk" (Luhmann, 1995, 25). The modern society with operationally closed function systems make selections that can also be made differently in an unlimited number of ways leading to a risk of making this decision or the other within every system. Moreover, the modern society floats over an ever-expanding ocean of ignorance in between systems, creating dangers outside different systems' reductions and boundaries. The claim of any disaster management plan (as a system in itself) is to counter-balance this mess of blind spots. Considering the Leaders of the Society Project, I can say that Kızılay and AFAD try to establish connections with the function systems of education, religion, and political system. However, this process is by no means operating along a simple input-output paradigm. In a complex system, it is impossible to steer the system into exactly pinpointed goals and to attain a stable equilibrium. The local branch office representatives of Kızılay in Düzce seem to be very well aware of the constantly challenging situation.

Another important information that Kızılay members provided during the interview was related to the past activities of Kızılay after the 1999 earthquakes. They mentioned that a social center with the name "Pusula" (Compass) had been started in Düzce by the joint effort of Turkish Kızılay and the International Federation of Red Cross and Red Crescent Associations in 2001. This center primarily focused providing psychosocial support to the earthquake victims in Düzce. There were social workers and psychologists in this center, providing professional help and guidance to earthquake victims in Düzce along with social, cultural, and artistic activities. In 2003, the Red Cross concluded their services in Düzce and decided to move out from the field, and Kızılay's "Toplum Merkezi" (Social Center) had been established in Permanent Housing Area to continue the psychosocial support service provision. This center coordinated and supported various activities such as dance and drama classes, day classes for housewives and night classes for working women, study halls for students of different grade levels, counselling and guidance services, and socializing facility for the local people of all

ages from kindergarten to pensioners. Later I also interviewed 2 of the former social workers, who were actively working in this social center from its initiation until its closing in 2007. These former social workers emphasized that the most important aspect of this social center was its connection with the women, children and the university youth. Within the body of this center, they organized painting classes, public education classes, basic literacy classes for women, English classes, a toy library, and a book library. All of the classes offered to the people were completely for free and mostly ran by volunteering professionals and university youth. One of the most important activities oriented towards the women was the project "From 10 Women to 100 Women", in which 10 local women were initially trained about legal rights, domestic violence, civil law, health information, sexually transmitted diseases, family planning, mitigation of non-structural hazards and many other topics relating to women's lives. These 10 women were to go back to their neighbourhoods to organize 10 more women in their street and contact the social center to organize yet another training session for the new trainees. The trainers arranged by the social center included a variety of professionals such as psychologists, social service workers, health service providers and barristers. The project reached many women living in neighbourhoods and villages in Düzce province. One of the former social workers I interviewed about such projects involving local people reported that these provide the earthquake victims "something to hold on to" while all their life routine, savings, health and sometimes beloved ones are partially or totally lost. It is also a valuable channel of communication to track and report local needs to aid providers for a better logistics distribution, and also to motivate the local people to create their own solutions and resources for their everyday problems rather than passively waiting for aid in the long run. In other words, the activities of this social center involving the active participation of local victim population were means of active rehabilitation for the local people. This social center also provided a continued flow of training activities over time at least for a period. According to the field experience of the former social worker interviewees, one-time-only or one-hour-only style of training programs do not provide much permanent benefit for the local population unless they are coupled with volunteer participation of social work for themselves.

Active participation in volunteer work and projects is also a means of getting feedback about any training program.

Earlier, I mentioned Luhmann's clear statement in an interview that "[…] it would be a catastrophe for modern society if we go back to a stratification or segmentation. This could only be the outcome of a technical catastrophe, or an environmental catastrophe" (Rasch, 2000, 203). From a social systems theoretical perspective, we see that all of the existing systemic boundaries were punctured by the earthquake disruption, all differentiated domains and communication channels of the society had to be temporarily replaced by this social center just like a wildcard until the puncture is sealed. This Social Center provided a wide array of artificial possibilities for an undifferentiated communication based on a sense of natural community for the time being, until the functional differentiation took over again in the long run. Empirically, we can say the educational and socializing function of a school and daycare, cultural function of an art studio, socializing function of many other various facilities and much more were condensed in this Social Center, since schools, art studios, and most other facilities that comprise daily life were disrupted by the impact of earthquakes. The functionally differentiated communicational elements of daily routine now had to de-differentiate temporarily, until the systemic boundaries between these communications were bounced back. In my interviews, I saw that during recovery period, the efforts of the centrally planned action overlapped with those of the local associations in some cases. In other words, the central disaster management (the Social Center in this case) tried to imitate and artificially create (through psychosocial support programs) what the locally functioning associations routinely do (cultural, sportive, and other various activities to restore normality), in order to restore a routine social functioning. The social center was closed in 2007, and this flexible nexus of communication was terminated. The local population was now to participate in the restored channels of functionally differentiated communication such as education, sports, arts, social service and health & psychological counseling without the mediation of an undifferentiated the social center offering all of these functions together.

As mentioned earlier, the social systems are constantly decaying and in need of reproduction since "it is more probable that the system would collapse than it can

be maintained" (Rasch, 2000, 217). The disruption caused by the earthquake disaster led to a very interesting collapse in the previous routine in terms of gender inequalities. Kümbetoğlu stated that the number of divorce cases were on the rise in 3 years following the earthquakes in Düzce (Kümbetoğlu, 2006). The former social workers of this social center speculated that this increase in divorce was mainly due to women's realization of gender inequality and relative deprivation in their marriages and the increasing levels of awareness of their rights and power. Later when I was interviewing a local women's association, the association manager clearly stated that, "the women came out when the walls came down" ("duvarlar yıkıldı, kadınlar ortaya çıktı")! Of course, the increase in the awareness of women cannot be the only factor in such a complex and widespread problem like the earthquake disaster. The adverse social context of the post-disaster setting could easily deliver a fatal blow on any well-functioning, egalitarian and satisfactory marriage because of many other reasons, or make it easier for other latent problems to surface. However, the disruption caused by the earthquake in ongoing communication process had a catalyser effect and made easier to question certain (inegalitarian) social selections when things were bouncing back.

The same could be said about other forms of inequalities based on poverty or ethnicity as well. In a number of interviews I made, the local debates about housing property came up. I will be covering this issue later. At this point, women's realization of their rights and women's increased awareness of their right and their powers as entrepreneurs and social activists actually point at another important issue in relation to Luhmann's theory. The function systems are universally inclusive systems, to which any person can participate in the process communication as long as they communicate using the correct media and codes:

> […] modern society is based on the principle of *total inclusion* of almost everyone in the functional domains: for example, everyone must participate in economic activities and be educated, and everyone is influenced by political decisions and is subject to the law.
> (Drepper, 2005, 178)

The patriarchal exclusion or restriction of women from certain communication in function systems such as economy or politics at the local level was violating this principle of universality of function systems. However, the temporary disruption of the reproduction of former types of differentiation (gender-based in the case of women) due to the earthquake catalysed the permeation of the universal operations of modern function systems in the social context of Düzce. In other words, remembering Luhmann's discussion that the emergence of a metacode of *inclusion/exclusion* by the society of the 21st century as a worst case scenario, which would mean the exclusion from one function system would start a chain reaction of exclusion from all other function systems (Luhmann, 1997c, 12; Moeller, 2006, 59; Rasch, 2000, 221), we could say that the disruption of existing flow of communications caused by the earthquake, and how these communications were bounced back (with a slight change) enabled new opportunities for increasing the inclusion of women and disadvantaged ethnic groups such as the Roma population in systemic communications. I will be discussing this issue at greater detail later.

Kızılay was an important contact for interviews even though it was not a type III extending organization but a part of the established disaster plan since long. The importance comes from two reasons. The first is that it is much more reliable to get information on past activities due to its orderly archiving. The second point is that, it provides valuable information on local organizational partnerships in terms of disaster-related activities and referral to gatekeepers and experienced professionals from the field for interviews.

Another important point made by Kızılay members was the increasing importance of professionalization in their association with reagards to services they provide. They stated that it is a source of assurance that they now have more professionalized personnel when compared to the past and that this is an important progress contributing to disaster resilience. This remark of the Kızılay representatives also concurs with Luhmann's argument of increasing functional differentiation in modern society.

The two most important pieces of information I gathered from Kızılay were about the Social Center that was active during recovery period after the 1999 earthquakes (2001-2007) and the currently ongoing Leaders of the Society Project.

As I mentioned, the function systems are universally inclusive systems, and that the earthquakes victims' inclusion in these systems were severely disrupted. They were totally cut off from access to some function systems for the first days and weeks, and they could not effectively participate in functional communications with the rest of the world in terms of economic, legal, political, sportive, or educational domains in the first months and years following the earthquakes. The Social Center ran by Kızılay at that time functioned as a pre-modern social setting where all earthquake victims could participate in the undifferentiated communal flow of communication. For example, the fact that one was excluded from economical communication is society did not lead to their exclusion from arts or education as well, thanks to this Social Center since its services were free of charge. When this Social Center was functioning as a means of inclusion, some of the groups it worked with were not just excluded because of the earthquake disruption but because of the previously existing inequalities and social obstacles placed against their inclusion in function systems. Therefore, as well as post-disaster restoration the universally inclusive functional strands of communication in society, this Social Center also challenged the established set of social selections on who was to be included and how far. Both the activities of the Social Center itself and the other locally organized activities inspired by it were important factors in the penetration of the principle of universal inclusion in function systems. The importance was not only about post-disaster recovery and rehabilitation, but also about challenging the already existing sets of cultural selections that created disadvantages for certain groups in society, such as those regarding gender.

The Leaders of the Society Project ran by Kızılay points to the efforts of an established organization in disaster management for connecting to various function systems. Function systems basically aim for universal inclusion of any communication using their codes. In contrast, as I mentioned earlier, the organizations "regulate their boundaries primarily by membership roles and admission to membership" (Luhmann, 1995, 196) so in terms of their basic character, organizations are based on exclusion. In this case, the project tries to connect Kızılay with other organizations in the educational and the religious systems through teachers and imams, and the political system through neighbourhood headmen and

the community police. The centralized disaster management plans (both strategical and tactical) are based on an organization of organizations, aiming to reach the largest number of people by establishing connections with relevant organizations and tapping on their members' field of influence in the schools, the mosques, neighbouhoods, villages and the streets. I can say that the central disaster management plan is trying to speak the languages of the function systems it aims to connect with, but suffers from the organizational differences in decision programs of the organizations it attempts to connect with.

Generally, during the interviews I noticed that briefings, presentations and training sessions are the most common forms of earthquake-related activities by the established organizations involved; every stakeholder is so much interested in "training" people. Therefore, most striking example of the efforts to establish a resonance channel between disaster management system and other function systems, I can argue, is the one concerning the education function system. The teaching curriculum is the decision program of the National Ministry Education in Turkey. What is to be taught at all levels of schools, when it is to be taught, by whom, for how long, how it is to be measured and how to get the feedback is all deparadoxified by the curriculum and by the yearly/monthly/weekly/daily/hourly teaching plans. The uncertainty in the content, format and measurement of education is absorbed by this organization's decision programme. Most of the organization representatives and social workers I interviewed are also aware of this emphasis on training, but some are also critical about it. They specifically stated that not much can be achieved through only short-term training and presentations since it lacks long term consistency, hands-on involvement, and the ability to measure effectiveness. The same complaints were also stated about case of Toplum Liderleri project as drawbacks. During my interviews, a number of previous participants of this project directly stated that they did not remember much from the project seminars they attended. The attempts to establish connections with the education function system seem to be at odds with how this function system operates. Although it has its own weaknesses and problems, the education system makes use of the curriculum for long-term planning of the educational communications divided into courses and classes. No matter how well-intending, the attempts that fail to acknowledge the

operating logic of this system cannot go farther than being makeshift solutions for increasing awareness and preparedness, trying to save the day. The uncertainty in measurement, and lack of feedback and motivation in terms of the project's trainees turn into significant obstacles in the long run. A more systemic attempt for more widespread long-term inclusion is the project of School-based Disaster Education (Okul Tabanlı Afet Eğitimi) by a cooperation between Turkish Ministry of Education (MEB) and Japan International Cooperation Agency (JICA), which started in 2011 and concluded in late 2013 as a pilot project implemented in 8 provinces (including Düzce) and 80 schools at elementary level. The project is to be implemented in other schools nationwide too, if considered successful at conclusion.

This systemic attempt to establish a connection between the education system and the central disaster management plan is an important step and indicates a trend of working with systemic logic and systemic differences in the long run. The project both involves training students and also facilitating disaster planning at the managerial level at schools. However, judging from the information on project website (WEB-4) the disaster-related activities are still in the category of extracurricular activities, but not a fundamental component of the ongoing education process such as a math class, for example. In this sense, I can argue that without being a curriculum element for all levels of schooling, the activities of this project would be bound to remain as "disaster training" rather than becoming "disaster education". The decision program of the Ministry of Education, the curriculum, still does not have courses or classes on disasters just like math or literature. Considering how this function system operates, this would mean the loss of systemic reproduction advantages with more profound influence in the long run, such as specified and standardized teacher training, proper testing of students, and tracking of the test results for feedback over time. At this point, I should make the caveat that the society is a complex system, and no input gives exactly what it aims at the beginning. In this sense, designing courses on disasters, putting them in the curriculum and implementing them would not be a magic cure for the risks and dangers about hazards; the education system is not a central or steering function system on its own in modern society; no function system can be in such a central position in a complex autopoietic system. The point I am trying to make is that, the education system

operates in a certain way, and the operations of disaster management plan as a system differ from this.

The second local partner of AFAD along Kızılay is Düzrad, the Düzce Telsiz ve Radyo Amatörleri Derneği (Düzce Radio Amateurs Association). During my interview with the representative of the association, I discovered that this interviewee was in managerial position in another local association as well. This association was Düzce Bedensel Engelliler Derneği (Düzce Association of the Physically Disabled). Therefore he intentionally requested doing an interview about both of these associations, stating that the association of the physically disabled did not have much earthquake-related activities except for participating commemoration ritual on the anniversary of earthquakes. Although he did not consider this as a serious earthquake-related activity, it was still a self-organized activity related to the earthquakes. For him, the interview was an opportunity to get the problems of the physically disabled through to some audience. I will elaborate on this interview in the next section.

Let us now focus on Düzrad and the critical contributions it provides for the earthquake resilience of the radio communications infrastructure for AFAD in Düzce. The origin of this association was TRAC (Türkiye Radyo Amatörleri Cemiyeti – Turkish Society of Radio Amateurs), which had more than 40 branches throughout Turkey. The Düzce branch had started around 2000 but had to be closed down in 2002 due to lack of enough amateur radio operators in the province. In 2009, Düzrad was started again and still operational with a bigger number of radio amateurs. During the 1999 earthquake, when the telephone lines were down, the radio amateurs provided assistance to civil defense and search & rescue teams in the disaster area in Düzce and adjacent provinces. I was informed that the radio amateurs throughout the country and even throughout the world form another flow of communication in itself and sometimes travel very long distances to check on their fellow radio operators both nationally and internationally. Some radio operators from other provinces came to Düzce to check on the interviewee immediately after the earthquake, and he even had a fellow radio operator visiting from France just to check on him.

After the Düzrad was founded in 2009, with a total of 25 members and a managerial board of 5 members, the most important activity they did was to install a radio relay station by their own resources. This amateur relay station they installed covers a total of 16 provinces adjacent to and near Düzce. I was informed that they meticulously studied all the surrounding hills in Düzce to find the best location of signal coverage. Finally they found a perfect spot in Kardüz Plateau at an altitude of 1830 meters above the sea level. However, they had a problem, this spot was entirely out of power grid. After some investigation, the association members decided to install their relay station on this spot and use renewable energy sources from solar panels and a wind turbine. The result was an amateur radio relay station with a VHF (very high frequency) coverage of 16 provinces, and independent from the traditional power grid. This meant that although a possible earthquake in Düzce region or in İstanbul brings down the established major communications and power infrastructure down, this independent relay station could remain operational. With this reason, the AFAD Düzce office has a protocol with Düzrad.

Of course, this very extraordinary (and for Luhmann, very improbable) amateur relay station came out against many odds and challenges. The Düzrad manager told me that they had to purchase all of the technical equipment by their own financial resources (financial system/economy), assemble them by their own technical knowledge and expertise (science), obtain all the required official permissions from the Ministry of Forestry (political system & legal system), and pay for the rent (financial system/economy) by their own resources and that not AFAD or any other organizations made any contributions in this process. In this sense, I can say that while each respective function system makes different things more probable in their own medium and through their own codes in an evolutionary sense, it takes still other 'cuts' to combine their reciprocally ignorant and sometimes conflicting processes to bring about yet other improbable results, and it takes different organizations for this. For example, I was told that the association had to pay for the location just like any major commercial communication companies, and that they actually considered it unfair.

When I ask the question "is the society evolving mechanisms to make a highly improbable resilience sub-system probable?" it looks more convincing to talk

about indirect, self-reproductive systemic efforts such as those of Düzrad's. Apart from the difficulties about various and ignorant function systems, which Düzrad had to cope with, there were also physical conditions that made this relay station highly improbable. As I mentioned, the altitude of the Kardüz Plateau is 1830 meters and the road to this location is not of a high quality. The spot receives a snowfall upto 4 meters in winters. I was informed that in the first years of its installment, the station suffered some technical difficulties such a wind turbine malfunction, or solar panel deficiency due to extremely cloudy weather conditions. The radio silence required a visit to the location for maintenance in intense and risky winter conditions. The association utilized the personal resources of its members to mobilize and reach the spot in 4 meters of snow and replaced the malfunctioning wind turbine, a venture, which owes its enactment to the differentiated and coordinated communication and its systemic boundary of membership. The very act of installing and maintaining such a relay station is an indicator of the strategic importance of inclusion in the ongoing flow of communications. And it is due to the same reason why AFAD signs a protocol with Düzrad. AFAD itself had to narrow its horizon down to its own professional duty, and Düzrad narrowed its own horizon down to its own domain. The organizational priorities of AFAD and Düzrad are different, therefore it is the establishment of a stable channel of irritation-resonance between them that enables the successful management of systemic differences for the purposes of earthquake resilience.

At this point I should also note that, the Düzrad members can actively follow the radio communications of AFAD and other emergency organizations in their vicinity since they all operate on the same medium of radio transmitters and receivers. Some AFAD emergency technicians are also Düzrad members. However, these communal connections do not mean much at the level of a national plan, and the organizational premises for future cooperation have to be specified by the documentation of a protocol. The AFAD headquarters as the hierarchal center of the organization needs to be told about this overlap in its own organizational language, since like I mentioned earlier, "people elsewhere have other things to do" (Luhmann, 1995, 158). Düzrad was also an important organization in the sense that it is actually a type III extending organization, which is not routinely engaged in disaster-related

communications and activities but engaged in such communication and activities in 1999 earthquakes. In this sense, we see that the strategical importance of an organization does not come from its statistical significance (such as the number of members, or the number of branch offices it has), but from its relational importance to the TAMP (Türkiye Afet Müdahale Planı). At this point, we should once again remember that the elements of a system can be counted, quantified and the number of possible relations between them can be determined mathematically as the "mathematical world picture of the early-modern period"; however, the paradox is that elements become the elements of a system only by referring to one another (Luhmann, 1995, 21). Düzrad becomes a part of the TAMP when AFAD and Düzrad both recognize each other as organizational partners in the case of a disaster. The quality of being an element is constituted "from above", according to Luhmann, since "elements are elements only for the system that employs them as units" (Luhmann, 1995, 22). In short, we can see that the type III extending organizations, which were not steered by a previous central plan oriented towards earthquake resilience, can still prove to be a vital component of the process as well as the type I established organizations and the type II expanding organizations. In this case, this component (Düzrad) is recognized by the plan (as a system itself) and included within its definition of environment, and stable channels of irritation-resonance are established through a protocol signed and frequent live radio cooperation. However, there are also other components, which go mostly unnoticed due to functional differentiation and reciprocal systemic ignorance. I will be giving examples of these self-organized solutions that never appeared on AFADs organizational horizons, such as the local Albayrak Gençlik ve Spor Kulübü and the mosque associations for this matter.

As I stated, the third association with which AFAD has a protocol of cooperation in the case of an earthquake is DAKE (Düzce Arama Kurtarma Derneği – Düzce Search and Rescue Association). DAKE can be considered a type I established disaster-response organization with a clear cut aim of search and rescue, even though it was founded years after the 1999 earthquakes. I could not arrange interviews with this association, because of the intense work schedules and personal reasons of association members.

b- The meta-code of inclusion/exclusion

Earlier I mentioned that earthquake was a catalyst for women's realization of gender inequality and relative deprivation in their marriages and the increasing levels of awareness of their rights and power. I was told that "the women came out when the walls came down" ("duvarlar yıkıldı, kadınlar ortaya çıktı") during my interview with the Women's Solidarity Association. I observed that the same could be said about other forms of inequalities based on poverty or ethnicity as well. In a number of interviews I made, the local debates about housing property came up.

One of the local associations that played very important role in establishing a connection between local claims to housing rights and the legal and political system was Düzce Depder (Düzce Depremzedeler Derneği – Düzce Earthquake Victics Association). Düzce Depder was founded shortly after the 1999 earthquakes. Although it can be categorized as a type IV emergent organization, rather than a type III extending one, it is still outside the borders of the centralized disaster management plan as a system. It is very notable that the initial protest demonstrations and marches about problems in Düzce city center after the November 12th earthquake, which led to the founding of Depder, was very intensely attended by women. Women played very active role in the founding and management of Depder. Later I had the chance to interview another member of Depder who was also a member of Kadın Dayanışma Derneği (Women's Solidarity Association).

While in the first years the main concern of Depder was to legally assist the earthquake victims in their claims-making from state agencies and organizations about their lost housing property, with the completion of permanent housing, another issue came up. That was the disadvantaged position of the inhabitants of Düzce without housing property (the renters and the financially disadvantaged). The association made effort to produce housing projects and contacted the relevant state agencies and state authorities about their claims both in legally valid means and when it failed, in protesting means. They made street demonstrations, public petitions, and park-occupation type of activity in Ankara city center for 1 year to get their claims through to the political leaders via news media attention. During this

process they also established a housing cooperative for the propertyless Düzce inhabitants who had a claim for state-assisted housing, social housing loans and even housing projects involving their own physical labour. This was a very interesting result of the earthquake disruption of the ongoing routine communition in the society in terms of property rights. The earthquake disrupted the flow and reproduction of the routine communication, and what bounced back had a slight difference to it; the propertyless citizens started and elaborated a claim and debate over access to housing property rights. They requested state-subsidized construction plot, and low or no interest construction loan for social housing. What this association aimed to bounce back was at odds with pre-disaster profile of housing property ownership in Düzce and this led to intense social debate and antagonization between property owners and groups with vested interests, who also had political influence. This incident proves how delicate the ongoing process of reproduction of communication in society and how badly it needs to be constantly reproduced and maintained. Any disruption bears the potential of mutating what is to be communicated, and how the borders are to be drawn. None of the the previous flows of communication and systemic boundaries were absolute, vital or 'meant to be', but all of it was contingent and could be subjected to questioning and change if problems arise in their constant reproduction.

