TREMORS TO TEARS

What was the Architectural Response to the 2023 Turkey - Syria Earthquake and Consequential Mass Destruction of Buildings?

Yasemin Taylan

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University of Greenwich
ARCT-1014-M01-2024-25

Word Count: 7,268
(Dissertation)

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ACKNOWLEDGEMENTS

I would like to thank my tutor Freya Wigzell for the support throughout the dissertation and for putting up with me for the past three years! Freya has helped and seen my writing develop throughout the years and even made me enjoy writing, especially this dissertation topic – I've really learnt a lot and cannot stop talking about the matter!

I would also like to give a shout out to my dad and uncle (who is an architect in turkey) for aiding in my interest in the topic and for guiding my study.

For the people who lost their lives & families,
And the rescuers who risked their lives

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ABSTRACT

This dissertation examines the international and local architectural responses to the catastrophic earthquake in South Eastern Turkey in 2023. Affecting 10 provenances with the collapse of around 230,000 buildings - led me to question, how this can happen. Turkey has been affected by earthquakes in the past (1992 Erzincan and 1999 Izmit) but never to this extent – the past studies reviewing these earthquakes show the reasoning to be linked with, the use of poor-quality materials and illegal activities from the people in charge. These people have been found to cut costs on materials in order to make a profit. These reasons and many more will be explained throughout the dissertation. To see the architectural responses, I will be sorting through Turkish and English Journals such as Yapi Dergisi and The RIBA Journal, showing how the local and international opinions may vary/ have similar views. Each chapter of the dissertation has a different focus from; background knowledge, firsthand accounts from survivors, and architectural journals, all aiding in answering the dissertation question. Whilst my initial aim is to gain an understanding of what went wrong, it is also to spread awareness and to bring to light all the uncovered truths that still go on, to prevent this from happening again.

INTRODUCTION

Habib-I Neccar Mosque Post Earthquake

FIGURE 1

6th of February 2023, a day to remember as South Eastern Turkey was struck with a 7.8 magnitude earthquake in Gaziantep, followed by a 7.7 magnitude in Kahramanmaraş 9 hours later. Overall, affecting 10 provenances – they were said to have *'suffered more damage than any army bombing' (Köksal. A, 4th April 2023)*. With a death toll of around 55,000 people and a collapse of around 230,000 buildings, it begins to question why and how such destruction could occur in a country known to have earthquakes. Ironically, one of the oldest mosques in Turkey, Habib-I Neccar - which was rebuilt in 1853 by the Ottomans – didn't endure as much damage as majority of the modern buildings. How can this be? How can a building that is almost two centuries old withstand the force of an earthquake better? Have people not learnt or does it all come down to *'man's ignorance, carelessness' and 'greed' (Mckaig. T, 1962 - Page 4)?* Figure 1 and 2 are images of Habib-I Neccar Mosque before and after the earthquake.

As someone with a Turkish heritage and aspirations of becoming an architect – potentially in Turkey. I'm saddened and frustrated by this. Many people put their trust in the architects, engineers, and contractors that provided them with their homes – not thinking that one day it would be flattened, and their once called home and neighbours would go along with it. With the desperation of finding a home, the safety of the building is the last thing to cross their mind, especially when a building is advertised as "safe".

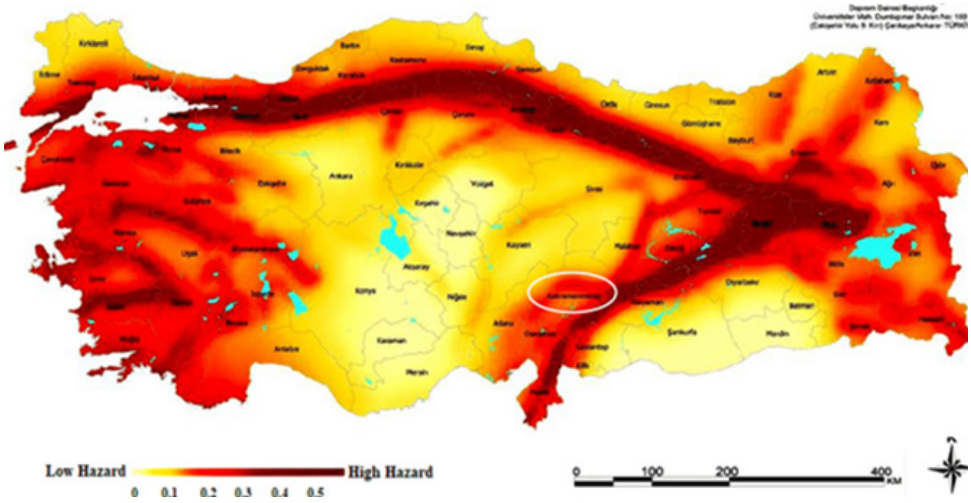
Habib-I Neccar Mosque Pre Earthquake

FIGURE 2

At the time the earthquake struck, I wasn't aware of how bad the destruction was and the severity of the situation, until I saw the figures, which led me to question how and why this could happen and what was being said about it by the architectural community in Turkey. With this in mind, the dissertation asks, 'What was the architectural response to the 2023 earthquake and consequential mass destruction of buildings?' Turkey itself is located where three tectonic plates interact; Arabian, African and Anatolian, therefore it is inevitable that Turkey will suffer from earthquakes with high and low magnitudes.

FIGURE 3

Shows the tectonic interactions within Turkey, the darker regions being more hazardous than the lighter regions. The circled region is Kahramanmaraş, where the earthquake happened, almost 2 years ago now.



To be able to have a good understanding of why so many buildings collapsed, it is important to look at studies on previous earthquakes that have taken place in Turkey, especially those reviewing the materials used in buildings. In particular an architectural science review; *'Earthquake failure of reinforced concrete buildings: the case of the 1999 earthquakes in Turkey' (Erman. E, 2004)*, which highlights the reasons for the damage in reinforced concrete buildings from the 1999 earthquake, as well as touching on the efforts made by the government *'to improve insurance and inspection systems' (Erman. E, 2004)* post-earthquake. Also, studies by *Cengiz Özmen – 'Reconciling Architectural Design with Seismic Codes' (2021)*, which touch on the codes that are in place and what they intel. As well as having a shared opinion on reinforced concrete with Erman, a study by *EEFIT (1992) – 'The Erzincan, Turkey earthquake of 13 March 1992: a field report'* also contributes to the arguments for the use of reinforced concrete in buildings. These studies are essential to build foundation knowledge on what went wrong in the past, especially aiding in seeing whether Turkey has learnt from them or not. This background knowledge, that I will explain in detail later on, has guided my research into the direction of looking for these failures within the new Kahramanmaraş earthquake.

With this in mind and my dissertation question which asks what the architectural response to the 2023 earthquake was, my main source of information is from architectural journals, both in Turkey and internationally. Especially those published on "Yapi Dergisi" and "Arkitera", as well as the "RIBA Journal". In particular, a journal published by Hasan Özbay who is an architect (founding partner) at TH&Idil Mimarlik based in Ankara (the capital city of Turkey). The title of his article translates to *'It's not the earthquake, but the crooked building system in the country*

that's killing' (25th April 2023) which was written 2 months after the earthquake. Throughout the article he explains the problems within the building systems, especially focusing on the education sector, unqualified building inspectors, construction process and low architectural service costs. He also offers his opinion on what he thinks should be done.

Additionally, part of my study has drawn upon some of the theories related to building failures, in particular a book by *Thomas Mckaig – Building Failures: Case Studies in Construction and Design (1962)*, and an article by *Adrian Forty – Accidents Waiting to Happen (2019)*. Mckaig addresses the reasons why buildings fail as human errors – Ignorance, Carelessness, and Greed. He mentions that nobody can learn anything *'from a building on which everything has gone smoothly' (Mckaig. T, 1962)* – therefore these errors are required so the problems can be highlighted. His book aims to *'teach a lesson' (Mckaig. T, 1962)* to its readers but ironically the problems he addresses still happen to this day. In the article by Adrian Forty, he describes that the *'more inventions there are, the more accidents there will be' (Forty. A, 2019)* as every creation eventually shows its flaws, but also when there are people who *'choose not to' (Forty. A, 2019)* meet the requirements to cut costs, will eventually lead to much greater disasters.