During my interviews with the governor's office, I observed that Depder's critical attitudes, decisions and activities against the vested interest groups and about state policies on housing caused discomfort on the state authorities' part as well. A deputy governor stated that it was useless to keep criticising the solutions and keep all kinds of problems alive about the earthquakes after so many years. This attitude from a member of the central, established governing organization towards an opposing emergent local association indicates that such locally self-organized forms with critical attitudes run the risk of being excluded from effectively contributing to political communication because of agenda and decision program conflicts with the state. This is an important aspect of the asymmetry between functional equivalents.

During the interviews, I realized that there were also antagonisms between different disadvantaged groups in terms of property rights, gender or ethnicity. Usually the gains of one disadvantaged group or organization were interpreted as

relative loss or deprivation by another. For example I observed complaints from Depder about the relative disadvantages they suffered in proposing housing projects when compared to some local women's organizations' housing projects or the Roman people's housing projects. As we can see, the boundaries and priorities of different organized groups vary greatly, and they all primarily operate on the basis of exclusive membership. It is possible to talk about both a center-periphery process of exclusion between state and local associations, and also a periphery-periphery reciprocal exclusion between the local associations themselves.

The Social Center can be mentioned as an interesting example of undifferentiated nexus of communication for various inequalities along with the disaster rehabilitation activities in the organizational history of Kızılay. In this sense, the Social Center seems to be what came closest to an undifferentiated conception "civil society" domain of communications. This is the most important feature of this center in terms of my study. Because of the disruption of the routine systemic communications with earthquake damage, the earthquake victims were cut off from most systemic communications. Offering various psychological, social and cultural activities free of charge to the earthquake victims, the Social Center temporarily functioned for inclusion of these victims in communications of various function systems such as education, arts, sports, psychological counseling, etc. despite the fact that some did not have the financial resources to engage in economic communication. This center was like a temporary melting pot for normally differentiated flows of communication. The participants and volunteering service providers took place in the activities of this center as whole individuals for a limited time until the systemic boundaries between function systemic communications were restored. Then, the Social Center was dissolved, and differentiated flows of communications were maintained separately.

I already mentioned the involvement and participation of local women in social center's activities, leading to a higher awareness of their rights and power. Both of the former social workers, who actively served in this center, stated the importance of women's participation not only in training activities but also in gathering information on local needs, active sorting, preparation and distribution of aid material. One of the former social workers mentioned involving the children and

youth suffering from substance abuse (narcotics, and paint thinner inhalation mostly) in the aid distribution projects. These children were considered as highly dangerous and unreliable in daily life, but they also suffered post-disaster troubles of family loss and other problems just like any other victims. Once included in Social Center projects such as the preparation of aid packages and their distribution, they proved to be highly dedicated, reliable and open for rehabilitation.

One of the former social workers I interviewed also had worked together with the KEDV (Kadın Emeğini Değerlendirme Vakfi - Foundation for Supporting Women's Labour) before, during and after her Social Center duty. Although KEDV was a nation-wide organization in the form of a foundation, their initial activities after the 1999 earthquakes triggered other local women's organizations both in the form of housing cooperative and also women's commercial enterprises. For example, they formed 2 local women's housing cooperatives (Başak Konut Yapı Kooperatifi and Burçak Konut Yapı Kooperatifi). These two cooperatives had exclusively women members, and they were started with very little financial resource, but these cooperatives ran consistently until they reached their goals at the end, making all members a house-owner:

> We first started in 2001, with housing savings, depositing money in the bank. It was very interesting that the bank were not willing to accept. Because, there were groups of 10 women, each of whom deposit only 30 Turkish liras. Everybody laughed at us, saying it was impossible to get a house for that money. But it was somewhere to start saving, wasn't it? After the earthquake it was impossible for them to save 500 liras, or even 100 liras. So it was a common decision made by the women, we asked them, "how much can you save"? The women said 30 liras at most. So we started with 30 liras. I had to talk to many banks at first, and then since I had good connections with İş Bank, I convinced them. 10 women give their ID copies, do all the legal procedures and deposit 30 liras each, but they need the signature of all 10 women again to withdraw that money. Just 1 woman can collect the money and she can deposit, but in order to withdraw, signatures of 10 people are required. It was a solid system. In 2001 it was the savings groups to meet

the expenses of founding, and the cooperatives were founded in 2002. It took 1 year to plan it. What kind of a house it should be, there were some training sessions with the university, there were training sessions with CitiBank about women entrepreneurs' credits. The whole thing took around 4,5 years, not even that much. The construction, natural gas connections and other little things…it normally takes 10 to 20 years for cooperatives to complete buildings. It took so short in ours…
(Düzce Nilüfer Kadın Kooperatifi interview) [Translation mine]

In here we see that the women's initiative to self-organize into construction cooperatives was an important step in their inclusion in systemic processes of economical communication, which was made possible by the earthquake disruption according to some women I interviewed. This disruption provided a chance for breaking the established flow of communications, which excluded women from many domains of systemic communications, and when things bounced back the systemic reproduction now had to include women as well. The interviewee, due to her special position as a communal figure of overlapping acquaintances and professional experience between KEDV, Kızılay, AFAD, Nilüfer Kadın Kooperatifi, Başak & Burçak housing cooperatives, and numerous international aid organizations such as the Red Cross, shows us that the theoretical function systemic divisions co-exist with communal connections. As I mentioned earlier, the functional differentiation is only the predominant form, but not the one and only.

The full name of the women's cooperative that led to these two housing cooperatives was Nilüfer Kadın Çevre Kültür ve İşletme Kooperatifi. It was started as a local women's enterprise after the completion of the national women's foundation KEDV. The interviewee reported that they chose to start a cooperative instead of an association since financial sustainability is an important concern for women's organizations, and also because cooperative is a more politically neutral and democratic structure when compared to association. They prepared their own statute as the first of its kind in Turkey, which was later taken up modified and put into use by more than 100 women's cooperatives throughout the country. The cooperative has 28 women financial partners, as opposed to usual 5-people

managerial boards of most local associations. They also have a group of volunteering women around 35 people both assisting and utilizing the cooperatives services. In terms of the local women as the producers, the cooperative reached to more than 250 women through time via leadership training, financial partnerships in the line of production of services.

During my interview with this former employee of the Social Center and the current manager of the women's cooperative, I discovered that they also cooperated with AFAD at the local scale for a disaster training program:

> AFAD sent us an invitation. We keep sharing our recent cooperative activities on the social media…it was 3 months ago. The first group who received training was our personnel. Then it was our cooperative partners, since most of them were intensely working, you know this is a cooperative of low-income women. It was a 1-day training. Later, we had a parenthood assistance program, and we distributed AFAD brochures during this program as well, and in our introductory speech we informed the parents about these activities and told them that we are open for further inquiries in this matter. We gave them preliminary information about what to do. Besides these, we also had a mind-map activity with the children in our daycare unit. Most people might think "oh these are just children, what do they know about it", but we think it is very important. So we had a session of activities about mind-map with our children after AFAD training.
> (Nilüfer Kadın Kooperatifi interview) [Translation mine]

In this partnership with AFAD, we see that the social environment of the women's cooperative helps AFAD activities connect with parents, women entrepreneurs, and most interestingly with children. The inclusion of these groups in disaster-related communication is a valuable progress since they can also be the members of a vulnerable population in the case of a disaster. However, we can see that these disaster-related communication attempts are mostly on a single-serving basis and far from being institutionalized. Of course, considering AFAD's strategic plan, which proposes the establishment of communication channels with local

organizations in 5 years until 2017, these can be interprered as the initial steps of the future progress to come. However, considering the reciprocal ignorance of different function systems and the complex mass of their blind spots suggests that the exact intended outcomes can never be obtained, these can only be the starting point for further evolution:

> Here one normally thinks of unplanned structural changes. However, planning theory offers no alternative to evolution theory. Evolution theory also deals with systems that plan themselves. […] the future does not comply with intentions but only takes the intentionally created facts as the starting point for further evolution. Evolution theory therefore assumes – and is not far from reality in doing so – that planning cannot determine the state in which the system will end up as a result of planning. Planning, when it takes place, is accordingly an element of evolution, for even the observation of models and the good intentions of planners put the system on an unforeseen course. Evolution theory would say: what structures result will emerge through evolution.
> (Luhmann, 2012, Vol. I, 260-261)

During the interview, the interviewee, who was a former social worker at Social Center and currently managing the Nilüfer Kadın Kooperatifi, mentioned another aspect of inclusion process. She told me about their encounter with the Roman population in the prefabricated temporary housing area. The Roman style of life was different than that of the regular urban inhabitant; for example their horses were sometimes tied next to or even inside the small 27 square meters of container housing where two Roman families lived already. This led to various problems both between the neighbours and also within the families itself. Later at Çamköy District a housing project was proposed by women's initiatives for the Roman people:

> When the housing issue came up for the Roman people, there was the government's "Democratic Roman Initiative" going on. Democratic…well it was an opportunity, why wouldn't the Roman people living in Düzce also

benefit from this? There is land, and these people are in a difficult situation. We were running a joint project with the health department of the Duzce University, and I saw their living conditions, years and years after the disaster they were still living in disaster conditions. 30 people using the same bathroom, 30 families…30 families using 1 bathroom means hardly one bath every month for each person. They though they had proper heating, living in huts. Children wearing pants but their back all torn up for example, there was no hygiene and no proper sanitation. This is just 2-3 years ago by the way…It has been 3 years…Can you imagine, just 3 years ago something like this taking place in Düzce, and in a part like Çamköy on Ankara – Akçakoca highway…We made great efforts until we convinced them, but it worked. They had their own houses at the end, suitable for their life style, they are getting their keys these days, they will move into their houses finally.
(Former social activist in Social Center and current Düzce Nilüfer Kadın Kooperatifi manager interview) [Translation mine]

The same project about Roman people's housing was also mentioned during another interview, this time with the local Düzce Kadın Dayanışma Derneği (Women's Solidarity Association). The manager of the association reported that most male state officials and municipal officials said "let's give children some pencils, books and notebooks, and let's just give a couple of toilet stones to the Roman people and that's all". However, the women's organizations insisted that this to be turned into a proper housing project and carried out until the end. As the housing project advanced, the municipality attempted at opening the project to application of all financially disadvantaged groups living in Düzce. However, the manager of Kadın Dayanışma Derneği informed the office of the President of Turkish Republic directly with a letter, requesting the project to remain oriented towards the roman people. The municipality had to step back from this attempt, and the local officials were surprised by such an intervention. At the end, the housing project was completed and handed over to the Roman people in Çamköy. It was reported in 3 interviews that the Roman people and other citizens do not easily inhabit the same housing area because of dramatic differences in life styles. It was

because of these differences that some Roman families, who initially had houses in the Permanent Housing area sold them for nothing and moved out to huts. However, despite the successful conclusion of the Roman housing project, the manager of the Kadın Dayanışma Derneği emphasized that mostly the male local officials get the credit for most women's initiatives' projects.

However, the inclusion process is far from being smooth or widely pervasive. For example, the Depder also started a housing cooperative exclusively for their propertyless members (Sınırlı Sorumlu Evsiz Depremzedeler Dayanışma Konut Yapı Kooperatifi) but all their legal and social attempts for allocation of construction plot and proper construction credit were turned down. The debate about ownership of the housing property shows that although the earthquake disruption enabled certain punctures in the previous flow communication and the power relations leading to a separation such as inclusion/exclusion, it is not possible to talk about a widespread liberation or miraculous inclusion for all previously excluded parties. The same could be said about the disabled as well, judging from my interview with the manager of a disabled people's association. What bounced back did not make much difference for the disabled people living in Düzce.

During my field visits, I noticed that while Nilüfer Kadın Kooperatifi had active connections with AFAD and Kızılay for disaster-related activities, Kadın Dayanışma Derneği stated that "they were considered too marginal" by AFAD and Kızılay and were not invited for joint activities because of their sometimes challenging attitudes against the established conventional understandings. This shows that while the earthquake disruption opened the way for women's inclusion in previously restricted flows of communication in some cases, similar restrictions might apply in terms of women's inclusion during the formation of a disaster management system.

In my interview with Kadın Dayanışma Derneği, I had the chance to talk to one of the association members, who was also a very active and fervent member of Depder as well. During my interview with her, I observed that she took active part in the marches and protests that took place in Düzce after the 1999 earthquakes about the relevant problems. This process of claims-making and conflict contributed to the formation of a growing antagonism against the established authorities, such as the

governor's office and municipality. Such an exclusionary attitude was observed through interviews with women's cooperative and women's association in relation to how the City Council operated under the municipality. The women interviewees agreed that the City Council was clearly dominated by the mayor and that they did not have much chance to represent their views and gradually this council fell into stagnance and turned into a pointless effort. The effects of this antagonism can be seen as exclusion from the centrally steered disaster management plan. Such an exclusion should remind us of how asymmetric relationships of power and hierarchy might influence the spread and implementation of such central disaster plans.

An interesting anecdote was told to me about the distinction between an individual and a person in Luhmann's theoretical perspective. During the protest marches after the earthquake, there was a police intervention to the protesters. The member of the women's association and Depder I interviewed was in the front lines of this march. When the protesters were confronted by the local police, and told to change the path of their march, she had to actually argue with the police chief, who was later appointed out of town. After 14 years, she said she ran into the same individual in düzce city center; but this time he grabbed her by hand to show her respect kissing her hand and show his recognition saying "I still remember you from that day, I could not do anything to help you because my powers as an officer were so restricted, I had to follow orders, but I've always respected your attitude and struggle".

In terms of their organizational horizons, the women's organizations manifest different characteristics. For example whereas the Nilüfer Kadın Kooperatifi reports that they recently had a recent joint call from AFAD, and therefore appear in AFAD's organizational horizon, Kadın Kalkınma Derneği reported the opposite. This difference might be interpreted that some individual connections can still be influential, such as the women's cooperative's manager being an ex-social worker at Kızılay's Social Center. However, an important point to note here is that, more critical and more antagonistic local organizations (including women's and disadvantaged groups' organizations) tend to be more likely to be excluded from the cooperative horizons of the official and larger organizations such as AFAD and

Kızılay. This can be a serious obstacle in forming communication channels to promote earthquake resilience in the local population.

Another important topic in terms of exclusion is the case of the physically disabled people in Düzce. I interviewed a representative of the Düzce Bedensel Engelliler Derneği (Düzce Association of the Physically Disabled) about how the physically disabled in Düzce were organized and what activities they did. I was informed that the association had been founded in 2002 and that it mainly organized social activities for the physically disabled such a theater plays and trips, concerts, picnics. However, the urban infrastructure and living conditions of the disabled people are always a hidrance for their organizational activity and it is one of the biggest reasons why they cannot be as active as they desired. A simple commute to downtown association office can be a serious challenge and even life-threatening venture in some cases using a wheelchair. Since they cannot employ full-time office personnel to coordinate office work, they can never effectively mobilize as an association. There were some requests made to them by able-bodied entrepreneurs for using the name of the association for running a coffee house – card room and offering a share of the revenue for the association. However, the decision was against this, since they did not want to engage in gambling and possibly alcohol-related income even though the association needs financial resources. Besides, the statute of the association draws a systemic boundary for the disabled people, stating that the members should have at least 40% of bodily disability, which is confirmed by a board report from state hospitals. This membership condition, he stated, is a measure rightly taken by the former management in order to prevent the association from being overtaken by the able-bodied people, and to ensure the self-government of the disabled members of the association. However, it is also clearly stated that they are open to assist any physically disabled person no matter if they are members of the association or not.

What able-bodied people call 'bouncing back to normal' is by no means the same for the physically disabled people. They just continue living in conditions of constant disaster, in a sense. The design of the sidewalks is either too high to prevent them from climbing over so they have to use the vehicle roadside with high risk of being hit, or the sidewalks are low enough for wheelchairs but then motor vehicles

park over them, occupying the walking and strolling space much needed by both pedestrians and especially the disabled people. The design of some pedestrian crossings on some main inter-state highways (e.g. E-80 highway specifically mentioned by the interviewee) dissecting the province is impossible for a disabled person to overcome on their own. The very entrance of the governor's office, or the gates without sensors can be a problem and sometimes a source of risk and de-motivation for the disabled because of accidentally shattering glass and unfriendly reaction from the able-bodied people, for example. Considering the very vulnerable psychological state the disabled people are in, such thresholds of motivation seriously reduce their efforts to be included in the routine functioning of the society;

> When you cannot reach anywhere, you are finished...you cannot organize any activities, no action...Because, when you cannot go there, your level of activity decreases, thus you do not have much say in anything. You cannot tell about what you have already done or what you want to do...it is such a thing...
>
> They just pass the buck, they say "okay okay" and it fades away. After some time, I don't know if its about our psychology but, you just get tired of it, you let go...and then you start over again. It is just repetition over and over. For example the municipality did something good, widened the sidewalks. But now we can't get rid of the parked cars on them...
>
> ...it is constant struggle for us...what I'm trying to say is...a disable person is already struggling against himself. His psychology is about to collapse. He is about to try certain things, if you know what I mean...he is already troubled by all these, fighting all the odds. He has no income, no social security. It breaks his hope for good when you put obstacles like this in front of him. The state officials or the mayor may come up and say "I am with the disabled people"...the disable people just laugh at this, never taking it seriously. Because it is just talk, no work. For example, we went to Adıyaman once, to a seminar for the disabled...We made some speeches on this and that, and one

man told about a memory of his. He was from Belgium, disabled. He said "well, your country is so beautiful, it is superb" he was adoring it, "but there is nothing for the disabled!" he said. "We can by no means live in here"...
(Düzce Bedensel Engelliler Derneği interview) [Translation mine]

We can say that the problems about the inclusion of the disabled people in functionally differentiated channels of communication is still an important issue, and that they may not have enjoyed similar levels of liberation experienced by some women's organizations in Düzce for example. Of course this is not a representative picture for projection to the whole disabled population in Düzce; but still it gives clues about the obstacles in front of universal inclusion in function systems.

One of the interesting topics that came up about the association of the physically disabled was that, even though my interviewee was also a managerial member of Düzrad, the Düzce Association of the Physically Disabled had no organizational connections or cooperation with AFAD. These two did not take place within each others' definition of organizational environment and no channels of communication were established between these two;

Well, I mean we are already disabled in the time of earthquake. For example, if we stayed inside a building in the case of an earthquake, what to do then, or which official organization deals with us...I mean AFAD or other organizations, we don't know what kind of work they are doing about it or what they think. Because the disabled are more vulnerable when compared to normal citizens, since we are disabled anyway...
(Düzce Bedensel Engelliler Derneği interview) [Translation mine]

Although AFAD signed a protocol with Düzrad to back up its existing radio communications network, and although the same person is the manager of both Düzrad and the Düzce Association of the Physically Disabled, their flows of communications are kept separate from each other. The primary goal of AFAD in signing this protocol with Düzrad is to guarantee its own reproduction in the case of a disaster, which is not an ethically bad or wrong thing in itself. However, even

though the individual AFAD members know about the disability of the Düzrad manager, there is not an undifferentiated dissemination of disaster communication. The communication is reduced to the topics of radio communications and is not communally extended into the individual disability situation and disaster planning about it. The identity of Düzrad manager and the identity of Düzce Association of the Physically Disabled manager are kept separate during the course of organizational communications. I observed that, although the interviewee stated that amateur radio communications had been a source of motivation for him to hold on to life for 21 years of serious disability from the waist down, the two organizational domains are still kept separate in their organizational flows of communication.

c- Inreasing importance of organizational systems and systemic boundaries over communal ties

Another interesting statement recorded during my interview with the former Social Center worker was that, there were certain communal neighbourhoods in Düzce before the earthquake, such as those known for the predominantly Abkhasians or Circassian population. However, these communal neighbourhoods were largely dispersed after the earthquake due to erratic changes in housing location of their inhabitants. While part of the local population preferred (and were able to choose so) neighboring with people of a similar ethnic identity before the earthquake, this was not the case in the post-disaster setting where housing was a big problem, and location in the Permanent Housing area was distributed largely by chance rather than choice. Arslan & Ünlü carried out a study for evaluating place attachment of earthquake victims in Düzce (2010). They evaluated 100 individuals, 50 of whom had relocated after the 1999 earthquakes and 50 had remained in the same location. They observed that those who relocated had significantly less attachment to place in their new locations, and relocation process had negative effect on previous patterns of networks and socio-cultural relationships (Arslan & Ünlü, 2010, 52). Drawing on these two points, I could speculate that the dissolution of these traditional communal ties in geographical sense in terms of housing location, manifested in ethnicity appearing as an organizational theme in the form of local cultural associations. The

decomposing traditional communal ties were now making way for more modern forms of organization, with connections to the legal function system and with the opportunity of public attribution of ethnic themes of communications. Of course, just like in the case of divorces, the earthquake is not the only factor that dissolves and decomposes the ethnic and communitarian emphasis. However, since it disrupts the ongoing flow of communicational reproduction in society, it can accelerate the penetration of more modern forms of organization. I have been witnessing different solidarity associations and platforms based on hometowns, cities, villages (i.e. hemşehri dernekleri), or ethnicities (kültür ve dayanışma dernekleri) for decades in Turkey, also partly as a by-product of population movement from rural parts of the country to urban centers. In general, these associations and other similar platforms can be interpreted as responses to the dissolution of traditional forms of differentiation, be it through population movements, penetration of modern forms of organization, or disasters.

The cultural associations and the large family associations stand as interesting examples in this sense. Çengeloğulları Yardımlaşma ve Dayanışma Derneği was a large family association in Düzce city center. The association manager reported that for the last 3 years their association had been rather inactive. The main reason for the founding of this association was to improve the familial connections and communication among the members of Çengel family from Giresun. According to the manager, they have around 250 registered members in their association, however there are also many unregistered family members living in numerous other cities in Turkey and some family members abroad as well. It is very interesting to see that the identity of being a family member loses its definitive function when a threshold is exceeded, and the increasing complexity of a larger family is attempted to be transferred into an organizational structure, a family association in this case. The large family, as a system, attempts at observing itself through the formation of a sub-system in the form of an association and making a distinction between members and non-members.

This association was founded in 1995, and organized an activity about the 1999 earthquake. This activitiy was for their family and association members only. They provided financial aid for the student members of the family with their own

resources. The manager of the association reported that they did not ask for help from outside, since the point of self-organizing into a family association is to help one another in troubled times like that. When he was asked about any organizational connections and cooperation with AFAD, he mentioned personal acquaintances with the local officials and momentarily brainstormed about future cooperation in terms of earthquake training for the association members. However, I observed that although there were personal acquaintances with disaster-related officials locally, these did not necessarily led to organizational cooperation so far. The communal relationships, geographical proximity and interactional acquaintance are not enough to overcome organizational divisions in some cases.

Another interesting piece of information I discovered during this interview was that, my interviewee was a village headman in Düzce and he had been the manager of the Muhtarlar Derneği for 7 years (Association of the Neighbourhood-Village Headmen). As a headman, he had participated in Kızılay-AFAD Toplum Liderleri Project 2 or 3 times. His personal opinion as a trainee of the program was that it was better than nothing, however he could not give much details about the training program. About the Muhtarlar Derneği, his opinion as a former manager was that the separation of the association into 3 distinct associations is a result of political disagreement and is not a progress for Düzce. In Luhmannian thinking, the formation of different, separate associations in the same location about the same topics of interest (e.g. 3 headmen associations, several football fans association supporting the same club, several associations for the phycisally disabled, etc.) is not surprising. It is always highly improbable that the members of an organization agree succesfully on all decisions concerning a topic of interest. As I stated earlier, the organizations operate by deparadoxifying their decisions and absorbing the uncertainty arising from the fact that any organizational decisions could have been made differently. Majority of the problems in organizations stem from a failure in absorbing this uncertainty, and we can observe this in the case of disagreements among the local associations of similar thematic orientation but differing decision programs and membership conditions.

Apart from the Çengel family, I also attempted to contact the Gürcü Kültür Derneği (Georgian Cultural Association) and the Kuzey Kafkas Kültür Derneği

(North Caucasus Cultural Association), which had offices in Düzce city center. However, the office of Gürcü Kültür Derneği was closed during my field visits in Düzce, and the telephone number provided by the governor's office did not respond to my calls.

Kuzey Kafkas Kültür Derneği (North Caucasus Cultural Association) accepted my request and we scheduled to meet on their weekly meeting day. I learned that the name of the association had been currently changed into Düzce Adıge Kültür Derneği (Düzce Adygean Cultural Association). Rather than responding directly to the interview questions, they agreed to respond to the questions later through a written document after a meeting with their managerial board members. During our brief face-to-face interaction, I observed that they were interested in the rationale of my study and asked about what they could do as an organization about earthquakes. When I informed them about the Toplum Liderleri Project ran by AFAD and Kızılay, they expressed their motivation to contact these organizations for training of their members.

When I received their written responses, I saw that this association was very actively connected with the Circassian population in Düzce, both in the city center and in the villages around. In this sense, the association seems to be one of the organizational alternatives in incorporating various traditional identity elements into a modern social setting, where functional systems increasingly seek to attribute their communications to formal organizations rather than to common communal values, ethnical identitiy constructs or familial connections. After the August 17th earthquake the managerial board immediately contacted all their association members throughout Düzce for damage assessment, and mobilized for providing the aid they could. It was reported that the association had around 500 members before the 1999 earthquakes. However, due to deaths and relocations this number decreased to 270 current members. This fact is consistent with the remarks made by my former social worker interviewee about the dissolution of the ethnical grouping in the neighbourhoods throughout Düzce because of the relocations after the 1999 earthquakes.

One of the important organizational partners of this association was Kafkas Dernekleri Genel Merkezi – Kafder (Headquarters of Caucasian Associations),

which was based in Turkey's capital Ankara. They gathered local information about the needs from Düzce, and contacted Kafder for cooperation in aid activities with other local Caucasian associations throughout Turkey. At the local level, the members of the association and also non-member Adygeans and Caucasians, who were considered honorary members, cooperated for search & rescue, material aid, and for various activities of support in Düzce. I was also informed that a managerial board member of the Düzce Adygean Cultural Association was directly contacted by the Crisis Management Center at the governor's office after the November 12th earthquake. Düzce had been declared an independent province shortly after the November earthquake. This member of the Düzce Adygean Cultural Association later took part in the operations of Social Services Office and Crisis Management Center in newly founded governor's office of Düzce province. As other organizational partners in earthquake-related activities, Düzce Adygean Cultural Association listed Kızılay, Düzce Municipality, and some cooperatives in other provinces. However, they put strong emphasis on Kafder as their main organizational partner. They reported that their earthquake-related activities continued until 2002, and were concluded as the disaster related troubles slowly disappeared. Currently the Düzce Adygean Cultural Association does not have any ongoing earthquake or disaster related activities, and they do not have any current contact with AFAD or Kızılay. However, as I mentioned, they reported that they started discussing the topic in their managerial board for future disaster training of their members after my interview with them.

Considering the fact that these type III local associations were actively using their organizational connections in response to the 1999 earthquakes, the organizational recognition of such cultural and ethnical local associations by AFAD would be one of the ways of coupling their central plans and preparedness efforts with the already existing patterns of local self-organization in Düzce. The future disasters will not only hit the type I and II established and extending organizations, but also the hit these cultural organizations and their members. Having learned about how these non-specialized local organizations produced decisions about past disasters and how they organized various activities through their existing organizational structures point to the fact that they were working solutions, even

though they are not currently recognized as relevant ones by the current central disaster planning efforts. In short, even though they are functional equivalents, they are treated in an asymmetrical manner by the system of central disaster planning; and that is why I argue they should be recognized by the term *asymmetrical functional equivalents*.

Religion is another contingent function system in society, which is given extraordinary importance by the people and some theoreticians, and perhaps the one thematically most easy to relate with communal characteristics among others. Religion, as a function system, uses *faith* as its generalized medium of communication and *immanence/transcendence* as its code. Different religions are basically different programs for making different selections using the same medium and the same codes to bring out different combinations. The Mosque associations on the other hand, have their communications fundamentally oriented in this theme, but also make pragmatic connections with other function systems such as the legal system, or the economy. A religion, as a program of selections, might have certain criticisms with regard to how different functions systems should make their selections and therefore produce transcendental excusions about selections made otherwise. However, the mosque associations work with immanent, worldly conditions and problems, to produce communications in order to maintain the infrastructure of the religious system. During my field visits in Düzce I interviewed the managers and board members of 4 mosque construction and maintenance associations, which had engaged in construction and repair activities after the 1999 earthquakes. Each mosque association I interviewed had a different history and organizational history.

The first one was Hacı Davut Camii yaptırma ve yaşatma derneği. This was an old small mosque near city center, which was constructed in 1930s. During the earthquake it sustained light damage. The association could not do much during the first 1 year after the earthquake. During this time they continued their prayers in a tent set up in the mosque yard. At the end of the first year, they contacted the General Directorate of Foundations (Vakıflar Genel Müdürlüğü) in order to get a repair permit for this historical building. This permit included certain renovations along with the repairs in the mosque that was much needed by the regularly praying

community anyway, such as the replacement of the wood flooring, ground heating, and construction of an extension room at the entrance. An interesting point I discovered during mosque interviews was that the mosque imam and the mosque association members do not necessarily cooperate. Most of the time the association members are part of the regular praying community, but they do not have much information whether their imam has been to Kızılay-AFAD training or not. The only organization they cooperated during this earthquake-related activity was the General Directorate of Foundations, and they reported that they did not have any other organizational contact about earthquakes.

The second mosque association I contacted was Cedidiye Camii Yaptırma ve Yaşatma Derneği, about 300 meters from the first mosque I visited. This large and central mosque in city Düzce center, the construction of which was completed in 1976, did not sustain any damage in the first earthquake on August 17th, however both of its high minarets collapsed in the second earthquake on November 12th. The activities of the mosque continued in a big tent set up in front of the mosque for a couple of months, and then the prayers were carried out inside since it was only the minarets that collapsed, but the rest of the structure was inspected and found to be fit for use by the Ministry of Public Works and Settlement (Bayındırlık ve İskan Bakanlığı) inspectors. Some minor repairs were carried out in the spring and summer, approximately 6 months after the earthquake, but the re-construction of the minarets took almost 2 years since these are special structures, which can only be constructed by scheduled companies.

When asked about their organizational partners during and after the earthquake in their earthquake-related activities, I learned about a number of organizations. For example, the interviewee said that the tent they used in the first couple of months after the earthquake for prayer was sent either by Kızılay or Ankara Büyükşehir Belediyesi. Ankara Büyükşehir Belediyesi and their aid activities came up in a number of other interviews as well. Other than that, they cooperated with Düzce Municipality and Diyanet Vakfi (Foundation of Religious Affairs). A big part of their financial resource came from donations of the regular praying community of the mosque. When asked if they cooperated with the other mosque associations communally, I was told that the mosque associations are not

allowed to do that on their own, so they cannot routinely do that. When the mosques need the help from other mosque communities, they apply at the office of the mufti (Müftülük), who is in official charge of the religious affairs in the local level. They can only cooperate if they are given permission to collect money for one another after prayers. Cedidiye Camii association reported that this happened in a very few incidents, probably just twice so far. This shows that there is not a communal principle of cooperation between the goers of different mosques, or rather the political and legal systems intervene in their operations. As a result, each mosque association operates within its own organizational boundaries rather than through the whole local muslim community in practice. The interaction of these organizations is regulated by higher organizations and by different function systems indeed.

When asked about their members, he reported that they have 60 members, and a managerial board of 5 members, most of whom are from among the local nearby tradesmen. He noted that there was no advantage in having more members, since their main income was not from monthly membership fees, but from the praying community's donations. They did not have any specific membership requirements into the association other than being at least 18 years of age and Turkish citizen. However, I should note that, none of the mosque associations I interviewed had any women as members at all.

When Cedidiye Camii association was asked if they had any other earthquake-related activities, they reported ne other activities. When they were asked about the Toplum Liderleri Project of Kızılay and AFAD, the association manager said they had never participated in such an activity, and had no information if their imam had done so. Considering that the members and the manager of the mosque association are also the regular mosque-goers, the training of just imams might not guarantee the flow of communication regarding earthquake resilience through the community. Their imam might just not have participated in Toplum Liderleri Project yet, but still, the respose I received shows that there is not such an intensely active channel of communication between the mosque association manager and their imam. This mosque association as an organization does not have AFAD in its organizational horizon.

Another important remark he made was that, having an association as an organizational roof for the maintenance of the mosque is a great advantege. When he explained why he said that, he was actually making a definition of an organization in a Luhmannian sense. He reported that producing decisions about how the mosque should be maintained can be such a problem sometimes, since everyone in the praying community has ideas and criticisms about anything to be done all the time. However, when there is an association and a managerial board, the decisions can be finalized in relatively short time, the tasks can be carried out and all the long discussions about alternatives and criticisms can be successfully warded off. Without such an organizational roof he noted, what they accomplished so far would be extremely difficult, if not impossible. Here was see a very concise practical explanation of the absorbtion of uncertainty principle.

The third mosque association I contacted was Merkez Büyük Camii Association, which is located about just 300 meters from Cedidiye Camii, in the city center. Despite the name, this is actually a rather small-sized mosque, which had been built in 1912 as the central mosque of Düzce in its time. This historical building had been damaged in the August 17th earthquake, and it almost totally collapsed in second earthquake on November 12th 1999. After the first earthquake, a hut was built in the yard of the mosque and the prayers were carried out in this hut. The most important event during the restoration of this mosque was the change of mosque association managerial board and the manager after big heated local debates, and the deep disagreement with the General Directorate of Foundations about how this historical building were to be restored. The previous managerial board of the association was abolished right after the earthquakes with the claims that they had been too passive for repairs and restoration. This can actually be interpreted as another example of the absorbtion of uncertainy principle, showing what happens when the decisions cannot be deparadoxified in the face of uncertainty of created by the earthquake. A new board was selected and the remaining debris of the old mosque was removed to make way for new construction. However, this was a big problem for the General Directorate of Foundations since this was a historical building and originally the property of the directorate. For the directorate, what was essential was keeping the authenticity of the building. For example, they suggected

and pressed for using the actual stone blocks from the debris of the old collapsed building in the construction of the new one. However, the mosque association disagreed with this principle of preservation, arguing that the solidity and safety of the building is of a bigger concern in the case of another major earthquake. The disagreement was so deep that it was carried over to the court, since legal system's function is to regulate conflicts when they are thematized within the medium of jurisdiction. The new manager of the association had been sued in the high criminal court for violation of restoration principles in construction. However, the case was resolved in the end, long after the construction of the new mosque building had been completed. The manager reported that the new building had been constructed according to superior criteria in terms of solidity, seismic resistance and the material quality. He stated that from what they observed after the 1999 earthquakes, it was a mistake to construct large Ottoman style mosques with high dome-ceilings and high minarets in an earthquake zone. The best solution would be to construct small Seljuk style mosques with flat ceilings.

When asked about their members, the association manager said they made a great reduction in their members when the managerial board changed in 2000. The association used to have more than 130 members before the current board, however this number was reduced to 46 now. I was informed that, registering 'fake' members living far away from the actual association office, and registering irrelevent people as members was used by some associations as a strategy of easier management, since the 'fake' members never show up in meetings and such activities. What they did was to clear the association of such 'fake' members and register new members who actually lived near and who can actually participate meetings and such events when needed. They now had a managerial board of 7 members.

When they were asked about their organizational cooperation about the earthquake-related activities, it was the governor's office, municipality, the General Directorate of Foundations, and the Foundation of Diyanet (Diyanet Vakfı – Foundation of Religious Affairs) were listed. Fenerbahçe Sports Club manager Aziz Yıldırım was cited for his contribution of construction steel of 60 tons, due to the personal connections of the association manager with him. It was also stated that there were numerous anonymous donations of various construction meterials left in

the mosque yard at night. When they were asked if they had any communications with Kızılay or AFAD, or ever hear about the Toplum Liderleri Project, the association said they have never heard of such a project, and have no idea if their imam had participated in it. However, they stated that if such a call was made for such an activity, they would be willing to join. Remarks similar to those earlier were also made during this interview, complaining about the difficulty of constructing and maintaining a mosque. It was stated that the constant debates, alternative ideas and criticisms make it very difficult, and maybe it should be just one person who runs such places. Even an organization such as association might be severely restricted by criticisms and interference, so the rule of single person might be even better, from the perspective of this manager.

Another interesting point I observed was that, some of the daily nuisances mentioned in mosque interviews were also pointing at the difficulties of maintaining a system based on differences, which constantly keep reducing their horizons to their own operations. The mosque associations I interviewed tended to draw and maintain their own organizational boundaries against those of the mufti's office (müftülük) and foundation of religious affairs (Diyanet Vakfi) as well as cooperating with them. For example, I observed complaints in more than one cases about these organizations (müftülük & diyanet vakfi) from mosque associations, since they interfere with the donations collected in all mosques, and since they also interfere with the management of the inventory and equipments of all mosques'. One of the examples given was that, the air conditioners bought and installed by the mosque association's own resources were registered to the inventory of diyanet vakfi by the local officials. The mosque associations interpreted this and other such actions as violation of their organizational boundaries, selections and resources. The same issue could also be observed in terms of the restoration of the almost totally collapsed old mosque building right after the earthquake. While the organizational horizons of the General Directorate of Foundations (Vakıflar Genel Müdürlüğü) were reduced to the preservation the historicity of the building, the organizational horizons of the mosque association were reduced to a rapid and solid re-construction of the mosque building in a functional and safe way. The organizational reductions of these two organizational bodies conflicted on the very topic of earthquake safety. In terms of

resilience, when one decided to bounce back the historical elements of the building and pressed for its 'restoration', the other one decided to bounce back its function through 'reconstruction'.

The fourth mosque association with which I had an interview was 60 Evler Camii Yaptırma ve Yaşatma Derneği. This mosque was 1,3 kilometers to the city center, relatively far from the first 3 associations I visited. The association manager and one board member were interviewed together. This mosque association had started in 1996, before the 1999 earthquakes. The first couple of years the association was mostly busy with purchasing the construction plot. Shortly before the earthquake, the mosque construction had started and the foundations were laid. When the earthquakes struck in 1999, the construction was halted for 3 or 4 years. During this time the association did not engage in mosque construction. The financial resources they used during the construction was mostly donation money. However, it was not easy to get this money. The association members issued official donation receipts for legal clearance to collect donations, and then went out to literally ask money from people in the street. They also visited cities like İstanbul and Ankara, collecting money little by little such as 0.5 liras or 1 lira by receipts. They stated that anybody would be surprised if they saw the effort they put in this pursuit. When they decided to continue construction, the most important thing they did was to revise and modify their blueprints to reduce the ground floor shops from their design. They decided that having shops as the ground floor of the mosque would be a risk factor for the future earthquakes in the area. As a result of this decision, the mosque is on the ground level, with a balcony storey inside like most mosques. When they were asked if they consulted any other organizations in their decision to remove the ground floor shops from the blueprints, they said they did not consult any organizations and that this was their own decision as the association. The only party they consulted was the engineering office with whom they worked together. I observed the same complaints about the interference of official bodies (Mufti's Office - Müftülük & Foundation of Religious Affairs - Diyanet Vakfı) in their communal affairs in terms of collecting donations after prayers. These official organizations regulate the donations collected by all mosques into a common financial pool ("havuz sistemi") and then distribute the money to the ones need it.

Therefore, mosque association regards this a violation of its own organizational decisions and efforts. While these official bodies have no contribution to the construction of a new mosque, they ask for money when it comes to donations, they state.

When I asked if they ever heard about the Toplum Liderleri Project, or if their imam participated in the project, they reported that they never heard about such a project. They stated that the only trainig they know that their imam was receiving was a course from the mufti's office about religious practices and prayers, but nothing about earthquakes or disasters. The interviewees from this association reported no communications or cooperation with Kızılay or AFAD when they were specifically asked about it.

Judging from the interviews that I had with 4 mosque associations, there are no communal donation connections between associations. Each mosque association primarily aims to reproduce and maintain their organizational boundaries, their communications and their decisions. These associations have to sort through various alternative courses of decisions in their operations. They all have different managerial boards, different ideological attitudes that I do not specify in this thesis. However, none of them was observed to mention Kızılay or AFAD in their organizational horizons, despite these organizations play very critical roles in the construction and maintenance of public service buildings such as mosques and their surrounding annexes. The inclusion of imams, with an assumption that they would preach and inform the praying muslim community during religious gatherings does not necessarily mean establishing a stable channel of communication with these local organizations, which play a key role in the very construction, maintenance, repair and reconstructions of these public service buildings. Attempting to train the praying community through the mosque preching is one thing, however the decisions about these public buildings, which sometimes host thousands of people at once, cannot be attributed to a praying community. Establishing stable channels of communication with the mosque associations as stable addresses of attributing organizational communication can prove to be a useful pursuit in generating and reproducing a sustainable earthquake resilience communication in the long run.

Düzce Gazeteciler Cemiyeti Derneği (Düzce Journalists' Association) also engaged in earthquake-related organizational activities as a professional organization. This association has an interesting quality, which can be confusing about its classification. It was the first association founded right after Düzce became a province separate from Bolu, on December 9th 1999. Actually, as the interviewees stated, "it was founded in a tent after the earthquake". Because of its founding right after the November 12th earthquake, it might be classified as an emergent organization at first glance. However, if we remember the definitions of type III and type IV organizations I mentioned earlier, it becomes possible to argue otherwise:

> *Type III: Extending* – While they exist prior to an event, much of what they do is not predetermined (e.g. other governmental agencies, small businesses, larger firms, social clubs, public service organizations, religious organizations, etc.)
> *Type IV: Emergent* – Both their existence and activities are ad hoc and therefore unique to the event.
> (Kreps & Bosworth, 2007, 299)

While the founding of this association was right after the November 12th earthquake, its members had already been considering founding the association and its activities are not ad hoc and unique to the event in this sense. It was specifically stated that this is an association founded by local initiative, not as a branch office of the Türkiye Gazeteciler Cemiyeti. I had a chance to interview the association manager and a managerial board member together.

They stated that even the founding of the association itself was an activity related to earthquake. The primary aim was to provide assistance and solidarity for journalists working in the post-disaster conditions in Düzce. In these conditions, where it was considerably difficult to prepare all the required documents for founding, the 7 founding members took all the trouble to start it. The main condition for membership is to be a journalist (print newspaper, local tevelevision, radio, or new agency). Currently the association has 65 members, some of which are journalists and TV program-makers living in other cities but of Düzce origins.

This association organized exhibitions of disaster photographs in the park in Düzce city center. These exhibitions aimed to remind people of the experiences and lessons from that period of time, not to make them feel sad. This was considered as a duty by this association since the people forget about these important issues very quickly and easily. The photographs used in these exhibitions were taken by one of the association members immediately after the 1999 earthquakes and during the following days. It included photographs of the newspapers of those days, photographs from the city streets, collapsed buildings, and capturing search and rescue efforts.

The members of this association also put forward some suggestions about an earthquake memorial in the city center, in the form of a collapsed building, so that the people would remember that the incident and act accordingly in the future. There were local newspaper articles and speeches in television programmes about this suggestion, however, this suggestion was not received well by the officials. I was informed that the exhibitions they organized were not very welcome by the local governing officials in general. The official attitude was usually more in the direction of clearing all remaining marks and memories of the earthquake as quickly as possible, to promote the might and capability of the state and government.

When they were asked about their organizational cooperation, they cited connections with Türkiye Gazeteciler Federasyonu (Turkish Journalists' Federation). When asked about disaster-related cooperation, they also mentioned that they cooperated with Depder in some of their activities. When I probed specifically about cooperation with AFAD or Kızılay, they said they gave photographical assistance to Kızılay in documentation of their activities, but this was not for a very long time and did not transform into other joint organizational earthquake-related activities. It was only when specifically asked that they remembered cooperating with Kızılay. They stated that they would be open for any invitations of cooperation. They also added that, the journalists would benefit from training from such organizations, especially on how the journalists should act in disaster situations, what they should and should not do in their duties.

Organizational horizons of this association were reduced to their profession. Even when brainstorming on disaster training, the ideas and requests they came up

were related to their professional practice. The production and spreading, let us say processing, of information about disasters is one of the most strategic operations both in times of the actual disruption and also in times of routine functioning. In the case of journalists' association, I observed that the decisions, activities, suggestions and the spreading of these disaster-related information is largely not coupled to TAMP. Establishing stable channels of communication to the local news media can prove to be an important asset for any efforts oriented at generating and maintaining earthquake resilience, since it can encourage participation of self-organized bodies into disaster-related communications.

Earlier, I mentioned that during my interviews with the governor's office, I observed that Depder's critical attitudes, decisions and activities about state policies on housing caused discomfort on the state authorities' part. Criticisms from local initiatives were interpreted as efforts to challenge the authority, rather than as legitimate claims to participate in decision-making. The antagonism between the disadvantaged groups in terms of property rights, gender or ethnicity was always a recurring theme in the interviews.

For example in more than one of the interviews, by both men and women interviewees, I was told that the City Council did not work in a much egalitarian and participatory manner. This council had been started as a result of the UN Agenda 21 charter, with the hope of formulating a means of community participation. However, some interviewees emphasized that these councils are not self-organized but imposed and steered from above, and therefore did not have much prospects for promoting local participation. The local authorities could interfere and manipulate the composition, discussions and decisions of these councils of women, youth and local organizations, which reduced motivations of the participants. The decisions of these councils did not have any binding power either, but they could just be advisory decisions at best. As a result, the city council meeting that was due last summer was not held and the councils practically came to a halt because of lack of participation and lack of motivation. This information was given by the women's organizations that participated in these councils, by the neighbourhood headmen that participated in these councils and also by some other interviewees from the municipality itself.

When I visited all 3 of the associations of the neighbourhood and village headmen (muhtar dernekleri) and asked if they organized any activities related to earthquakes, I received negative responses. The secretary of one of these associations had participated to Toplum Liderleri Project some years ago, but did not remember any details or information from the training at all.

At this point, like I mentioned before, taking TAMP as a steered effort to promote and increase earthquake resilience of the society, being defined as an element of this system might not be enough to ensure reliable results. The training of individual headmen might not necessarily steer their associations into organized communication for earthquake resilience. In this sense, along with establishing new channels of communication for resilience communication, the consolidation of the already existing channels is also important and it requires constant reproduction, just like any other systems in the society.