METHODOLOGY

To gain an understanding of what the architectural response to the catastrophe was, I will be mining through two architectural journals. One of which will be a Turkish Journal – Yapi Dergisi, which is released monthly and is used by architects in Turkey. Doing this will help to see a more localised response with more attachment to the disaster. Additionally, I will also look at international journals such as the RIBA Journal, to offer a different perspective on the earthquake. I will look at journals from the time it occurred, in February 2023, up until now – almost 2 years on, to see whether the response has changed and what has happened since.

To do this, I created a table, which can be seen in the appendix, where I noted down key quotes from the journals and then categorised them into subheadings depending on its contents. An example of this is as follows: The quote, *'The fact that every architect and engineer who graduates from school enters the sector without gaining any experience and uses unlimited authority' (Özbay. H, 25th April 2023)*, was categorised as problems with the educational sector. In Turkey, one can become an architect after completing four years of undergraduate studies, without the need of gaining experience within a practice and completing a final examination, like what is required in England. Using this method, ensured my notes were organised and became helpful in the placement within the dissertation.

Within the main body of the dissertation, there will be four main chapters, starting off with a chapter describing the sincerity of the earthquake and a first-hand account

of what someone experienced. The next chapter is focused on the Turkish Journals, with subheadings splitting it up into categories, such as materials, illegal work, problems within the educational sector. All becoming factors that could have caused a destruction of this scale. The third chapter will focus on looking at international journals, and in the same way will be split into subheadings, where in the fourth chapter they will be analysed to see if there are any similarities/differences in the responses. As well as focusing on the types of people who have written in the journals, whether they're architects, professors, engineers etc, to see if their opinions/solutions to the catastrophe overlap.

BACKGROUND KNOWLEDGE

Earthquake History

The Kahramanmaraş earthquake wasn't the first time this level of destruction occurred in Turkey, although it has been known to be one of the most destructive ones, alongside the 1992 Erzincan and 1999 Izmit earthquakes. After the 1992 Erzincan earthquake a *'UK based group of earthquake engineers, architects and scientists'*, known as EEFIT, arrived in the region *'sixteen days after the earthquake' (EEFIT, 1992)*, in which they carried out investigations into the damage that occurred. They stated that prior to the earthquake, the region *'contained a total of 28,000 buildings'* of which *'2,168 were destroyed', '3,290 were classified as moderately damaged and 4,131 suffered light damage'* – a significantly low number in comparison to the 2023 Kahramanmaraş earthquake. They highlighted that the most common faults were found in the design and construction of the buildings, including aspects such as *'soft storeys at ground floor level', 'Inadequate repair to minor structural damage'* caused by previous earthquakes, as well as the use of *'poor quality concrete' (EEFIT, 1992)*.

Similarly, following the 1999 Izmit earthquake an architectural science review was written, describing the failure of reinforced concrete buildings, which led to the collapse of around *'78,000 buildings' (Erman E, 2004)*. Multiple reasons were given for the damage caused in reinforced concrete buildings, including:

FIGURE 4

Damaged Beam Columns

- *'Problems arising from architectural and structural design'*
- *'Inadequacies and mistakes related to building materials' and 'construction phase'*
- *'Inadequacies and mistakes related to site selection'*
- *'Inadequacies related to the codes, architectural education and profession, inspection and insurance system'*
- *'Mistakes related to the service life of the building' (Erman E, 2004)*

Similar to the conclusion derived by the EEFIT investigation team, the quality of materials used in the buildings in the Izmit provenance was said to have used *'excessive water, dated cement, and salty sand'* in the concrete mix. Additionally, *'smooth reinforcement bars'* were used instead of *'deformed bars' (Erman E, 2004)*, which increases the risk of the bars and concrete sliding as there's no grip and friction between the materials. How are people meant to be protected, when their own homes aren't safe and the people in charge of creating this "safe space" are too ignorant to read The Building Codes, with the mentality that it *'was not written for them' (Erman E, 2004)*.

BACKGROUND KNOWLEDGE

Migration History

Aside from Turkey's earthquake history, it is also important to understand why regions in Turkey are so populated, which has overall led to the acceleration in *'construction activities' (Bayrak. S, 18th April 2023)*. After the 1950s, *'Turkey experienced a major migration wave from rural areas to cities'*, the types of people that migrated were – one, *'landowners who had enough money to do whatever they wanted'* and two, *'agricultural workers who were too poor to do anything' (Sayin. N, 5th May