Sports clubs prove to be interesting type III extending organizations in this study as well. They are interesting in the sense that the communal connections, which are usually associated with ethnicity, profession, or religion, are also commonly associated with football fan groups as well. Two associations I interviewed in this study were the Düzce Fenerbahçe Taraftarları Derneği (Fenerbahçe Football Club Fans' Association) and Albayrak Gençlik ve Spor Kulübü Derneği (Albayrak Youth and Sports Club Association). I also made great effort to contact the Galatasaray Taraftarları Derneği (Galatasaray Football Club Fans' Association) and Beşiktaş Taraftarları Derneği (Beşiktaş Football Club Fans' Association), which were also located in Düzce city center. However, Galatasaray and Beşiktaş Associations reported that they preferred not to participate in the study.

Fenerbahçe Fans' Association had been founded in 2002 in Düzce, as an independent local association with their own initiative. At the time of interview, this association had 78 registered members, 5 or 6 of whom were women, and 1 woman member in the managerial board. However, the activities of the association usually involve more than just the registered members when they organize trips to football matches in other provinces.

The members of the association participated in the commemoration activities in the city center on the anniversary of the earthquakes, carrying the banners of their

association on a number of occasions. The interesting point about this association is their interest in being an active local organization not only about football but also about other local issues, such as painting of schools in the financially disadvantaged parts of the province, or writing EU project proposals for the sight disabled citizens living in Düzce.

When they were asked about their organizational cooperations, they cited Gençlik ve Spor İl Müdürlüğü (Provincial Directorate of Youth and Sports), and Fenerbahçe Sports Club. When they were specifically asked about Kızılay and AFAD, they reported that there has been no cooperation with these organizations so far, but they would be willing to engage in any joint activities about disasters.

The popular interest in football as a sport in Turkey is a commonly observed phenomenon. The involvement of different fan clubs in current debates as addresses of communication puts them into a position of strategical importance. Considering the level of popularity of this sport, and considering its capacity to encourage self-organization of local populations throughout Turkey, the utilization of these sports organizations as a means of communication channel in terms of earthquake resilience could prove to be another alternative. Overlapping a centrally steered resilience plan with such existing organizational themes would contribute to the self-reproduction of TAMP as a system, just like religion and education were supposed to do so for Toplum Liderleri Project.

Of course, football is not the only, or necessarily the best alternative. Albayrak Gençlik ve Spor Kulübü Derneği (Albayrak Youth and Sports Club Association) was another local association, which was originally founded in order to promote and spread the sport of karate and recently arm wrestling in Düzce in 1997. The association had 350 members in its last congress, approximately half of these being women. The managerial board of 7 members consists of family members, and the number of men and women is almost equal. This association became active within the first month after the August earthquake in 1999 to offer sports courses for free to the young university candidates preparing for physical education department at the time. The association manager contacted the crisis management bureau at the governor's office and requested a location for this purpose. At the time, the city stadium was being utilized as a tent-city consisting of tent offices and tent housing.

As a result of their request, they were given a space in the stadium for their exam preparation. Later, the candidates (approximately 15 to 20 young people) who participated in their free course succeded in their physical exams and placed in the universities near by, to continue pursuing their careers.

In the months to follow, this association also formed a simple sports center in Beyciler tent-city as a result of the city-dwellers' requests. The association managers contacted the tent-city administration and requested a tent where simple sports activities such as step and aerobic sessions along with karate classes could be held for the earthquake victims free of charge. This request was accepted and their sport center in tent was active for 4 months, offering all members of Beyciler tent-city sportive recreation free of charge. Their activity in the tent ended when this tent-city was removed 4 months later. There was not such a space provided in the prefabricated temporary housing area for sports, so they remained inactive for some period.

1 year after the earthquakes, they re-furnished their sports center in the basement floor of a building in Düzce city center. However, it took almost another 6 months before local people could feel safe enough to go into the buildings and start using them. In this commercial sports center, they accepted people who suffered physically debilitating earthquake traumas free of charge for rehabilitative sports assistance. They also reported that they witnessed some victims suffering light traumas, weak tendons, contusions, muscle atrophy, and muscle disfunction to recover from their physical restrictions during attendance.

Apart from these, they arranged a number of local karate competitions, in which children and young people suffering from physical earthquake traumas and disabilities were registered free of charge. Meanwhile, they contacted the Milli Olimpiyat Komitesi (National Olympics Committee) for sports equipment assistance. The association received high quality sports equipment such as Nike karate outfits, and they distributed these to their young karate students free of charge. The association manager reported that these karate sessions were very important for the local youth participating in them, since these provided something to keep the young people busy in a time of aimlessness and lack of proper guidance. He personally mentioned his observations that the cases of substance abuse was on the rise among

the young people after the earthquake since all the recreative facilities and activities were disrupted by the earthquake impact. Participation in any type of sports activities, according to his opinion, would prevent young people from going into wrong paths, especially in times of crisis like earthquake disasters. The interviewee reported that some of the children and the young people who started training karate with them at Beyciler tent city in the time of earthquake, became national champions to represent Turkey in the national team and to have world-wide degrees in international karate competitions later.

When I asked if their association still had any ongoing earthquake-related activities, or if they did anything to prepare for a future earthquake, I was told that since they currently run commercial fitness and sports center, they had to practise emergency drills for a couple of times. When the November 12th earthquake happened in 1999, they were inside the sports center with approximately 70 people. They did not let anyone to run outside during the earthquake since the stairs were generally known not to be safe, and since the falling objects in the street could be dangerous as well. As a result, none of their students were injured back then. Currently, they talk about the subject or earthquake safety during their belt exams in karate sessions where all their students are together. They brief the students about what to do in the case of an earthquake and what not to. The members of the association also participated in the commemoration activities on the anniversaries of the 1999 earthquakes on a number of occasions.

In terms of their relations with the TAMP, the only thing they reported about cooperating with Kızılay was that Beyciler tent-city was set up and maintained by Kızılay. However, they have never cooperated with AFAD or Kızılay in any of their earthquake-related activities so far.

d- Non-steered, self-organized asymmetric solutions for the problem of earthquakes and TAMP

As I mentioned earlier, during my field visits I did not only interview type III extending local organizations but also the type I established (AFAD), type II expanding (Kızılay) and type IV emergent ones (Depder). I contacted the municipality, the governor's office, neighbourhood headmen, and also a women's cooperative (Nilüfer Kadın Çevre Kültür ve İşletme Kooperatifi) along with 15 local extending associations of type III. I talked to the managers, managerial board members, activists, training department employees, press and public relations representatives, and association members.

The most important point about the type III extending associations were that they did not engage in their earthquake-related activities according to a plan or some external organization's incentive, but through their own initiative. They decided for themselves, and combined their already existing domains of activity with those of earthquake-related problems. Some of them, like the mosque associations, journalists' association, the football fans, or the karate club members did not directly get involved in search and rescue, or aid distribution activities, which are the most popularly listed disaster activities. However, these local organizations contributed to the bouncing back of the local society into its routine functioning simply through a reproduction of their own systemic differences and functions.

In the theory chapter, I mentioned that organizations are gaining more and more importance in the society as stable addresses of communication. In my first observation criterium, I stated that I expect the communication about earthquake resilience and disaster response would be attributed to specialized organizations in the society. During my interviews, I observed that most of the time the members of type III local associations did not even consider their activities as related to earthquakes at first, but then during my interviews, they realized that they contributed to the resilience of the society through their decisions and organizational activities. When I first informed my interviewees that our interview was going to be

on earthquakes, they first mentioned that I should be talking to Kızılay, governor's office and Sivil Savunma/AFAD office in Düzce. However, during the interviews they realized that their organizations can also actively take part in increasing the society's capacity to self organize in the lack of guidance in the case of an earthquake disaster. In fact, they already have done this after the 1999 earthquakes.

In the second observation criterium, I stated that unsteered functional equivalents may not be recognized by the system of central disaster management plan at all, and I propose the term *asymmetric functional equivalents* for these. After the interviews, I observed that only a fraction of the locally self-organized disaster responses are recognized by the AFAD plans (TAMP) and included among the elements of a disaster resilience plan. The ones which are included in this plan at this stage are the ones that would contribute to the self-reproduction of the plan itself. Like any social system of thematic communications, the emergency management plan primarily is concerned with reproducing and maintaining its own communications. However, we should note that, the strategic plans upto 2017 state goals of increasing connections with local organizations through accreditation, training and joint organizational activities. Other organizations such as the Ministry of Education (MEB) follow their own organizational boundaries, concerns, horizons and formulate their own decisions such as the joint School-based Disaster Education with JICA. Like I stated earlier in the theory chapter, no set of selections in the society can avoid blind spots, or can deterministically steer the society for exact goals. It can only observe its own observations on a second order, to establish stable channels of irritation and resonance between different systems through structural couplings. Although organizations on their own cannot function as structural couplings most of the time, they would certainly contribute to the resonative capacity of different function systems together.

In the third observation criterium, I stated that it is not possible to talk about a singular 'resilience' but differentiated 'resiliences' from the points of different function systems and different organizations copying and combining their codes. For example, for the General Directorate of Foundations, the accurate restoration of a historical mosque would be more important than its function for the people who actually use it every day more than once. While the directorate tries to bounce back

the historicity of this building, the mosque association might struggle for its quick, safe and functional reconstruction. The conflict between these two different organizations and their operation could be so intense that it could have to be carried over to the legal system.

The fourth observation criterium I tried to formulate earlier was that the responses to the earthquake disruption of the communications would not be unitary and communal, but differentiated. During the interviews, I witnessed in most of the cases that the geographical proximity or individual connections are counterbalanced with organizational boundaries, roles, and orientation towards functionally differentiated systemic logics of communication. For example, in the case of mosque associations, the activities of one mosque association do not manifest a communal connection with the activities of another one. Each association tries to gather its own resources, reproduce and maintain itself. Most mosque association members personally know other mosque association board members, but they do not intermingle communally in their organizational affairs as they maintain their mosques. They are confined within their own systemic boundaries and they are coordinated by the Mufti's office in the province, which is hierarchially under the control of Ministy of Religious Affairs.

However, the connection between KEDV, Kızılay's Social Center, Nilüfer Kadın Çevre Kültür ve İşletme Kooperatifi, and AFAD training project stems from the involvement of the same individual as a member or activist in all of these organizations' activities. This is a reminder that individual connections can still play a role in the extension and overlap of the organizational horizons of separate organizations. Another challenge to the idea of the atomization of the invididual into communicative aspects, or 'personas' is the influence of the official governors and managers in local projects. In the theory chapter, I mentioned that the reduction into communicative personas is a solution for the unpredictability of the human individual. Certain positions in organizations and the designated powers and responsibilities can be helpful in the formation of ideal types and expectations, however, in Turkey, the change of individual managers can still make a lot of difference. In many of my interviews, the people complained about that fact that the governor of Düzce was changed for 8 times in 14 years, and that this incredibly

slowed down the recovery and progress in Düzce. The same complaint was also expressed about the directors of many other official organizations' such as the health directorate or the national education directorate. Another point of complaint was that the people appointed to these managerial position by the government authorities were not professionally fit for their duties and this also costed Düzce a lot of opportunities lost during the past years. Actually this complaint is in line with Luhmann's interpretation of corruption as a form of de-differentiation in modern world. If a non-professional person is appointed to an irrelevant position, or if a professional person in that position manipulates organizational decisions in an unprofessional corrupted way, then this would violate the functionally differentiated and efficient systemic communication. Corruption or de-differentiation is the violation of valid codes in a relevant situation. For Turkey, the earthquake has created punctures in the previous cultural selections, and provided opportunities for questioning the ongoing de-differentiation efforts.

The fifth observation criterium I tried to formulate was that associations are primarily concerned with reproducing themselves as systems, not making society more resilient. During my interviews with the type III extending local associations, what I witnessed was actually their self-steered organizational decisions and activities for solving the problems posed by the disruption of their systemic communications with their organizational environment after the earthquake. Meanwhile, while they were just working to reproduce and maintain themselves, they were also bouncing the social fabric back through their interdependencies. In this sense, a sports club might not be seen as a critical element of a disaster management plan when compared to radio telecommunications of the search and rescue teams. However, once the rescue activities conclude and the debris is removed, the psychosocial support gains more importance. Psychologists, counselors and hospitals can only guide, counsel and treat so many traumas; but cannot deal with the whole population of traumatic individuals and their experiences to rehabilitate them.

At this point, the self-organized, self-steered local activities come into play. These self-organized, self-steered activities, which were exemplified by the type III extending local associations in Düzce in this study, are a way of society to observe

and steer itself. The central plans for disaster management and promotion of resilience are also observations of society by itself; however, the claim of steering social processes into being more resilient and imposing new reductions on the already existing ones is not a foolproof solution to escape from blind spots, which are already producing the risks in the social system.

The blind spots of differentiated function systems and their ignorant communication flows are the very sources of different 'dangers', and these blind spots also interact with each other to create even further and ever-increasind combinations of dangers. The very structure of the modern society is intertwined with blind spots and dangers, and no single specialized organization or plan can 'notice' and regulate all the blind spots in the social fabric, no matter how perfectly and carefully it has been prepared. Every function system is aware of its own relevant 'risks' and coordinate the communications of various organizations that produce decisions based on different decision programs. However, the narrow communicational horizons of the function systems and the narrow decisional programs of organizations cannot capture 'dangers', the consequences of decisions which have not been made by themselves. This reminds me of Luhmann's example, "we toil day after day round the lake to keep fit only to meet our end in a plane crash" (Luhmann, 1993, 30).

The function systems and organizations cannot 'notice', regulate or steer the dangers they ignore and thereby create. The same applies to the solutions of the problems created by these dangers. In a similar fashion, their reduced horizons may also miss the relevant communications, like I quoted from Qvortrup earlier; "the range of communicative variations is reduced, thus increasing efficiency, but also raising the risk of excluding relevant communicative selections" (Qvortrup, 4). The TAMP may not include all the type III organizational solutions to the earthquake in its disaster plans (except for those like Düzrad since it would contribute to self-reproduction of AFAD), and the type III local organizations do not departmentalize or seek cooperation with AFAD since their organizational histories and their organizational horizons do not require so for their self-reproduction. For example, the National Olympics Committee could be a more relevant organizational partner for some local associations in their organizational efforts of bouncing back from the

earthquake disruption and restoring their streams of communication to routine levels when compared to AFAD. While the TAMP will be trying to convert a sports facility into public shelter according to its plans, a local sports club will be trying to convert a tent into a gym. This does not point at the irrelevance of their efforts, but to the difference in their organizational meaning-making and horizons. The bouncing back of a local sports club or similar 'seemingly less vital' organizations can prove to be at least as important as any other local organizations in their effects of psychosocial rehabilitation in the long run. Similar examples of different organizational concerns can be observed in terms of horizon conflicts; some local mosque associations might have to fight the restoration demands of General Directorate of Foundations after the earthquake in their efforts of bouncing back to routine functioning. In other words, the society does not only have to fight the nature but its own distinctions, and therefore it also needs to adapt to its own distinctions.

CHAPTER 5
CONCLUSION

"False hopes are more dangerous than fears."

(Tolkien, 2010, 72)

Having read about Luhmann's theoretical perspective, the interviews I made, and the observations I reported, a typical reader would ask the questions: "So what? Where does the solution for this problem lie? What good are all these for planning or engineering our way out of disasters? How does this thesis contribute to making our society more resilient in the face of earthquakes"? Well, not so fast. Luhmann's Social Systems Theory explains that we cannot "steer" socio-cultural evolution; but only become a part of it, at best. Social Systems Theory increases our awareness of this fact, and this thesis applies SST to the case of disaster management and planning in Turkey. While doing this, my main problematic was "how does society handle the relationship between centralized, specialized solutions to earthquakes and local, self-organizing non-specialized ones during its evolutionary adaptation to itself"? I found that, besides a functional differentiation of the earthquake responses, there is also an asymmetric relationship between centralized disaster planning and local self-organization. Based on the result of my interviews, I proposed a modification of the SST terminology to conceptualize the interaction between multiple forms of co-existing social differentiation (functional and center-periphery). Conceptually, SST recognizes different solutions to the same problems as functional equivalents. SST also recognizes that previous types of differentiation still co-exist as subordinate to functional differentiation. As a subordinate type of differentiation, the center-periphery differentiation creates an asymmetry between the centralized and self-

organized local functional equivalents about disasters. Therefore I proposed the term *asymmetric functional equivalents*. The systemic blind spots between boundaries are also influenced by asymmetric relationships between functional equivalents, which might serve as obstacles hindering their evolutionary selection for reproduction.

Rather than making the society more resilient, in reality, this thesis primarily fulfills the function of reproducing sociological communication. As an individual, who experienced the 1999 earthquakes and wondered why things got so much out of control, I also desire to "make society more resilient" or "contribute to progress". However, The academic system aims to reduce my unpredictable individuality to a more predictable and 'processable' academic persona, that of a PhD. candidate. Otherwise "I" cannot meet the membership criteria of the university as an organization, and this system cannot make sense of my individual communication. This ever-anxious PhD. candidate tries to reconcile the available sociological explanations with his individual curiosities and observations about why the society is so indifferent about mitigating disasters. The modern society depends on systemic reductions of communications in its complex environment for social approximations in behavioral outcomes; in order to create a "we". The cost of these systemic reductions and the systemic efficiency obtained is paid in further blind spots for each approximation.

At this point, let me remind Luhmann's remark that "Nobody is 'I'. As little as the word apple is an apple" (Luhmann, 1992, 76). As much as 'I' is a fictitious entity, so is 'we'. The society consists of series of repetitive reductionist attempts to construct and reproduce boundaries about the things to be agreed upon and then to be put in action. We as human individuals with separate psychic systems, struggle to agree and cooperate, and all 'we' can do is to approximate. Selecting what topic to agree on is a challenge as much as the agreement itself. The tailoring of expectations and reactions based on contingency is made easier by binary coding of various function systems, since "consciousness is always intentional, it is always consciousness of something and not everything" (Lee, 2000, 324).

In this sense, every function system in society narrows its communicative event horizon and along the way creates its blind spots. Selecting either one of the two codes can create different consequences (i.e. risks) but still, these consequences

of choosing the one or the other code are interpreted as risks within borders of that system. However, the function systems are blind to the third value; to the world. We can imagine these blind spots (i.e. dangers) as by-products, or waste disposal of function systems after they narrow their horizons. Other systems do not primarily care about covering the others' blind spots. They also have their own blind spots, and they just aim to reproduce their own selections. Moreover, the interaction of these blind spots will manifest even further blind spots. Since these blind spots (i.e. dangers) are created simultaneously, one function system cannot structurally aim to cover another's blind spot. In other words, the simultaneity in the complex social system of society rules out the possibility of covering up the blind spots. The addition of a subordinate type of differentiation (i.e. center-periphery), further increases the combination of blind spots, sometimes enforcing the blind spots of the center over periphery.

The idea of risk and disaster 'management' is an apparently popular approach to the situation. In a complex environment, such attempts at "steering" can partly plan the systemic selections, but not their consequences outside the respective boundaries of their system. The center-periphery differentiation puts the "managing" party in the center, and the "managed" in its periphery; but does not create immunity to blind spots. Once the extra-systemic factors manifest themselves in the form of dangers, the boundaries and reductions collapse. Thus, 'danger management' is an impossible concept, since dangers comprise an ever-growing swamp that nobody can handle, plan, manage, govern, or foresee. In evolution, no problem can be solved forever, and no absolute safety is attainable. What happens is that some problems are postponed and made even more complex while saving the day. Today, urban renewal projects are promoted as solutions about the earthquakes in Turkey. However, we do not hear anything about 50 or 100 years later when new buildings will come to the end of their life cycle, or about water shortage, power shortage, changing climate conditions, shortage of other natural resources, air pollution, electromagnetic radiation, chronic health problems, traffic jams, crime, and so on…

In the first days and months of the 1999 earthquake, while I was living in tents with my family in, along with various organizations I also remember the individual philanthropists visiting Adapazarı with their cars and trucks from different

provinces all around Turkey and bringing supplies for the earthquake victims. These individual, non-organized, mostly non-coordinated, self-steering efforts of aid and support reminds of Luhmann's depiction of the protest movements in some aspects;

> With the form of protest, it becomes apparent that, although participants seek political influence, *they do not do so in normal ways*. This eschewal of the normal channels of influence is also intended to show that **the matter at issue is urgent, profound, and general, so that it cannot be processed in the usual fashion**. Although protest communication takes place *within* society – otherwise it would not be communication – it proceeds *as if it were from without*. It considers itself to be (the good) society […] It expresses itself from a sense of responsibility *for* society, but *against* it.
> (Luhmann, 2012, Vol. II, 157) [Bolds mine]

The bolds in this quotation give an explanation for activists-philantrophists by-passing functional differentiation and also the center-periphery differentiation by direct involvement, driving their cars or trucks into the earthquake area to bring supplies to the people they have never met, and will probably never see again. However, this is the exception rather than the routine. When it soon disappears, all we have left are the organized efforts in the long run.

Earlier, in theory chapter, I mentioned that this thesis focused on the relationship between steered and non-steered/self-steered functional solutions to the earthquake disruption as asymmetric alternatives to each other. In other words, I tried to investigate in what ways the already existing self-organizing tendencies of the local population (i.e. local associations) are engaged in disaster-related communcation in the recovery process and in disaster planning in the long run. Resilience, when defined as self-organization in the lack of guidance (i.e. designation of any specific disaster-related connection, cooperation, duties or responsibilites by a disaster plan, and since these are local associations, lack of guidance from another city or country), can be hindered by the asymmetry between AFAD's future disaster plans and the history of self-steering organizational disaster communications and activities of the local associations in Düzce. The associations I selected were

normally not specialized in emergencies, but they still took initiative to engage in various levels of earthquake-related communications, decisions and resulting activities (type III, extending their domain of activity). Remembering the impossibility of social steering I mentioned earlier;

> […] the intention is not to arrive at a more favorable picture of modern society by some other path; we must a fortiori avoid replacing concepts such as planning, control, or ethics with similarly practical proposals. We know too little to decide even on the form to guidelines for action. This can be done only within each functional system for its own domain. *This naturally does not mean demanding abstinence in practical matters, but it makes sense to observe observers* with regard to these attempts to recognize what happens *when someone claims planning or ethics for themselves in order to introduce new differences into society with their aid*.
> (Luhmann, 2012, Vol. II, 109) [Italics mine]

I mainly tried to find out how much AFAD (as just another systemic boundary) recognizes self-organized disaster communication outside of itself, and what links AFAD strategic and tactical plans aim to establish with these historically self-organized, self-steered disaster activities. Meanwhile, I also tried to investigate if the local associations recognize AFAD as their organizational partners in earthquake communications, and cooperate for related activities. I also tried to find out what organizations other than AFAD come up as cooperating partners of these local associations in their activities related to earthquakes. My observations show that AFAD is developing an awareness for the existence of different perspectives and possibilities, and it manifests this awareness in its strategic plans. In AFAD plans, the suggestions such as accreditation and other types of cooperative connections point at the tendency to establish stable channels of communication with different forms of locally self-organized efforts for disasters. However, the good intentions in its strategic plans have not manifested themselves so widely in its tactical plans and current connections in the field yet.

When we talk about organized local efforts, the center-periphery asymmetry in the political function system comes into play, in combination with the functional differentiation. I observed during the field visits in Düzce that, the centrally 'steered' attempts of organizing can suffer from asymmetric exclusion and lack of participatory motivation. The systemic reductions of the centralized efforts may sometimes ignore the already existing 'self-steered' organizational communication and sources of motivation. Historically, some type III extending local associations in Düzce province city center served as functional equivalents about the problem of earthquakes for bouncing back various disrupted communications in society. The asymmetrical relationship between these local self-steered solutions and today's centrally steered efforts (AFAD plans) creates blind spots reducing the level of planned and desired local participation in the long run. Therefore, the term *asymmetric functional equivalents* should be used to refer to this factor when talking about functional equivalents in disaster planning. Introducing new differences to the society and enforcing them is one way to solve a problem; and recognizing the already existing self-organizing solutions is another way. From an anthropocentric perspective, it is similar to the difference between doing something you have to and doing something you love. An increased organizational awareness of the *asymmetric functional equivalents* in disaster management and planning might contribute to better recognizing and combining these two ways of solutions.

Disaster management process in Turkey has been transforming in the last couple of decades, with a strong emphasis on efforts of re-organization in political function system. The term *asymmetric functional equivalents* suggest that, these efforts of central disaster planning and management are not immune to structural blind spots, towards the historical variety of functional responses in its periphery. Therefore, the combined structurally blinding effects of co-existing forms of social differentiation should be formulated theoretically and be referred to as *asymmetric functional equivalents* in Social Systems Theory terminology.

The asymmetry between established disaster management system and the local type III associations is also important in terms of the evolutionary processes of variation and selection (for stabilization) of disaster responses in the long run. Counting on the preliminary telephone survey I did, I can confidently say that the

majority of the local associations in Düzce did not show any organizational communications and activities related to disasters after the 1999 earthquakes. The involvement of only a few non-disaster specialized local associations in earthquake-related organizational communications can be interpreted as an improbable variation, an unexpected case of minor mutation. For the SST, the communications that make up the society need constant reproduction, just like living tissue. The moment reproduction stops, decay starts; the moment the reproduction changes, mutation (genetic variation) occurs. While type III local associations were reproducing their organizational communications after the disruption of 1999 earthquakes, minor changes were manifested in the reproduction process. However, whether these variations would be selected for future stabilization (e.g. in a disaster response plan with regular training and organizational cooperation for disasters during routine functioning) or not entirely depends on the society's selective differences. These variations in organizational activity (of the type III extending local associations) were improbable but not impossible in an evolutionary sense. The selection of these improbable variations for stabilization in the long run depends on the society's adaptation to its own structures, such as the formation of AFAD as a specialized organization in political function system. Basically, AFAD is just another systemic difference, with blind spots and with a primary concern of reproducing its own boundary and its own internal operations. Being a central "steering" effort, when AFAD ignores the disaster-related local organizational variation in its periphery, it misses a chance to enforce an evolutionary selection favoring its functional equivalents, which would also increase its own chances of reproduction in the long run by creating better resonance with its environment. The failure or success of single selections is not conclusive in such a long process like evolution; but it is the accumulation of such selections that create adaptation in the long run. We should note that this is a reciprocally selective relationship. Despite the center-periphery asymmetry, the reactions and involvement of the type III local associations are also having selective evolutionary influence over centralized disaster management efforts, by providing a more or less favoring environment.

In most cases, the mosque associations, sports clubs and other type III local associations in Düzce did not even consider their own recovery and rehabilitation

activities as a part of local earthquake resilience capacity. From their own organizational horizons, they were just maintaining their systemic operations. Their own decisions and activities did not make sense to themselves as the part of a disaster communication in society. However, with the different 'cut' I made in society with my observations in this study, I defined their efforts as a part of earthquake resilience. As a result, the interviewees also started to become aware of their involvement in disaster response, the alternative meaning of their associational activities, and such opportunities of resonance. Of course the interviewees on their own cannot create miracles in the organizations, of which they are members. Evolution is a slow and intricate process. However, I would argue, this observation suggets that a centralized awareness towards the *asymmetric functional equivalents* (i.e. earthquake-related variations in type III local associations) might contribute to accumulation of minor selections over time, increasing chances of stabilizing their involvement in earthquake resilience in the long run. This is my interpretation of how the society primarily needs to adapts to itself, rather than to the physical environment. The interdependence between the two sides of this asymmetry is a complementary part of society's evolution.

Earlier I mentioned Robert Stallings for quoting Luhmann that; "For sociology, the topic of risk ought thus to be subsumed under a theory of modern society, and should be shaped by the conceptual apparatus thereof" (Luhmann, 1993, 5; Stallings, 1998, 134). In my literature research, I realized that the conceptual frame of Niklas Luhmann's SST has not been employed for studying disasters in Turkey so far, despite the potential it bears for explaining the evolutionary mechanisms shaping social systems. With this reason, investigation of selective mechanisms in the socio-cultural evolution of society, and their role in disaster resilience can be considered as a meaningful direction for broadening theoretical and empirical horizons for future disaster research in Turkey.

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APPENDICES

APPENDIX – I.

Bedelsiz Modernleşme[1]

Hep beraber birilerine kızıyoruz: Devlete, partilere, belediyelere, müteahhitlere, mühendislere, kalfalara, arsa sahiplerine, hatta sisteme. Tek tek hepsine kızmakta haklıyız. Bir kez bunun adını koyalım. Ancak adını koyduktan sonra bir adım daha atıp şu soruyu sormak gerekiyor: Felaketlere açık bu kentleşme örüntüsü neden ve nasıl mümkün oldu? Eğer bu soruyu sorup üzerinde düşünmezsek kızgınlığımız, öfkemiz kendi içinde boğulacak. Çaresizlikle boşvermişlik arasında savrulup duracağız.

Son cümleyi baştan söyleyelim: 1940'ların ikinci yarısında başlayan, 60'larda hızlanan, 70'lerde tıkanan, 80'lerde mecra değiştiren, bugünlerde de yeni tıkanıklıklarından söz edilen Türkiye modernleşmesi kentleşme için gerekli olan ekonomik kaynakları yaratamamıştır. Ya da kaynakları arasından yeterli miktarı kentleşmeye ayır(a)mamıştır. Kentleşmenin"bedeli" öden(e)memiştir.

Kentleşmenin "bedeli" nedir, nasıl hesaplanabilir? Şöyle basitinden bir tablo çizelim: Bir kenti oluşturan yapı stoğunun ezici bir ağırlığını, %80-90'ını konutlar oluşturur. O zaman hesabı kolaylaştırmak için konutlar üzerinden gidelim. Ama önce kentin sadece binalardan oluşmadığını da hatırlayalım: Kaldırımlar, yollar, otoparklar, garlar, demiryolları, metro istasyonları ve tünelleri, iskeleler, kanalizasyon-su-telefon-gaz vs. şebekeleri, elektrik direkleri, telefon kulübeleri, duraklar, parklar, okullar, kreşler vb.'den oluşan dev sistemi ve bu sistemin maliyetini şöyle bir gözümüzde canlandırmaya çalışalım. (Mal ve hizmet üreten işyerlerini, ofisleri, çarşıları, atölyeleri, fabrikaları şimdilik tablonun dışında tutuyoruz.) Sonra da bu toplam bedeli o kentteki konut sayısına bölelim. Bu hesabı yapmış kent ekonomisti var mı bilmiyorum, ancak ürkütücü bir rakam çıkacağına hiç kuşku yok. En iyimser tahminle ortalama bir evin maliyetinden daha düşük olmayacaktır bu rakam. Demek ki o evi meydana getirmek için harcanan paranın en azından iki misli harcanacak: Biri kendisi için, diğeri de doğurduğu kentsel donatı ihtiyacı için. Bir evin "kentsel konut" olabilmesinin bedeli en azından bu. Öyleyse "kentsel konutun" maliyeti arsa, proje, demir, çimento, tuğla, inşaat işçiliği, doğrama, seramik, parke, lavabo, dolap vs.'den ibaret değil. Üstüne bir de kentsel donatıların bedelini eklemek gerekiyor.

Peki kim ödeyecek bu bedeli? Toplum çeşitli açılardan sınıflandırılabilir. Konumuz kent olduğuna göre aktörleri de kentin tüketimi üzerinden okuyalım. Muhtemel aktörler şunlar: Kiracılar, bina ve ev sahipleri, mal ve hizmet üreten şirketler.[2] Kiracı zaten böyle bedelleri ödeyecek durumda olmadığı için kiracı kalıyor. Ayrıca da uzun vadede kirasıyla zamana yayılmış olarak ödemiş olacak payına düşeni. Ev sahibi

payına düşeni ödeyecek. Eğer evini kiralıyorsa zaman içinde kiralara yansıtarak bir miktarını geri alacak bu bedelin. Şirketlerin bina sahibi veya kiracı olmanın dışında da yükümlülükleri olacağı kesin.[3] Ama kim hangi oranda ve hangi termin içinde öderse ödesin ev ciddi bir biçimde pahalılaşacak. Ev sahibi olmak kolay olmayacak. İşte o nedenle İngiltere'de bu yüzyılın başında toplam konut stoğunun %90'ı nüfusun %10'unun elindeydi. Kiralar da yükselecek. Kiraların yükselmesi mal ve hizmet üreten şirket kârlarının daha büyük bir bölümünün ücretlere, ücretlerin de daha büyük bir bölümünün kiralara gitmesine neden olacak. Yine bu nedenle Avrupalı işçi sınıfının büyük bir bölümü 1920'lere kadar çoluk-çocuk tek odalı evlerde oturuyor ve helâları diğer ailelerle paylaşıyordu. Bina yapmak (yani kentleşmek) pahalı bir iş olduğu için, dolayısıyla da kolay olmadığı için.[4] Bedel bir biçimde ödenecek; herkes de bundan payını alacak.

Şimdi bu tabloyu aklımızda tutarak Türkiye'nin son 50 yıldaki modernleşme öyküsüne bakalım: 1980'lere kadar sermaye birikimi esas olarak imalat sektörünün şu kanalları içinde seyrediyordu: Dayanıklı tüketim malları, paketlenmiş tüketim malları ve inşaat sektörüne girdi teşkil eden ara mallar. Büyük firmaların faaliyetleri, dolayısıyla da kârları bu kanallar içinde yoğunlaşmıştı. Dikkat edilirse bu faaliyet ve kâr alanları içinde doğrudan "kentin üretimi"ne konu olan faaliyetlerin bulunmadığı görülecektir. Oysa 19. yüzyıl Avrupa'sında başta arsa spekülasyonu olmak üzere, alttyapı ve üstyapı yatırımlarına konu olan büyük ölçekli faaliyetlerin de büyük şirketlerin konu ve kâr alanı içinde olduğunu görüyoruz. Özellikle de banka ve sigorta şirketleri gibi finans kuruluşlarının. Oysa bizde 1980'lerin sonuna kadar büyük sermayenin bırakalım inşaat ve imalatı, bu sektörün en kârlı ve en zahmetsiz kalemi olan arsa spekülasyonuyla bile ilgilenmediğini görüyoruz. Kent dışı faaliyetler olan baraj ve otoyol yapımlarını bir kenara bırakırsak Türkiye'deki ilk büyük inşaat firmaları 1980'lerde komşu ülkelerin büyük ölçekli inşaat talepleriyle birlikte oluşmuş; oluştuktan sonra bile Türkiye içinde kendilerinden beklenebilecek bir faaliyet yoğunluğu içinde olmamışlardır. Bu bize şunu gösterir: Demek ki kentin üretimi alanında büyük şirketlerin kâr beklentilerine cevap verecek bir hareketlilik yoktur. Ancak öte yandan da ülkenin nüfusu dramatik bir hızla artmakta ve artan nüfusun üçte biri Doğu Marmara Bölgesi olarak adlandırılan Sakarya-İstanbul-Bursa üçgenine yığılmaktadır. Demek ki en azından bu üçgenin içinde kentin üretimine ilişkin faaliyetlere büyük bir ihtiyaç bulunmaktadır. İşte dramatik ikilem burada başlıyor: İhtiyaç olduğuna kuşku yok. Ancak sermaye bu ihtiyaçların doğurduğu faaliyet kolları üzerinden birikmiyor. Demek ki bu işler yapılmıyor! Çünkü yapılıyor olsa önce bu ölçekteki kuruluşlar talip olacaklardı işlere. Ya da başka türlü yapılıyor. Kapitalist modernleşme tarihinin alışık olmadığı bir biçimde yürüyor işler.

İşlerin nasıl yürüdüğünden önce neden böyle olduğuna bakalım: Neden Türkiye tarihinde kentin üretimine en çok ihtiyaç olan bir zaman aralığında bu faaliyet kolları marjinalize oluyor? İhtiyaç neden kâra dönüştürülmüyor? İşte bunu Türkiye'nin içinden bakarak anlayamayız. Tıpkı Türkiye'nin neden hemen 2. Dünya Savaşı'ndan sonra kesintisiz bir büyüme ve genişleme mecrasına girdiğini de Türkiye'nin içinden bakarak anlayamayacağımız gibi. Çünkü bu dünya ölçeğindeki yeni birikim rejimiyle ilgilidir. Şunu vurgulamak önemli: Avrupa ve Amerika'nın merkez ülkeleri de dahil, dünya kapitalizmi tüketim toplumunu 1950'lerle birlikte kurmaya başlamıştır. Bir başka deyişle 100 yıllık geçmişi olan sanayi devrimi 1950'lere kadar bugün

anladığımız anlamdaki kitlesel tüketim devrimini gerçekleştirecek bir kapasiteye sahip olamamıştır. Süpermarketlerin, reklam sektörünün, alış-verişin, modanın, medyanın 1950'ler sonrası yaptığı ilk büyük atak, bugün içinde yaşamaya alıştığımız yaşam standartlarının başlangıcının da bu dönem olduğuna işaret eder. İşte Türkiye modernleşme rüzgârına tam da bu zaman diliminin başlangıcında yakalandı: Otomobilin, beyaz eşyanın, televizyonun, mutfak aletlerinin, sinemanın, gazetenin, modanın, Tetra-Pak tarafından kutulanıp market raflarına dizilmiş malların dünyaya çığ gibi yayıldığı dönemde. Türkiye dünyayla senkrona girmişti bir kere. Dünyada neden kâr ediliyorsa burada da ondan ediliyordu. Dünyada ne satılıyorsa burada da o satılıyordu. 1980'lerle birlikte gelen değişime de kolayca ayak uyduruldu: Finans, bilgi-işlem, telekomunikasyon, medya, seyahat sektörlerindeki patlamayı, hizmet sektörünün yeniden keşfini, sermayenin diğerlerinin yanı sıra bunlar üzerinden de birikmesini dünyayla eşzamanlı olarak yaşıyoruz.

1950'lerde ve 60'larda merkez ülkelerde kamu sübvansiyonları tarafından finanse edilen sosyal konut ve planlama hamlesi yeni birikim rejiminin desteği olarak işlev görüyor, hegemonik sektörlere servis veriyordu. Yeni sosyal konutlar taze malların kitlesel olarak tüketilmesini kolaylaştıracak istikrar ortamının güvencesi oldular. Türkiye'nin ikisini birden, aynı güçle yapacak imkanları yoktu. Kaynaklar ağırlıklı olarak televizyona, otomobile, radyo-teype, çamaşır makinesine, deterjana harcandı o dönem. Tıpkı şimdi de cep telefonuna, şifreli kanallara, seyahate, borsaya doğru yöneldiği gibi. Bu tabii ki karşılıklı bir ilişkiydi: Yatırımcılar üretim, tüketiciler de tüketim tercihlerini bu sektörlerin mallarından yana kullandı hep. Bilerek ve isteyerek.

Peki ya kent? Kentin üretimi ne oldu bu arada? Ertelenemeyecek acil ihtiyaç barınmadır her zaman. Barınamayan insan tüketemez de. Doğu Marmara'nın nüfusu 50 yıl içinde 15 kat artarak 1 milyonlardan 15 milyonlar seviyesine çıktı. Bu nereden bakılırsa bakılsın yılda ortalama 100 bin yeni konut ihtiyacı demektir. Daha en başından, tarihin tanık olduğu en geniş ve en sınıflarüstü katılımla bir anlaşmaya varıldı modernleşmenin bütün aktörleri arasında: Herkes sorununu kendi imkânları ve inisiyatifiyle çözecek, örgütlü sermaye malzeme satmanın, yönetim ve hukuk da işleyişi kolaylaştırmanın ötesinde bu işe karışmayacaktı. Eşi görülmedik bir enerjiyle betonarme apartman hamlesine girişildi. Herkes hemşehrileriyle, kalfalarla, arsa sahipleriyle, müteahhitlerle, "kooperatif" adı altında biraraya gelmiş müteahhit ve taşeron gruplarıyla, belediyelerle küçük ve seri anlaşmalara girişiyor, arsanın ve inşattın maliyetinden payına düşeni bir biçimde denkleştiriyor, ev sahibi oluyor, sonra ikincisine, üçüncüsüne, yazlığa yatırımın hesabını yapıyordu. Denklem o denli "sağlam" kurulmuştu ki, herkes birden kazançlı çıkıyor, İngiltere, Almanya gibi ülkelerin 60 yıllık disiplinli politikalarla ulaştığı %60'lar seviyesindeki konut sahipliği oranı otomatik olarak tutturuluyordu. Anlaşmanın önemli bir maddesi daha vardı: Kentleşmenin, betonarme inşaat dışındaki maliyeti kimse tarafından ödenmeyecek, kaynaklar iki kanala akmaya devam edecekti: Evlerin modern sanayinin ürettiği mallarla doldurulmasına ve bir sonraki betonarme apartmanın inşaatına.

Esneklik üzerine kurulu bu "büyük anlaşma"nın tahammül edemediği bir küme vardı: Uzun vadeli hesap, akıl ve norm. Çünkü buralardan gelen sesler "bedeli"

hatırlattılar hep; "yumuşak modernleşmenin" ödenmemiş bedelini. O nedenle bürokrasi, teknokrasi ve meslekler ancak formasyonlarını kapının dışında bırakmak şartıyla kabul edildiler "büyük anlaşmayı" ilmik ilmik ören küçük anlaşma ortamlarının içine. "İşi bilmek" okuldan ve kitaptan öğrenilenleri unutmak, yerine bu ilişkilerin kendine özgü dilini ve alışkanlıklarını benimsemek anlamına geliyordu. Dilin karışmasında ve anlaşılmaz hale gelmesinde medya patlaması kadar inşaat yapma konvansiyonlarının ve ortamlarının da payı olsa gerek.

Sıkışınca alıştığımız şu sonucu çıkarmayalım bütün bunlardan: "50 yıldır yanlış şeyler tüketiyoruz. Bizim aslında otomobile, buzdolabına, bilgisayara ve deterjana ihtiyacımız yoktu!" Bunun yerine bir yana otomobilimizi, buzdolabımızı, bilgisayarımızı ve deterjanımızı koyalım, öte yana da apartmanmızı ve şehrimizi. Ve kıyaslayalım. Sonra da neden birincilerin Amerika ya da Japonyada'kilere benzerken ötekilerin arasındaki mesafenin bu denli açık olduğunu bir kez olsun düşünelim.

Ve kızmayı sürdürelim. Ama her kızdığımız aktörün 50 yıl önce bedelini ödemeden modernleşmek üzere anlaştığımız ve anlaşmayı sürekli olarak yenilediğimiz aktörlerden sadece biri olduğunu da unutmadan.

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[1]Deprem sonrası ortama tepki olarak kaleme alınmış olan bu metin ilk kez Radikal gazetesinin Pazar eki olan *Radikal İki'*de 5 Eylül 1999'de yayınlanmış, daha sonra *Mimarlık* dergisinin Eylül 1999 (8/99) sayısında (s.26-27) ve *Cogito* dergisinin Güz 1999 tarihli "Deprem Özel Sayısı"nda (s.354-357) yayınlanmıştır.

[2]Bu noktada mal ve hizmet üreten işyerlerini, ofisleri, çarşıları, atölyeleri ve fabrikaları da işin içine katmış oluyoruz. Çünkü bu faaliyetlerin gerçekleştiği bina stoku kentin toplamı içinde küçük bir yer tutmasına rağmen, bu faaliyetleri gerçekleştirenler kentin varoluşundan kapladıkları yerle kıyaslanamayacak ölçüde yararlanmakta ve pay almaktadırlar.

[3]Bugün de işyerlerinin örneğin suya ve elektriğe ikametgahtan daha fazla para ödemeleri bu anlamdaki bir uygulamanın örneğidir.

[4]Üstelik de bu ülkeler dünyanın "merkezinde" oldukları için 19. yüzyılın koşulları içinde çevre ülkelerden büyük oranda artık transfer ediyorlar, dolayısıyla da kentleşmelerinin bedeli bir ölçüde ilişkide oldukları çevre ülkeler tarafından ödenmiş oluyordu.

Web Access: http://v3.arkitera.com/v1/diyalog/ihsanbilgin/modern.htm

APPENDIX – II.

FIELD INTERVIEW QUESTIONS

DÜZCE'DEKİ DERNEKLERİN DEPREM FAALİYETLERİ

Konulu tez çalışması

Sayın katılımcı,

Görüşmeyi kabul ettiğiniz için teşekkür ederim. Bu araştırma Orta Doğu Teknik Üniversitesi, Sosyoloji Bölümü öğrencisi Berat YOLDAŞ tarafından, Depremler ve Sivil Toplum Kuruluşları konulu doktora tezi için yapılmaktadır. Üyesi olduğunuz dernek ve deprem faaliyetleri hakkında yaklaşık 1 saat sürecek bir görüşme yapılacaktır. Yapılan doktora çalışması, depreme dirençli bir toplumda sivil toplum kuruluşlarının rolünü anlamayı, depremle ilgili faaliyetlere daha geniş katılım sağlamayı, ve bu konuda yaşanan zorluklara çözüm üretmeyi amaçlayan bir çalışmadır.

Çalışmada derneğiniz ve faaliyetleri hakkında genel bilgiler, deprem faaliyetlerini neden ve nasıl düzenlemeye başladığınız, ne kadar devam ettiğiniz gibi konularda deneyimlerinizden bahsedilecektir.

Bu çalışmaya katılmak ya da katılmamak tamamen sizin özgür iradenize kalmış bir karardır. Bu konuda aktaracağınız deneyimler, toplumumuzun afetlere daha dirençli olmasına katkı sağlayabilir.

Görüşme soruları

Derneğin adı:
Görüşülen kişinin dernekteki konumu ve görev süresi:
Yaş:
Cinsiyet:
Eğitim durumu:
Ne kadardır dernek üyesi olduğu:
Ne kadardır Düzce'de yaşadığı:

1- Genel olarak derneğinizden bahsedebilir misiniz? Derneğin kuruluş amaçları, rutin etkinlikleri, üyelik şartları, ne zaman kurulduğu gibi.

2- Dernek üyelerinin genel profilinden bahsedebilir misiniz? Üye sayısı vs.

3- Depremden ne kadar zaman sonra derneğiniz aktif hale geldi?

4- Depremle ilgili etkinlik düzenlemeye depremden ne kadar sonra başladınız? (17 Ağustos ve 12 Kasım)

5- Derneğiniz 12 Kasım 1999 Depremi ile ilgili olarak hangi faaliyetleri düzenlemiştir? Ayrıntılı olarak bahsetmeniz mümkün mü?

6- Depremle ilgili bu faaliyetlerin düzenlenmesine karar verirken yaşanan süreci biraz anlatır mısınız? Neden ve nasıl karar verdiniz?

7- Hedef kitleniz kimlerdi, deprem etkinlikleri kimlere yönelik olarak düzenlenmişti? (Üyeler, üye olmayanlar?)

8- 17 Ağustos ve 12 Kasım depremlerinde derneğinizin işbirliği yaptığı başka kurum/kuruluş oldu mu? Belediye, Kızılay, Afet işleri, diğer dernekler, vakıflar vb.

9- Depremle ilgili bu faaliyetler ne kadar süreyle ve kaç defa düzenlenmiştir?

10- Devam eden deprem faaliyeti var mı? Neden devam ediyor? Bitenler neden bitti?

11- Derneğinizin bir deprem durumunda uygulayacağı herhangi bir plan bulunmakta mıdır? Bu konuda görevli bir üye, iletişim şeması vb.

12- Derneğinizin depremle ilgili belirlemiş olduğu amaçları var mıdır? Eğitim, güçlendirme, deprem güvenliği vs.

13- Derneğinizin depremle ilgili etkinlik yapması ne kazandırdı? Gelecekte ne gibi şartlar sağlansa tekrar deprem etkinliği yapılabilir?

Görüşmeyi kabul ederek araştırmaya katıldığınız için teşekkürler.

APPENDIX – III.

CURRICULUM VITAE

Name, Surname:	Berat YOLDAŞ
Date of Birth:	November 7th, 1981
Place of Birth:	Adapazarı / Sakarya, Turkey
Gsm:	00 90 535 745 80 44
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Education:

2004	B.Sc. (Double Major) METU, Department of Sociology, ANKARA
2003	B.A. (Major) METU, Department of English Language Teaching, ANKARA
1999	Arifiye Anatolian Teacher Training High School (English section), SAKARYA

Work Experience:

Currently	Research assistant at METU, Department of Sociology (Since 2005)

Fields of Academic Interest

Socio-cultural evolution, sociology of disasters, environmental sociology and ecology, sociology of sports, sociology of science and technology

Languages:

Turkish	Native
English	Fluent
German, French, Spanish	Rudimentary

Hobbies and Interests:

Inline speed skating, snowboarding, nordic skiing, powerkiting, fitness, cycling, running, movies, pc games

APPENDIX – IV.

TÜRKÇE ÖZET

DÜZCE'DEKİ YEREL DERNEKLERİN
MERKEZİ AFET YÖNETİMİ PLANLARINA
ASİMETRİK İŞLEVSEL DENKLER OLARAK KATILIMI:
LUHMANN'CI BİR BAKIŞ AÇISI

Yoldaş, Berat
Ph.D., Sosyoloji bölümü
Tez Yöneticisi: Assoc. Prof. Dr. Helga Rittersberger Tılıç

Şubat 2014, 244 Sayfa

17 Ağustos 1999 Depremi'ni ve sonrasındaki süreci Adapazarı'nda şahsen yaşamış bir birey olarak, toplum - doğa ilişkilerini ve afetleri sosyolojik açıdan daha iyi anlamaya çalışarak bu araştırmaya başladım. Bu amaçla, kuramsal anlamda ilk önce Ulrich Beck'in Risk Toplumu (1992) ve Dünya Risk Toplumu (1999) adlı çalışmalarını Türkiye'deki deprem afetlerini göz önünde bulundurarak değerlendirdim. Beck'in, modern topluma kuramsal yaklaşımında doğal afetleri ve teknolojik riskleri daha farklı ele aldığını gördüm. Yaptığı vurgu daha çok nükleer kazalar, genetiği değiştirilmiş gıdalar, kimyasal kazaların yanı sıra çözülen geleneksel toplumsal bağların ve esnek istihdamın sonucu olarak ortaya çıkan kırılganlıklar ve riskler üzerineydi. Doğal afetler ise modern toplumu anlamada, yeni ortaya çıkan risklerle kıyaslandığında ikinci planda kalıyordu (1999, 50). Öncelikli olarak erken endüstrileşmiş ve gelişmiş ülkeler çerçevesinde şekillenen bu konuların Türkiye için de her geçen gün gittikçe önem kazandığı açıktır. Yine de Beck'in kuramsal kurgusunun, içinde şekillendiği toplumsal ve doğal çevrenin şartlarından

etkilenerek, pek sık ve yıkıcı deprem görmeyen Almanya ve Avrupa bağlamı nedeniyle doğal afetleri ikinci planda bıraktığını fark ettim.

Doğa-toplum ilişkisi konusunda Bruno Latour'u da kuramsal kurgu açısından incelemeye çalıştım. İnsan olmayan, hatta canlı olmayan "actant"ların da toplumsallığın oluşumunda yapıcı ve yıkıcı roller oynadıkları fikri en önemli vurgularından biri olarak öne çıkıyordu (Murphy, 2004). Bu anlamda bireyler, toplumsal yapılar ve kültürel değerler kadar, örneğin tektonik tabakalar ve fay hatları da toplumsal ilişkilerin kurulması ve çözülmesi üzerinde etki sahibi olarak görülebilir. Murphy (2004), toplumu ve toplumsal gerçekliği kuramsallaştırmada toplumsal kurmacılık/oluşturmacılık (social constructionism) ile eleştirel gerçekçilik (critical realism) yaklaşımlarını karşılaştırır ve bu iki yaklaşımın sentezlenmesi gerektiğini savunur. Toplumsal kurmacılık, insan bilincinden bağımsız bir dış dünya ve gerçekliğin var olamayacağına dair varsayımları kapsar; insan yorumlamasını ve toplumsal ilişkileri doğanın dinamiklerinden daha çok önemser (Murphy, 2004, 250). Diğer yandan gerçekçi yaklaşım, bağımsız bir dış dünya ve fiziksel gerçekliğin varlığını savunur; bu gerçekliğin bozulmaya uğramamış bilgisi sadece ve sadece pozitif bilim aracılığıyla keşfedilebilir (Murphy, 2004, 251). 1999 Marmara Depremleri'ni düşündüğümüzde görülüyor ki, afete yol açan şey fay hatları ve hareketlerinin kendilerinden çok, bunların toplumsal oluşumlar tarafından ne kadar dikkate alındığı ya da göz ardı edildiğidir. Yani depremler öncesinde de çoğunun varlığı, yeri, ve gücü bilinmekte olan fay hatlarına göre toplumsal kararların üretilmemesi, cansız "actant"lara karşı yine toplumsallığın ağır bastığını düşündürmektedir.

Niklas Luhmann'ın sosyo-kültürel evrimi kuramsallaştıran kurgusu, bu anlamda radikal bir toplumsal kurmacılık karakterine sahiptir. Bu çalışmada Luhmann'ın kuramsal kurgusunu Beck'ten daha kapsayıcı ve Latour'dan daha açıklayıcı bularak kullanmamı sağlayan özelliği şöyle özetlemek mümkündür; Luhmann'ın kuramı "özel bir içerik dayatmaksızın yapısal bir biçime sahiptir ve tüm toplumsal sistemlere uygulanabilecek kadar soyut açıklayıcı kavramlar sağlar. Toplumsal Sistemler Kuramı'nın yaptığı ayrımlar evrensel olabilir, çünkü evrensel bir içerik dayatmazlar" (Lee, 2000, 330). Bu ifadenin daha iyi anlaşılması için Luhmann'ın kuramını daha yakından tanımak faydalı olacaktır.

Luhmann'ın Toplumsal Sistemler Kuramı, toplumu öz üretimli (autopoietic) ve işleyişsel olarak kapalı (operationally closed) bir sistem olarak görür. Öz üretimlilik özelliği, toplumun kendi kendini oluşturan ögeleri yine kendine referansla, kendisi üreten bir sistem olduğunu anlatır. Luhmann'a göre bireyler toplumsal sistemin yapı taşını değil, çevresini oluştururlar. Lee'nin özetlediği şekliyle, "bireyler ayrı ayrı varlıklar olarak toplumsal açıdan anlamsızdır; toplumu bireylerin *içinde* değil *arasında* bulabiliriz" (Lee, 2000, 322). Bu ifadeden de tahmin edilebileceği gibi, Luhmann'a göre toplum sisteminin yapı taşı iletişimdir. Toplum, önceki iletişime referans vererek sonraki iletişimi sürekli yeniden üretmek yoluyla devamlılığını sağlar; kendinden referansla öz üretim (autopoiesis) süreci bu şekilde işler. Toplum sistem, çevresi ile bir bütün olarak ele alınmalıdır. Temel olarak sistemin yaptığı şey, çevresindeki karmaşıklığı indirgemektir. Buna göre bir sistemin çevresi, sistemin kendisinden daima daha karmaşık olacaktır. Sistemin, çevresindeki tüm ilişkileri, tüm karmaşıklığıyla kendi sınırları içerisinde bire bir temsil etmesi mümkün olmadığından sistem bu indirgeme sırasında seçim yapmak zorundadır; risk kavramı bu seçimlerden kaynaklanan bir kavramdır. Luhmann'ın anlatımıyla "karmaşıklık seçme zorunluluğu demektir, seçme zorunluluğu (ortada bir seçim varsa, o seçimi farklı şekilde yapmanın mümkün olduğu) *zorunsuzluk/ihtimal* (contingency) durumuna yol açar, bu da *risk* anlamına gelir" (Luhmann, 1995, 25). "Eğer bir seçim yapılabiliyorsa, o seçimi farklı yapmak her zaman mümkündür" düşüncesi, sosyo-kültürel evrim sürecini açıklamada önemli bir rol oynar. Tez danışmanı Parsons'un aksine, Luhmann toplum ve toplumsal düzen için herhangi bir normu ve yapıyı şart koşmaz. Evrim süreci önceden çizilmiş bir yolu, ya da gelecekte varılacak bir amacı takip etmediğinden, toplumsal olarak hiçbir şeyin şu andaki gibi olma zorunluluğu yoktur.

Sosyo-kültürel evrim süreci, karşılaştığı sorunlara çözümler üreterek ilerlemiştir. Bu süreçte benzer problemlere birden çok çözüm üretilmesi, *işlevsel denklik* kavramıyla ifade edilir. Daha net anlatabilmek için örnek olarak dilin ve konuşmanın henüz ortaya çıkmadığı dönemde iki mağara insanını kullanalım. Bu iki birey birbirinden ayrı iki bedene, algılara ve zihne sahip olduğundan birbirlerinin zihinlerine asla doğrudan erişemeyeceklerdir. Bu toplumun oluşmasının önündeki ilk engeldir. İkisi de kendi algıları, deneyimleri, ve o anki özellikleri üzerinden

olayları anlamlandırıyor olacaklardır. Bu şartlarda karşılaşan iki bireyin iletişimi başlatması, başarılı bir iletişim sürdürmesi, ve nerede, ne zaman, nasıl, ne yapılacağı konusunda anlaşmaya varması çok düşük bir olasılıktır. Bu engeli aşmak için, sesli ve görüntülü işaretlerin olası tüm karmaşık anlamlarını indirgeyen ve kombinasyonlarını sınırlayan dil, bir çözüm olarak ortaya çıkmıştır. Dil, aynı zamanda sosyo-kültürel evrimde *işlevsel denklik* kavramının yerini gösteren çok güzel bir örnektir. Herhangi bir problemi çözmenin birden fazla işlevsel yolu vardır. Zihinsel sistemle toplumsal sistemlerin bağlantı kurmasını sağlayan tek, en doğru, ya da ideal dil denebilecek bir dilden bahsetmek mümkün değildir. İnsanlık tarihi boyunca ortaya çıkmış olan tüm diller aynı soruna farklı çözümler olarak evrilmiştir. Toplumsallığın önündeki ikinci engel, iki mağara insanının, aralarındaki iletişimi o anda orada olmayan üçüncü bireylere aktarmasıyla ilgilidir. Hem ikili iletişimdeki sorunlar, hem aradan geçen zaman, hem de değişen koşullar bu iletişimin bozulmadan başarılı olarak aktarılmasını çok düşük bir ihtimal haline getirir. Bu sorun için evrilen çözüm, dile bağlı olarak ortaya çıkan yayım araçlarıdır. Yazı, matbaa, ve daha sonra gelişen diğer yayın araçları, bu soruna yönelik gelişmiş çözümlerdir. Toplumsallığın önündeki üçüncü engel, iletişim kurulup sürdürüldükten sonra elde edilecek davranışsal sonuçlar üzerinde uzlaşı sağlamanın zorluğudur. Bireyler, birbirlerini belirli bir oranda anlamaya başladıklarında, yapılacaklar hakkında fikir ayrılığına düşmeleri için daha çok fırsatları olacaktır. İletişimin başarısını sağlamak, yani iletişimle arzu edilen davranış arasında bağlantı kurmak için ortaya çıkan çözüm *sembolik olarak genellenebilir iletişim ortamı* olmuştur. Buna örnek olarak bilim için "doğruluk", ikili ilişkiler ve aile için "sevgi", ekonomi için "para", hukuk sistemi için "yargı", dini sistem için "inanç" gösterilebilir. Bahsedilen işlev sistemlerinin kodları ve indirgemeleri bu iletişim ortamına göre oluşur.

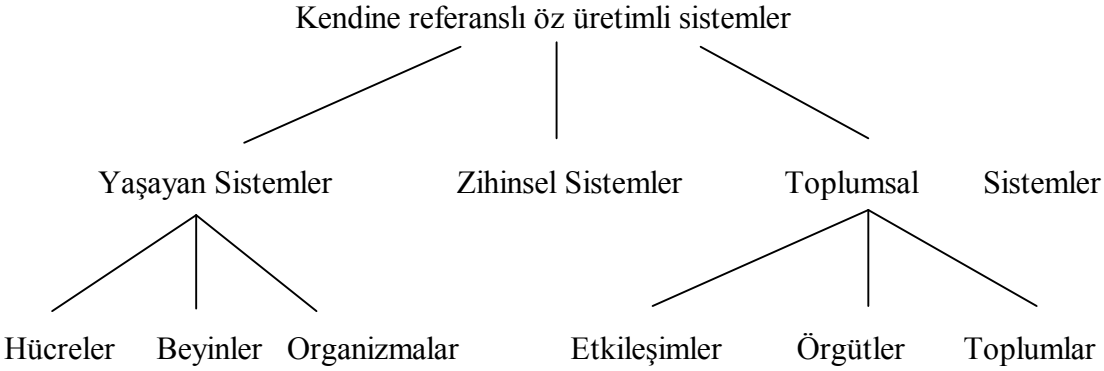
Toplum - doğa ilişkisi konusunda toplumun vurdumduymaz eğilimleri işleyişsel kapalılık (operational closure) özelliğine bağlanır. Bu özelliğe göre, öz üretimli sistemler çevreleriyle ilişki kurarken, çevredeki değişikliklerin sistemin içine doğrudan yansıması mümkün değildir. Sistemin çevredeki değişikliklere ne tepki vereceği ancak kendi süreçleri tarafından belirlenebilir. Diğer bir deyişle işleyişsel olarak kapalı sistemler çevrelerine karşı büyük oranda yalıtılmış durumda ve

duyarsızdırlar. Bu özelliği açıklamak için Luhmann'ın kullandığı örnek beyindir (Luhmann, 1992). Beyin, bir organ olarak ışığı, sesi, kokuyu, dokunma hissini, tat hissini doğrudan alamaz; çevreyle ilişkileri sadece belli kanallar üzerinden sürdürülmektedir. Her kanal dış çevredeki değişimleri büyük oranda sınırlayarak beyne iletebilir. Örneğin göz ışığın tüm dalga boylarını göremez, bunun yanı sıra gözler sadece görme işlevini yerine getirir; yani duyma, dokunma, tat alma, ya da koku, gözlerin ışığa indirgenmiş işleyişine ilgisiz durumdadır. Modern toplum da, hızla artan karmaşıklığı indirgemek için işlevsel açıdan gittikçe özelleşmiş alt sistemlere ayrıldığından, çevresindeki değişimleri kısmi olarak algılayabilir haldedir. Örneğin aynı doğa olayı (deprem) siyasi işlev sistemi için farklı bir anlam ifade ederken (eski kentleşme politikalarının sorgulanması, yeni kentleşme politikaları yapma gereği), ekonomi sistemi için farklı bir anlam ifade eder (kar-zarar hesapları, yeni sigorta sistemleri, yeni kredi programları), hukuk sistemi için farklı (hak sahipliği kanunu, yapı denetimi yönetmeliği, inşaat yönetmelikleri), eğitim sistemi için farklı (afet eğitim programları), dini işlev sistemi için farklı (kontrol edilemeyen bir olay ve kayıplar için açıklamalar, dini ritüellerin afet ortamında sürdürülmesi, dini söylemde olayın bir yer bulması ör: "deprem şehitleri"), bilim sistemi için daha da farklı (doğa bilimlerinde fay yapıları ve hareketleri, mühendislik bilimlerinde depreme dayanıklı yapı teknikleri, sosyal bilimlerde psikolojik ve toplumsal sorunların çözümleri)... Bireyler, farklı istekleri, eğilimleri, amaçları, sorunları, algıları dolayısıyla toplum için belirsizliği yüksek bir çevre teşkil eder. Özelleşmiş işlevsel kodlar, bu bireysel belirsizliklerin her işlev için ayrı ayrı basite indirgenmesini ve iletişim sonucu ortak davranışların elde edilmesini sağlar. Bu kurgudan anlaşılacağı üzere, burada çevre kavramı iki boyutu ifade etmektedir. Birincisi, bireyleri de kapsayan doğal fiziksel çevredir. İkincisi, tüm bu alt sistemler işlevlerine göre birbirinden ayrılmış olduğundan, aynı zamanda birbirleri için oluşturdukları toplumsal çevredir. Birbirinden farklı olarak özelleşmiş bu alt sistemler birbirlerinin indirgenmiş algılarına, anlamlarına, ve ürettikleri sonuçlara çok sınırlı ölçüde uyumlu tepki gösterebilir. Modern toplumun kendisiyle çelişen işleyişinin temelinde bu çoklu duyarsızlık, ya da kör noktalar yatmaktadır.

Luhmann temelde 3 tür toplumsal sistem belirler (**Şekil 1**, sayfa 227). Birincisi, sınırları iletişime katılan tarafların fiziksel olarak aynı anda aynı yerde

bulunmasıyla belirlenen *etkileşim* sistemi, ikincisi iletişimi kararlar üretme şeklinde gerçekleştiren ve sınırlarını üyelik şartları ile çizen *örgüt* sistemi, üçüncüsü de tüm anlamlı iletişimi kapsayan *toplum* sistemidir. Toplum içinde yer alan tüm sistemler kendilerini ürettikçe toplumu da yeniden üretmiş olurlar.

Şekil 1. Kendine referanslı öz üretimli sistemler



(Luhmann, 1986'ya referansla; Seidl & Becker, 2005, 65)

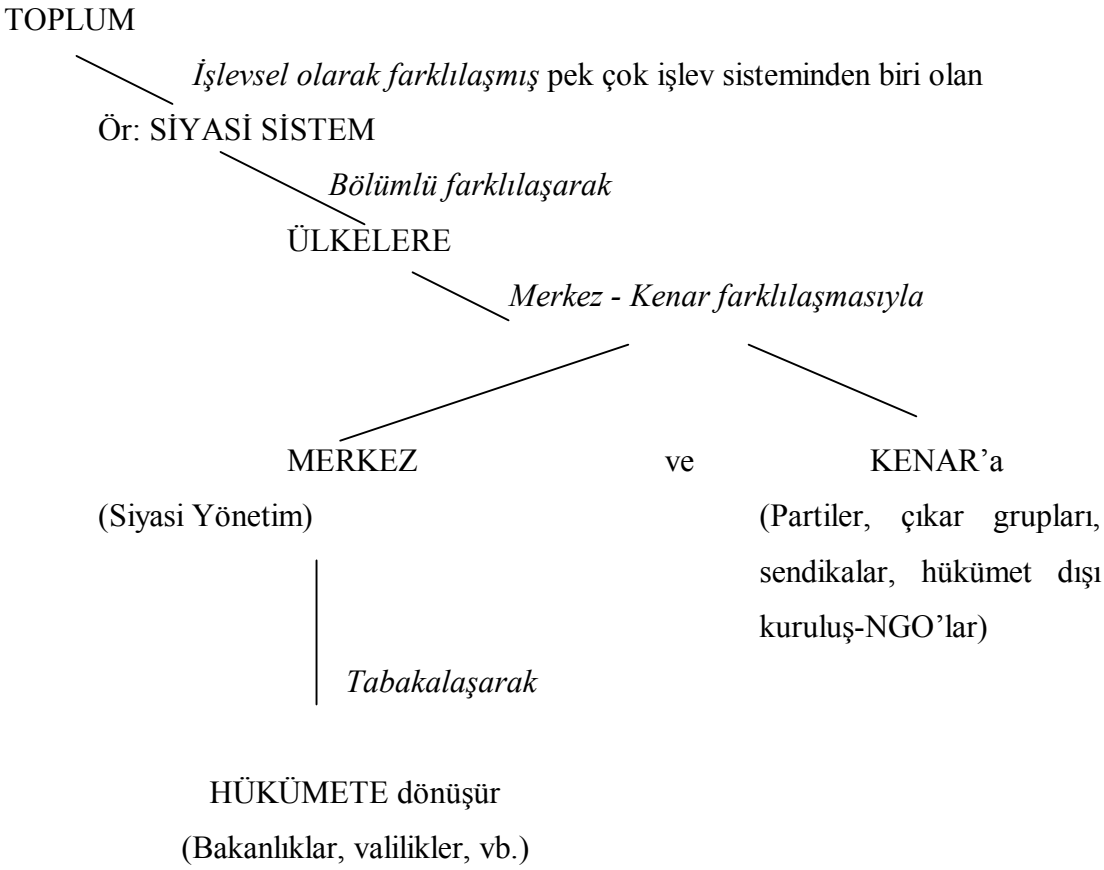
Modern toplumun en tanımlayıcı karakteristiği *işlevsel farklılaşma*'dan (functional differentiation) önce Luhmann *bölümlü farklılaşma* (segmentary differentiation), *merkez-kenar farklılaşma* (center-periphery differentiation), ve *tabakalı farklılaşma* (stratified differentiation) türlerini günümüzde baskın olan işlevsel farklılaşmanın yanında artık ikincil pozisyonda var olan daha eski farklılaşma türleri olarak sayar. Bölümlü farklılaşma, daha çok küçük avcı-toplayıcı grupların kendi başına tüm işlevlerini sürdürebilen farklılaşmasını ifade eder. Bu farklılaşma türünde bireyler fiziksel olarak farklı gruplar halinde yaşarlar, bir birey aynı anda başka bir grubun üyesi değildir. Merkez - kenar farklılaşma, zaman içinde bu grupların bir araya gelerek oluşturduğu köy ve kasabalar arasındaki merkez ve taşra farklılaşmasını anlatır. Yine fiziksel olarak merkezde ya da taşrada olma durumuna göre bir farklılaşma vardır. Tabakalı farklılaşma, artan nüfus ve merkez - taşra ilişkilerinin birbirine hiyerarşik olarak üstünlüğü bulunan sınıflara ve gruplara dönüşmesini anlatır. Aristokratik, ya da kast benzeri yapılanmalar yine bireyleri fiziksel olarak dağıtır; aynı anda iki sınıfa ya da kasta ait olmak mümkün değildir.

Modern toplum gibi iletişim olanaklarının küresel anlamda tam bir patlama yaptığı, toplumsal anlamda dünya çapında kurulan ve kurulabilecek bağlantıların çevredeki karmaşıklığı kat kat arttırdığı bir ortamda, işlevsel farklılaşma toplumun kendi kendine adapte olmasındaki evrimsel aşamadır. İşlevsel farklılaşmada bireyler artık fiziksel olarak birbirinden ayrılarak gruplara dağıtılmaz, artık bireyler kurdukları iletişimin temasına göre farklı karakterlere ayrılmıştır. Başka bir deyişle, artık bireyler değil iletişim tematik olarak dağıtılmaktadır. Bunun sonucu olarak aynı birey hem ekonomik, hem siyasal, hem dini, hem hukuki, hem de bilimsel işlev sistemlerine dahil olacaktır. Artık cemaat ya da "sivil toplum" gibi farklılaşmamış, tüm iletişim temalarını bir arada yürüten, bireylerin tüm bireysel yönleriyle bir bütün olarak dahil olduğu bölümlenmiş (segmentary) yapılar ikinci planda kalmıştır. Elbette bu farklılaşma türlerinin tamamen ortadan kaybolması beklenemez, günümüzdeki toplumsal bağlamda hala bunların bir kombinasyonu işlemektedir; örnek olarak günümüz siyasi işlev sistemi ele alınabilir (**Şekil 2**, sayfa 229).

Lee'nin de belirttiği gibi toplumsal sistemin evrimi, bir çevresine uyum öyküsü değildir; zaman geçtikçe toplum kendi kendisine, kendi içsel yapılarına adapte olarak evrilir (Lee, 2000, 327).

Bu çalışmada depremler karşısında toplumsal sistemlerin, özellikle örgütlerin, işleyişsel kapalılık özelliği üzerinde durdum. Tüm toplumsal sistemler gibi örgütler de kendi örgütsel sınırları dışındaki çevrenin karmaşıklığını indirgerler, ve kendi ufuklarını örgütsel iletişimle sınırlarken kendi kör noktalarını üretirler. 17 Ağustos ve 12 Kasım 1999 Marmara Depremleri'nden sonra Türkiye'de afetlere müdahale, afet yönetimi ve afet - acil durum planlaması konularında pek çok tartışmalar ve değişimler yaşandığı bilinmektedir. Bu değişimlerden biri de 2009 yılına kadar İçişleri Bakanlığı'na bağlı olarak görev yapan Afet İşleri Genel Müdürlüğü ve Sivil Savunma Genel Müdürlüğü'nün 2009'da doğrudan Başbakanlığa Bağlı Başbakanlık Afet ve Acil Durum Yönetimi Başkanlığı'na (AFAD) dönüştürülmesidir. Günümüzde Türkiye'deki afet - acil durum planlaması ve koordinasyonu görevi resmi bir örgüt olan AFAD tarafından sürdürülmekte ve hem stratejik hem de taktik planlar AFAD tarafından hazırlanmaktadır.

Şekil 2. Luhmann'ın Toplumsal Sistemler Kuramı'nı örnekleyen Siyasi İşlev Sistemi için dünya şeması (Seidl & Becker'in açıklamalarına göre; 2005, 184).



Ben tezimde, modern toplumda baskın konumdaki işlevsel farklılaşma ile ikincil konumdaki merkez-kenar farklılaşmasının birbiriyle etkileşimini ve bunun afet yönetimi konusundaki farklı toplumsal çözümlere (işlevsel denkler) etkilerini inceledim. Bu anlamda araştırmanın temel sorunsalı "toplum afet konusunda kendi kendine adapte olurken üretmiş olduğu farklı çözümler arasında nasıl bir ilişki kuruluyor" şeklinde özetlenebilir. Luhmann'ın *işlevsel denklik* kavramını, siyasal işlev sisteminin uzantısı olarak şekillenen bir örgüt olarak AFAD ile Düzce'de kendini örgütleyen yapılar olarak yerel derneklerin afet etkinlikleri arasındaki ilişkileri incelemek için kullandım. Aynı soruna yönelik ortaya çıkan biri merkezi diğeri yerel bu iki çözüm arasındaki ilişkinin asimetrik bir karakteri olduğunu gözlemledim, ve Luhmann'cı terminolojide bu durumu ifade etmek için *asitmetrik işlevsel denklik* kavramını önerdim.

AFAD (T.C. Başbakanlık Afet ve Acil Durum Yönetimi Başkanlığı) bir örgüt olarak ileriye yönelik/önetkin afet yönetimi planlarının ve politikalarının stratejik önemdeki bir parçasıdır ki, bu plan ve politikalar siyasal işlev sisteminin deprem sorununa verdiği işlevsel tepkilerdir (Türkiye Afet Müdahale Planı, TAMP). Luhmann'ın "işlevsel denklik" kavramında yola çıkarak yerel derneklere ve afet yönetimindeki rollerine Luhmann'cı bir bakış açısıyla yaklaşmayı denedim. Düzce'deki (Türkiye) yerel dernekleri amaçlı kartopu örneklem yoluyla 17 Ağustos ve 12 Kasım 1999 depremleri sonrasındaki örgütsel etkinlikleri açısından inceledim. İncelediğim dernekler, normalde deprem ya da afet konusunda uzmanlaşmamış olan, ancak 1999 depremlerinden sonra rutin toplumsal işleyişi yeniden çalışır hale getirmek amacıyla uzmanlaşmış afet yönetimi örgütlerinden bağımsız olarak depremle ilgili etkinlik düzenlemiş, ancak günümüzde AFAD tarafından afet planlamasında örgütsel paydaş olarak çoğunlukla tanınmayan yerel dernekler idi. Çalışmamda, afet konusunda uzmanlaşmadığı halde kendi inisiyatifini kullanarak deprem etkinliği düzenleyen yerel dernekler üzerine yoğunlaşmış olmamın üç önemli nedeni bulunmaktadır. Birincisi 2011 yılında katılmış olduğum bir AFAD semineri sırasında, yoğun saha deneyimine sahip psikososyal destek uzmanlarının yerel halkın kendine yeterli olmasına yaptığı vurgudur. Bir afet sonrası dış kaynaklardan o bölgeye gelecek destek, hem kısıtlı süre için mevcut olacaktır, hem zamanlaması ihtiyaca tam olarak uygun olmayabilir, hem de içerik olarak ihtiyacı tam karşılamayabilir. Ayrıca, bir sonraki afet durumunda bölgede yaşayan nüfus yine aynı sorunla karşı karşıya kalacaktır. Bu nedenle yerel nüfusun kendi kendine yetebilmesi, kendi kendine neler yapabileceğini öğrenmesi, ve etkinliklere aktif şekilde katılımı çok önemlidir. Etkinliklere aktif katılım aynı zamanda bie rehabilitasyon aracıdır. İkinci neden, afet konusunda uzmanlaşmamış tip III yerel derneklerin, nüfusun farklı işlev sistemlerinde devam etmekte olan gündelik iletişim süreçlerine katılımına sağladığı destektir. AFAD planları tek başına gündelik hayatın tümüyle normale dönüşünü planlayamaz. Diğer bir deyişle gündelik hayat, stratejik afet planlaması açısından daha az önemli ya da daha az ilgili olarak görülen değişik iletişim mecralarından oluşmaktadır. Sadece afet iletişiminden oluşmayan gündelik hayatta, iletişim akışı farklı işlev sistemlerine yönelik, çok farklı ve çeşitli örgütsel sınırları takip eden bir akışa sahiptir ki, afet planlaması bir sistem olarak bu

karmaşıklığı büyük ölçüde indirgemek zorunda kalır. Görünüşte daha önemsiz olan gündelik iletişim, bir sonraki afet ortamını hazırlamaya çok büyük katkıda bulunmaktadır. Bu nedenle çalışmamda AFAD planlarını afet yönetim sistemi, uzmanlaşmamış tip III yerel dernekleri de bu planın çevresi olarak ele alıyorum. Üçüncü neden, afetlere dirençli olma sürecinde sistemlerin, yönlendirme olmadan bile kendi kendini örgütleme kapasitesi önemli bir faktör olarak gösterilir (Folke, 2006; Parry et al., 2007; Setiadi & Chang Seng, 2012, 8; Birkmann et al. 2012, 2). Bu nedenle herhangi bir genel merkezden yönetilmeyen, yerel inisiyatifle varlığını sürdüren ve bu şekilde depremle ilgili etkinlik düzenlemiş dernekler üzerine odaklanmayı tercih ettim.

Bu inceleme sırasında, Delaware Üniversitesi'nde bulunan Afet Araştırma Merkezi'nden (DRC) Russell R. Dynes'ın oluşturmuş olduğu DRC tipolojisini kullandım. Bu tipoloji, afetlere verilen örgütsel tepkileri şu şekilde kategorileştiriyor:

- *Tip I: Yerleşik* – Olay gerçekleşmeden önce de var olan, kendilerinden beklenen etkinlikleri yerine getiren örgütler (ör: hastaneler, kolluk kuvvetleri ve itfaiye, altyapı ve fen işleri daireleri, kitle iletişim örgütleri, askeri birimler, vb.)
- *Tip II: Genişleyen* – Yaptıkları etkinliklerin çoğu kendilerinden beklenen etkinliklerdir, az sayıda uzman personelden oluşan çekirdek yapıları, gönüllülerden oluşan çok daha geniş bir yapıya dönüşür (ör: yerel halk afet birimleri, Kızılay şubesi, vb.)
- *Tip III: Yayılan* – Olay gerçekleşmeden önce de var olan, ancak afet sırasındaki etkinlikleri önceden belirlenmemiş örgütlerdir (ör: diğer devlet birimleri, küçük işletmeler, büyük firmalar, sosyal kulüpler, kamu hizmeti örgütleri, dini örgütler, vb.)
- *Tip IV: Yeni beliren* – Hem varlıkları hem de etkinlikleri doğaçlama olan, olaya özel örgütlerdir.

  (Dynes, 1970, 141-149)

  (Webb, 1999, 3)

  (Kreps & Bosworth, 2007, 299)

Bu tipolojiden de anlaşılacağı üzere, bu çalışmada Düzce'de AFAD planları ve diğer uzman afet örgütleri ile ilişkilerini incelediğim dernekler özellikle *tip III - yayılan* örgütlerdir. Bu örgüt tipi üzerinde özellikle durmamın birden fazla nedenleri var. Birincisi, bu yerel dernekler herhangi bir plan, dışarıdan gelen bir komut ya da yönlendirme ile değil, kendi inisiyatifleri ile deprem konusunda etkinlikler düzenlemişlerdir. Luhmann, öz üretimli karmaşık bir sistem olarak toplumun evrim sürecinde yönlendirilmesinin mümkün olmadığını, Habermas'çı anlamda bir "ilerleme" ve "özgürleşme" nin ya da "özgürleştirici" bir toplumsal merkezin var olmadığını iddia eder. Bu anlamda, merkezi ve uzmanlaşmış afet yönetimi örgütlerine karşılık kendini örgütleyen uzmanlaşmamış yerel derneklerin afet etkinliklerini araştırmak, toplumu yönlendirme çabalarına karşılık toplumun kendi kendini yönlendirmesi sürecine ışık tutacaktır. İşlevsel olarak denk olan bu çabaların arasında, toplumdaki değişik türden farklılaşma süreçleri (işlevsel farklılaşma, merkez - kenar farklılaşması, tabakalaşmış farklılaşma) dolayısıyla asimetrik bir ilişki ve karşılıklı körlük meydana gelir. Diğer bir deyişle, siyasal işlev sisteminin toplumu gelecekteki afetler için planlar yaparak hazırlamaya ve yönlendirmeye çalışması sürecinde, merkezi konumdaki örgütler, yerel dernekler gibi kenar konumdaki yapıları sistemik nedenlerle gözden kaçırır. Sonuç olarak, merkezi planlar, yönetmeye çalıştığı sürecin bir kısmını ironik şekilde görmezden gelmiş olur.

Bu çalışmada özellikle ve ısrarla "dernek" tanımını kullandım. Luhmann'ın cemaat benzeri yapılanmaların yanı sıra sivil toplum kavramını da modern toplum için geçerliliğini yitirmiş, fazla genel bir şemsiye kavram olarak görerek kullanmadığını daha önce belirtmiştim. Sivil toplum örgütü / kuruluşu (STÖ / STK) (civil society organization - CSO), gayrı-resmi örgüt/kuruluş (non-governmental organization - NGO), ya da cemaat / camia tabanlı örgüt / kuruluş (community-based organization - CBO) gibi kategoriler, Toplumsal Sistemler Kuramı'nın işlevsel olarak farklılaşmış toplumsal bağlamı için fazla genel kalan kavramlardır. Bu çalışmadaki yerel dernekler için gayrı-resmi kuruluşlar ya da resmi olmayan kuruluşlar (non-governmental organization - NGO) ifadesi, yukarıda saydığım ifadeler arasındaki en yakın ifade olarak görünmektedir; ancak hala "dernek" gibi çok daha özgül ve belirgin bir örgütsel tanımlamayı karşılamaktan uzaktır. Bu

belirsizlik Akşit, Tabakoğlu & Serdar (2002, 38) tarafından da kabul edilmiş, ve Ahrne'nin sivil toplum kavramını tartışırken örgütsel yapının önemini vurgulayan "sivil toplumun kalitesinin onun örgütsel biçimlerinin kalitesini aşamayacağı" alıntısına yer verilmiştir (Ahrne, 1998, 93). Bu anlamda, sivil toplum örgütü olarak genel bir kategoriye sokulan çok farklı toplumsal yapıların devletle, ekonomiyle, otoriteyle, örgütsel hiyerarşiyle olan ilişkileri bazen onların hiç de sivil olmayan özellikler göstermesine yol açabilmektedir.

Metodoloji ve saha araştırması

1999 Depremleri'ni Sakarya-Adapazarı'nda yaşamış olduğumdan saha çalışmasını Adapazarı'nda yapmayı planlamıştım. Ancak üç nedenle alternatif bir saha olarak Düzce'yi tercih ettim. Birinci neden, Adapazarı'ndaki yerel dernekler ve iletişim bilgilerini elde etmede karşılaşmış olduğum zorluktu. Sakarya Valiliği Dernekler Masası'ndan Sakarya'daki derneklerin isim listesini sağlayabildim ancak bu dernekleri iletişim bilgilerine erişim sağlanmadığınan araştırmayı ilerletmem mümkün olmadı. İkinci neden, Sakarya'da çok yüksek olan yerel dernek sayısının lojistik olarak çok daha büyük bir yük getiriyor olmasıydı. Sakarya'da toplam 1400'den fazla dernek bulunurken, Düzce'de bu sayının 770 civarında olması lojistik açıdan tercih nedeni oldu. Üçüncü neden ise, Adapazarı'ndaki Depremzedeler Derneği depremden birkaç yıl sonra kapanmış olmasına rağmen Düzce'de halen aktif bir Depremzedeler Derneği bulunmasıydı, 2010 yılında Düzce Depremzedeler Derneği'ni ziyaret ederek Düzce üzerine odaklanmaya başladım. Her ne kadar araştırmam tip III yayılan örgütler üzerine odaklansa da, Düzce Depremzedeler Derneği gibi tip IV yeni beliren örgütlerden ve daha yerleşik olan uzmanlaşmış tip I ve tip II örgütlerden de bilgi toplayarak bu örgütlerin afet etkinlikleri konusunda birbirleriyle ne kadar bağlantı kurduklarını anlamak, örgütsel ufuklarının neye göre farklılaştığını görmek istedim.

Düzce Valiliği Dernekler Masası'ndan 17 Ağustos ve 12 Kasım 1999 depremlerinde en çok yıkım ve zarar gören Düzce-Merkez ilçesinde bulunan derneklerin isim listesini ve iletişim bilgilerini sağladım. Düzce Merkez ilçedeki 423 adet dernekten 220 tanesini Ekim 2011 - Mart 2012 arasında telefonla arayarak bir

ön tarama gerçekleştirdim. Bu taramada sorduğum tek soru "derneğiniz şimdiye kadar depremle ilgili herhangi bir etkinlik düzenledi mi" sorusuydu. 220 aramanın 78 tanesi yanıt verdi, ve bu 78 yanıtın 15 tanesi deprem etkinliği yapıldığı yönünde oldu. Bu 15 derneği **Tablo 9**'da görmek mümkündür (sayfa 130).

Telefon taramasındaki düşün cevap oranı, Türkiye'de "tabela derneği" olarak da adlandırılan, sadece kağıt üzerinde varlık gösteren derneklerin oranının da bir hayli yüksek olduğunu göstermektedir. İletişim bilgilerini güncellemeyen, numarası değişen, numarası iptal edilen, ya da tamamen kapanan dernekler, sayıyı olduğundan daha yüksek göstermektedir. Bu nedenle, telefon taraması devam ederken bir yandan da Düzce şehir merkezinde ofisi bulunan derneklerle yüz yüze görüşmeler yapabilmek için saha ziyaretleri yapmaya başladım. Kasım 2011'den itibaren başladığım saha ziyaretlerinde Vali yardımcıları ve AFAD Düzce ofisi görevlileri ile görüşerek afet yönetimine merkezi anlamdaki yaklaşımı ve planlama etkinliklerinin içeriğini gözlemledim.

Saha ziyaretlerim sırasında yarı-yapılandırılmış mülakat soruları kullanarak, görüştüğüm yerel derneklerin ve diğer örgütlerin depremler konusundaki örgütsel geçmişini ve etkinliklerini ortaya çıkarmayı amaçladım (**Appendix II** - Görüşme Soruları, sayfa 219). Görüşmecilerin onay verdiği durumlarda ses kaydı yaptım, onay verilmeyen durumlarda görüşme sırasında verilen yanıtları notlar alarak kaydettim. Örgütsel etkinlik ve örgütsel afet tarihi açısından ideal araştırma yöntemi derneklerin karar defterleri, diğer belge arşivleri gibi yazılı kaynakların da incelemesini gerektirmesine rağmen uygulamada bu mümkün olmadı. Bunun birinci neden Türkiye'deki özellikle yerel derneklerin çok düzenli şekilde karar defteri ve benzeri kayıtları tutmaması. İkinci nedeni deprem gibi bir afetin düzenli kayıt tutmayı daha da zor hale getirmesi. Üçüncü nedeni ise yazılı belge, arşiv ve kayıtların çeşitli hassasiyetler nedeniyle (siyasi fişlenme tartışmaları, denetime tabi olma algısı, vb.) araştırmacılara açılmasında isteksizlik olması. Bu nedenlerle dernek ve diğer kuruluş temsilcileriyle mülakatlar yaparak aynı bilgileri derlemeye çalıştım.

Telefon taraması sırasında olumlu yanıt veren derneklerin yanı sıra saha ziyaretleri sırasında iletişime geçtiğim diğer dernek, ve kuruluş üyeleri ve temsilcileriyle de mülakatlar yaptım. Bu mülakatları, Düzce için yerel bir afet tarihi ve yaşam öyküsü oluşturabilmek için kullandım. Bu tarihin günümüzde merkezi,

afet konusunda uzman olan örgütler ile yerel, afet konusunda uzman olmayan örgütlerin etkinliklerine ve ilişkilerine ne kadar yansıdığını görmeye çalıştım. Bu amaçla toplam 27 derinlemesine yarı-yapılandırılmış mülakat gerçekleştirdim. Bu mülakatların tam listesi **Tablo 10**'da görülebilir (sayfa 132).

Bulgular ve tartışma

Yaptığım mülakatlar sırasında en çok öne çıkan olgulardan birisi, Luhmann'ın öngördüğü gibi artık cemaat benzeri ilişkilerin işlevsel olarak bölünmüş iletişim süreçlerine yerine bırakmasıydı. Aynı şehirde, çok yakın mekanlarda depremle ilgili etkinlikler düzenlemiş olmalarına rağmen bir cami derneği, bir spor derneği, ya da mesleksel bir dernek birbirlerinin depremle ilgili etkinliklerinden tamamen habersiz şekilde hareket edebiliyorlar. Dahası, bu derneklere depremle ilgili etkinliklerinde işbirliği yaptıkları diğer örgütler sorulduğunda öncelikli olarak uzmanlaşmış afet yönetimi örgütleri yerine kendi faaliyet alanlarındaki farklı örgütlerden bahsediyorlardı. Örneğin bir spor derneği depremle ilgili yaptığı etkinlikte öncelikli partnerinin Milli Olimpiyat Komitesi olduğunu, bir başka sporla ilgili dernek ise destekledikleri futbol kulübü ve Gençlik ve Spor İl Müdürlüğü ile öncelikli olarak iş birliği yaptıklarını ifade ediyordu. Sivil Savunma, Kızılay, ya da AFAD gibi daha yerleşik, merkezi ve uzmanlaşmış örgütlerle iş birliği sorulduğunda bunun genelde ikinci planda ya da sınırlı olduğunu gözlemledim.

Cemaat benzeri ilişkilerin en yoğun beklenebileceği cami derneklerinde de, örgüt bazındaki sistemik sınırların artık daha baskın ve birincil konumda etki sahibi olduğunu gözlemledim. Örneğin cami dernekleri birbirlerine cemaat olarak doğrudan yardım toplayarak katkıda bulunmak yerine Müftülük ve Diyanet Vakfı'nın yönetimi ve koordinasyonuyla seyrek olarak yardımda bulunuyorlardı. Her cami derneği öncelikli olarak, kendi örgütsel sınırları içerisindeki yeniden üretimiyle ilgileniyordu. İlginç noktalardan biri de ikincil konumdaki merkez - kenar farklılaşmasının bir yansıması olarak, bazı cami derneklerinin resmi örgüt ve kurumlarla yaşadığı anlaşmazlıklardı. Bir sistem olarak her örgüt öncelikli olarak kendi yeniden üretimini sağlayıp sistemik sınırlarını sürdürmeyi istediği, ve çevresiyle sadece sınırlı bir iletişim kurabildiği için, ortaya çıkan kör noktalar zaman

zaman afet sonrası normale dönme çabalarında toplumun kendi kendisine engeller çıkarmasına da neden olabiliyordu. Örneğin saha ziyaretleri ve görüşmeler sırasında özellikle tarihi bina özelliği taşıyan ve depremde yıkılan cami binasının yeniden inşası sırasında yerel cami derneği binanın modern bir plana göre sağlam ve hızlı şekilde yeniden inşa edilmesine çaba harcarken, Vakıflar Genel Müdürlüğü aynı binanın yıkıntıdaki eski taşlar kullanılarak, aslına uygun şekilde inşa edilmesi için çaba harcayabiliyordu. Sonuçta doğan anlaşmazlık hukuk sistemine taşınarak deprem sonrası yeniden yapılanma sürecinde toplumun kendi kendine engeller de yaratabildiğini gösteren bir örnek oluşturuyordu.

Yaptığım araştırmada, AFAD'ın afet müdahale planı çerçevesinde Düzce'de 2013 Kasım itibariyle sadece 3 adet dernekle protokol imzalamış olduğunu gördüm. Bunlar, Kızılay, Düzce Telsiz ve Radyo Amatörleri Derneği (DüzRad), ve Düzce Arama - Kurtarma Derneği (Dake) idi. AFAD'ın yapmış olduğu bu protokoller, her örgüt gibi öncelikli olarak kendisinin ve kendi planlarının yeniden üretimini sağlamayı amaçladığı şeklinde yorumlanabilir. Kızılay tip II genişleyen, DüzRad tip III yayılan, ve Dake tip IV yeni beliren örgütlerdir. Bunların arasında Kızılay ve Dake afet konusunda uzmanlaşmış, ancak DüzRad normalde afet dışı amaçlarla kurulmuş olan bir dernektir. Normalde, afet konusunda uzmanlaşmamış yerel derneklerin, uzmanlaşmış afetle mücadele örgütlerine göre daha az öneme sahip olduğu gibi bir izlenim olmasına rağmen, DüzRad gibi tip III yayılan örgütler bu izlenimin tersine işaret etmektedir. DüzRad Düzce'nin 1830 metre yükseklikteki Kardüz Yaylası'nda, tamamen güneş ve rüzgar enerjisiyle çalışan, elektrik şebekesinden bağımsız, 16 ili kapsayan bir yüksek frekanslı (VHF) bir telsiz rölesi kurmuştur. Tamamen amatör kaynaklar ve girişimle yapılan bu telsiz rölesi, olası bir depremde zarar görerek işlerliğini kaybedebilecek iletişim altyapısına alternatif oluşturma potansiyeli sayesinde AFAD'ın ilgi alanındadır. İlginç şekilde, görüştüğüm DüzRad temsilcisi 21 yıldır bedensel engelli olmasına ve aynı zamanda Düzce Bedensel Engelliler Derneği üyesi olmasına rağmen, AFAD'ın engelli vatandaşlar için yaptığı planlar ve hazırlıklar konusunda bilgi sahibi değildir. Burada yine görebileceğimiz gibi, sistemik sınırlar cemaat benzeri kişisel ilişkiler üzerinde önceliğe sahiptir. Aynı kişi iki farklı derneğin üyesi olmasına rağmen, AFAD ile

kurulan iletişimde onun sadece amatör telsizci yanı afetle ilgili görülerek engelli yanı göz ardı edilmektedir.

Kızılay Derneği Düzce şubesi ile yaptığım görüşmede, Kızılay bir tip II genişleyen örgüt türü olmasına rağmen afet ve acil urumlar konusunda uzmanlaşmış olduğundan, Düzce'deki tip III derneklerle olan ilişkilerini ve 1999 depremleri sonrasındaki örgütsel etkinlikleri öğrenmeye çalıştım. En önemli tarihsel bilgilerden birisi, 2001 yılında uluslararası Kızılay ve Kızılhaç Derneklerinin işbirliği sonucu Pusula adıyla hizmete giren, 2003'te Kızılay'ın tek başına devralmasıyla Toplum Merkezi'ni dönüştürülen ve 2007'de kapanan bir rehabilitasyon merkezi uygulaması olmuştur. Bu rehabilitasyon merkezinin en önemli özelliği, normalde işlevsel farklılaşma sonucu temalara bölünmüş olan eğitim, spor, kültür, aile, sağlık gibi pek çok iletişim akışı ve etkinliğin, farklılaşmamış tek bir çatı altına toplanmış oluşudur. "Sivil toplum" gibi farklılaşmamış bir şemsiye kavramını reddeden, artık tarihi geçmiş bir kavram olduğunu öne süren Luhmann, bir röportajında "[işlevsel farklılaşmadan] tekrar tabakalaşmaya ya da bölümlenmeye geri dönmek modern toplum için bir felaket olurdu; böyle bir şey ancak bir teknolojik felaket ya da bir çevresel felaketin sonucu olabilir" der (Rasch, 2000, 203) [köşeli parantez benim]. Bu anlamda, Pusula ve Toplum Merkezi gibi bireylerin bir bütün olarak iletişime dahil olduğu, işlevsel farklılaşmayı ihlal eden, bölümlenme (segmentation) özelliği gösteren bir uygulamanın ancak geçici bir varlık göstermesi beklenir. Deprem sonucunda çöken tüm işlevsel sistemik farklılıklar, sistem sınırlarında delinmelere, ihlallere neden olmuştur ve bu farklılıklar tekrar inşa edilene kadar daha eski, modernlik öncesi yapılara geçici olarak geri dönülmüştür. 2007 yılında Toplum Merkezi'nin kapanması, merkez bünyesinde bir arada yürütülen eğitim, sanat, kültür, sağlık ve benzeri pek çok farklı iletişim sürecinin artık kendi mecrasında tekrar akmaya başladığının, sistemik farklılıkların tekrar kurulup işlerlik kazandığının bir göstergesidir.

Kızılay'dan aldığım ikinci önemli bilgi ise Toplum Liderleri Projesi hakkında olmuştur. Kızılay ve AFAD'ın ortaklaşa yürüttüğü bu projede, mahalle ve köy muhtarlarına, öğretmenlere, imamlara, ve toplum destekli polis birimlerine afet eğitimleri verilmektedir. Afet yönetimini ve planlamasını kendi içinde bir sistem olarak ele aldığımızda, Toplum Liderleri Projesi'nin, eğitim sistemi, din sistemi,

güvenlik sistemi ve siyaset sistemi ile ilişkiler kurmaya, bu ilişkileri sürdürmeye ve geliştirmeye çalıştığını söylemek mümkündür. Ancak bu çabalar ve girişimler sorunsuz yürümemektedir. Proje dahilinde eğitim gören öğretmen, imam ve polis memurlarının bir süre sonra tayin nedeniyle başka illere taşınmaları projenin uzun vadeli takibini güçleştirmektedir. Bunun yanı sıra projeye katılım için görevlendirilen personelin motivasyonunu sağlamak ve eğitimler konusunda dönüt almak üzerinde çalışılması gereken konular olarak öne çıkmaktadır. Kızılay, Düzce'deki yerel derneklere bu proje kapsamında eğitim sağlamak ve onlarla iş birliği yapmak gibi çalışmaları olup olmadığı sorulduğunda, henüz böyle bir çalışmaları olmadığını, ancak karşıdan bir talep gelmesi haline destek vereceklerini belirtmişlerdir.

Görüşmelerimiz sırasında görüştüğümüz kadın derneklerinden biri, kadın merkezli, eleştirel tavırları, düşünceleri, ve etkinlikleri nedeniyle AFAD ve Kızılay gibi daha yerleşik ve afet konusunda uzmanlaşmış örgütlerin kendileriyle iş birliği yapmayı çok tercih etmediğini belirtmişlerdir. Bu kadın derneği de deprem sonrası kadınları yaşadıkları sorunları hafifletebilmek, onları rehabilite edebilmek ve kendilerine yetebilir hale getirebilmek için pek çok etkinlik düzenlemiş olmasına rağmen yerleşik ve uzmanlaşmış afet örgütlerinin iletişim ufkunda yer almamaktadır. Görüştüğümüz kadın örgütlerinde Düzce'de yaşayan Roman vatandaşlarla ilgili konut edindirme konusundaki çalışmalardan da bahsedilmiştir. Deprem sonrası kalıcı konutların yapımında, ekonomik iletişimde fazla yer almayan Roman vatandaşların konut durumu örgütlü ve eleştirel kadın girişimleriyle Belediye ve Valilik makamlarına taşınarak konut edinmeleri desteklenmiştir. Bu süreçte de kadın derneklerinin merkezi yönetim ve otorite tarafından tepkiyle karşılandığı belirtilmiştir. Luhmann'ın 21. yüzyıldaki en kötü durum senaryosu olarak gördüğü "dahil etme/dışlama" kodlamasının diğer tüm işlevsel kodların üzerinde bir üst kod olarak kabul görmesi, ve tek bir işlev sisteminden dışlanmanın zincirleme olarak diğer işlev sistemlerinden de dışlanmaya yol açması durumu Düzce'de deprem sonrası Roman vatandaşların, kadınların, mülk sahibi (dolayısıyla konut edindirmede hak sahibi) olmayan depremzedelerin, ve bedensel engellilerin durumuyla da paralellik göstermektedir (Luhmann, 1997c, 12; Moeller, 2006, 59; Rasch, 2000, 221). Merkezi yönetime, politikalara ve uygulamalara eleştirel yaklaşan yerel

örgütlerin işlevsel farklılaşma ve kör noktaların yanı sıra, merkez - kenar farklılaşmasından da etkilendikleri ve depremlerle ilgili etkinlikler düzenlemiş olsalar bile politik sistemin uzantısı olan yerleşik, merkezi ve uzmanlaşmış örgütlerle asimetrik bir ilişki içerisinde oldukları anlaşılmaktadır.

Akşit, Tabakoğlu & Serdar, çalışmalarında sivil toplum örgütlerinin ideolojik ve siyasi tavırlarına göre devlete daha yakın ya da daha uzak konumlandıklarını ifade ederler (2002, 309). Luhmann'ın ikincil farklılaşma türü olarak bahsettiği merkez - kenar farklılaşması da aynı mantık üzerinden işlemektedir. Bu çerçevede düşünüldüğünde, asimetrik ilişkilerin afet planlarına yerel katılımla ilgili işlevsel ayrımlara ek olarak, daha farklı kör noktalar da yaratması beklenebilir. Örneğin, Türkiye Afet Müdahale Planı'nda (TAMP) psikososyal destek hizmeti için sivil toplum örgütlerinin koordinasyonu görevi Aile ve Sosyal Politikalar Bakanlığı'na verilmiş durumdadır (AFAD, 2013, 20). Bu durum, merkezle (hükümetle) benzer ideolojiler paylaşan ve merkezi kararlara daha yakın konumlanmış örgütlerin afet yönetimine katılımında, daha eleştirel, muhalif ve kenarda konumlanmış örgütlere göre asimetrik bir avantaj elde etmesine yol açabilir. Luhmann'ın bahsetmiş olduğu "dahil etme/dışlama" kodlaması burada da karşımıza çıkmaktadır.

Sonuç

Her ne kadar şu anda AFAD çeşitli bakanlıklar ve yerel paydaşlarla gelecekteki işbirliğini kapsayan stratejik ve taktik planlar yapıyor olsa da, toplumu merkezi olarak yönlendirmeyi amaçlayan bu çabaların kör noktalar nedeniyle yerel bağlamdaki kendini örgütleme geçmişi ile tam örtüşmediği gözlenmektedir. Yaptığım araştırmada, (uzmanlaşmış afet yönetimi örgütleri yoluyla uygulanmaya çalışılan) merkezi yönlendirme ile kendi kendini örgütleyen yerel dernekler arasında karşılıklı işlevsel kapalılık ve çoklu sistemik körlükler nedeniyle örtüşme olmadığını buldum. Bu kör noktalar sadece modern toplumda baskın olan işlevsel farklılaşmadan değil, ikincil konumdaki merkez-çevre ve tabakalı farklılaşmadan da kaynaklanmaktadır. Aynı anda etki gösteren bu toplumsal farklılaşma türleri de, kendi içlerinde toplumsal sistemler gibi ele alındığında, birbirleriyle etkileşimlerinden doğan kör noktaların farkına varmak Türkiye'deki afet yönetimi

çabalarına katkıda bulunabilir. Toplumsal farklılaşma türleriyle ilgili bu etkileşim durumunu Luhmann'cı terminolojiyle tanımlamak ve bu durum hakkında afet yönetimi uygulamalarında bir farkındalık yaratabilmek amacıyla *asimetrik işlevsel denklik* terimini önerdim.

Luhmann'ın kuramsal olarak açıkladığı sosyo-kültürel evrim sürecini tek bir merkezden yönlendirmemiz ya da yönetmemiz mümkün değildir; ancak bu sürecin bir parçası olduğumuzun farkında olmak mümkündür. Toplumsal sistemler, çevrelerindeki karmaşıklığı indirgeme sürecinde kör noktalar da üretirler. Sistemlerin kendi yapıları içlerinde yaptıkları seçimler, ve bu seçimlere atfedilen kısmen kontrol edilebilir sonuçlar *risk*leri oluşturur. Ancak, indirgeme sürecinde sistem dışında bırakılan ve sonuçları kontrol edilemeyen kör noktalar *tehlike* olarak varlıklarını sürdürür. Bu kör noktalara ve tehlikelere işlevsel olarak farklılaşmış bir toplumun yan ürünleri ya da atıkları gözüyle bakabiliriz. Sistem içinde ikili olarak kodlanmış ayrımların birini ya da diğerini seçmek farklı riskler doğuracaktır, ancak bunlar sistem tarafından tanınabilir. Ancak, sistem üçüncü bir değere, dünyanın geri kalanına, kördür. Sistemler birbirlerinin ürettiği kör noktaları telafi etmek gibi bir kaygı taşımazlar, Her sistem kendi yeniden üretimini sağlamakla meşguldür ve kendi kör noktalarını üretir. Bu kör noktalar birbirleriyle de etkileşerek daha farklı kör noktalar üretirler, ve tüm bu süreçlerin aynı anda gerçekleştiği karmaşık bir sistemde bir sistemin bir başkasının kör noktalarını telafi etmesi yapısal olarak mümkün değildir. İşlevsel farklılaşmanın yanı sıra aynı anda varlığını sürdüren merkez-kenar, tabakalaşmış ve bölümlü farklılaşma da farklı sistemler gibi birbirleriyle etkileşirler. İşlevsel farklılaşmanın ortaya çıkardığı işlevsel denkler, bu sayede asimetrik işlevsel denklere dönüşebilir. Merkez-kenar farklılaşması çerçevesinde merkeze, yönetici pozisyonunda algılanan bir örgüt sistemi, değişik türdeki farklılaşma süreçlerinin etkileşimi sonucu yönetmeyi amaçladığı kenar yapılara, sürece ve çevrenin bir kısmına karşı kör kalır.

Sistemler kendi yaptıkları ayrımları ve bu ayrımın içinden yaptıkları seçimleri tanıyabildikleri için yönetebilirler. Bu anlamda risk yönetimi popüler bir kavramdır. Ancak, sistem tanımadığı, indirgeme sürecinde göz ardı etmek zorunda kaldığı tehlikeleri yönetemez; bu nedenle tehlike yönetimi gibi bir kavramdan kimse bahsedememektedir; mutlak bir güvenlik hali, asla ulaşılamaz bir idealden başka bir

şey değildir. Örneğin bugün büyük şehirlerde deprem risklerine kesin çözüm olarak tanıtılan kentsel dönüşüm süreciyle ilgili 50 ya da 100 yıl sonrasına ilişkin, yeni betonarme binalar kullanım ömrünün sonuna geldiğinde, ya da su sıkıntısı baş gösterdiğinde, enerji sıkıntısı baş gösterdiğinde, iklim koşullarında olabilecek değişimler yaşandığında, gerekli doğal kaynaklarda sıkıntılar yaşandığında, hava kirliliği ya da elektromanyetik radyasyon kronik sağlık sorunlarına yol açtığında, trafik sıkışıklığı, suç oranları, ve benzeri nüfusa bağlı sorunlar yaşandığında neler olacağıyla ilgili herhangi bir öngörü yapılmamaktadır.

AFAD stratejik planlarında, sivil toplum örgütlerinin önümüzdeki yıllarda akreditasyonu ve eğitimi gibi amaçların belirlenmiş olması, farklı çözüm yolları ve alternatif senaryolar konusunda bir farkındalık oluşmaya başladığının göstergesi olarak umut vericidir. Luhmann'ın işlevsel metodunun da amacı toplumdaki alternatiflere bir bakış geliştirebilmektir (Luhmann, 1995, 54). Ancak stratejik planlardaki iyi niyetli amaçların, taktik planlama aşamasında sahaya empirik anlamda yansıdığını söylemek henüz mümkün değildir.

Yerleşik afet yönetimi sistemi ve yerel tip III dernekler arasındaki asimetrik ilişki, afet müdahale çözümlerinin uzun vadede evrimsel çeşitlenmesini ve (sabitlenme için) seçilim süreçlerini de etkileyebilir. Saha araştırmamın başlarında yapmış olduğum telefon taramasına bakarak, Düzce'deki yerel derneklerin büyük çoğunluğunun 1999 depremleri sonrasında örgütsel bir etkinlik göstermediğini söylemek mümkündür. Sadece sınırlı sayıda afette uzmanlaşmamış yerel derneklerin depremle ilgili etkinlik düzenlemesi çok düşük ihtimalli bir evrimsel çeşitlenme, beklenmeyen küçük ve önemsiz bir mutasyon vakası olarak yorumlanabilir. Toplumsal Sistemler Kuramı için, toplumu oluşturan iletişimler bütünü, tıpkı canlı doku gibi sürekli yeniden üretilmeye ihtiyaç duyar. Yeniden üretim durduğu anda çürüme/çözülme başlar; yeniden üretimde değişiklik olduğu anda mutasyon (genetik çeşitlenme) meydana gelir. Tip III yerel dernekler, 1999 depremlerinin yol açtığı kesintiden sonra örgütsel iletişim akışlarını yeniden üretmeye başlarken, bu süreçte bazı küçük değişiklikler ortaya çıkmıştır. Ancak, bu çeşitlenmelerin gelecekte sabitlenme için evrimsel olarak seçilip seçilmeyeceği (örneğin yaşamın normal akışı sırasında bir afet müdahale planının parçası olarak, düzenli afet eğitimi ve afetlerle ilgili örgütsel iş birliğine dahil olmak) tamamen toplumun kurguladığı farklılıklara

ve seçimlere bağlıdır. Tip III yerel derneklerin örgütsel etkinliklerindeki bu küçük çeşitlenmeler, evrimsel açıdan çok düşük ihtimalli olan ancak imkansız olmayan durumlardır. Bu düşük ihtimalli çeşitlenmelerin uzun vadede sabitlenmek üzere seçilip seçilmeyeceği toplumun kendi yapılarına uyum sağlamasına bağlıdır. Örneğin siyasi işlev sistemi içerisinde uzmanlaşmış bir örgüt olan AFAD'ın oluşumu böyle bir uyumun bir parçasıdır. Temelde, AFAD da her toplumsal sistem gibi, öncelikle kendi sınırlarını ve kendi içsel işleyişini yeniden üretmeyi amaçlayan bir sistemik farklılıktan daha fazlası değildir. Merkezi olarak yönlendirici bir konumda bulunması yüzünden AFAD, kendine göre kenarda konumlanmış yerel derneklerin afetle ilgili örgütsel etkinlik çeşitlenmelerini göz ardı ettiğinde, afetle ilgili kendi işlevsel denklerini evrimsel seçilimde dezavantajlı bir konuma itmiş olacaktır. Bu aynı zamanda, AFAD'ın bir sistem olarak çevresiyle daha iyi ilişki kurarak (resonance) kendini yeniden üretme şansını arttırmasını engelleyebilecek bir durum olarak görülebilir. Tek tek seçimlerin başarılı ya da başarısız olması evrim gibi uzun bir süreçte belirleyici olamaz; ancak bu seçimlerin uzun vadede birikimi adaptasyonu üreten şeydir. Şunu unutmamalıyız ki, bu ilişki karşılıklı seçici bir ilişkidir. Merkez - kenar asimetrisine rağmen, tip III yerel derneklerin tepkileri ve katılımları da merkezi afet yönetimi üzerinde, daha uygun ya da zorlayıcı bir çevre oluşturmak yoluyla, seçici etkilere yol açmaktadır.

Pek çok görüşmenin başlangıcında, cami dernekleri, spor kulüpleri ve Düzce'deki diğer tip III yerel dernekler kendi iyileşme ve rehabilitasyon etkinliklerini yerel deprem direnci kapasitesinin bir parçası olarak görmediklerini ifade etmişlerdir. Kendi örgütsel ufakları açısından, yaptıkları sadece kendi sistemik işleyişlerini sürdürmek olmuştur. Ürettikleri kararlar ve etkinlikler dernek üyelerine toplumun afet iletişiminin bir parçası olarak anlamlı gelmemiştir. Ancak, bu araştırma sırasında farklı şekilde kullandığım kuramsal ve metodolojik indirgemelerle yaptığım gözlemler sonucunda bu derneklerin deprem etkinliklerini depreme dirençli olmanın bir parçası olarak tanımladım. Sonuç olarak görüşmeciler, kendi dernek etkinliklerinin afete müdahale anlamı da taşıdığının farkına varmaya başlamışlardır. Elbette, görüşmecilerin örgütleri içinde tek başına mucizeler yaratması beklenemez. Evrim yavaş ve karmaşık bir süreçtir. Ancak, iddia edebilirim ki, bu gözleme göre asimetrik işlevsel denklere (tip III yerel derneklerin

deprem etkinliklerine) yönelik merkezi bir farkındalık, küçük seçimlerin zaman içerisinde birikimine ve bunların uzun vadede depreme dirençli olma sürecine katılımlarının sabitlenmesine katkıda bulunabilir. Bu, toplumun fiziksel çevresinden önce kendi kendisine uyuma sağlamasının gerekliliği hakkında benim yorumumdur. Bu asimetrinin iki tarafi arasındaki karşılıklı bağımlılık toplumsal evrimin tamamlayıcı bir parçasıdır.

Robert Stallings, afet araştırmalarındaki kuramsal çerçeveyi tartışırken Luhmann'dan alıntı yapar; "Sosyoloji için, risk konusu modern toplum kuramının altında sınıflandırılmalıdır, ve bu kuramın kavramsal araçlarıyla şekillendirilmelidir" (Luhmann, 1993, 5; Stallings, 1998, 134). Literatür taramam sırasında, Niklas Luhmann'ın Toplumsal Sistemler Kuramı'nın, toplumsal sistemleri şekillendiren evrimsel mekanizmaları açıklama potansiyeli taşımasına rağmen, Türkiye'deki afet çalışmalarında şimdiye dek hiç kullanılmadığını fark ettim. Bu nedenle, toplumun sosyo-kültürel evrimindeki seçilim mekanizmalarının ve bunların afete dirençli olmadaki rolünün incelenmesi, Türkiye'deki gelecek afet araştırmaları için yeni kuramsal ve empirik ufuklar açabilecek anlamlı bir yön olarak görünmektedir.

APPENDIX – V.
TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü	
Sosyal Bilimler Enstitüsü	X
Uygulamalı Matematik Enstitüsü	
Enformatik Enstitüsü	
Deniz Bilimleri Enstitüsü	

YAZARIN

Soyadı : Yoldaş
Adı : Berat
Bölümü : Sosyoloji

TEZİN ADI (İngilizce) : Involvement of Local Associations as Asymmetric Functional Equivalents to Centralized Disaster Management Agency in Düzce: A Luhmannian Perspective

TEZİN TÜRÜ : Yüksek Lisans [ ] Doktora [X]

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir. [X]
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir. [ ]
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz. [ ]

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: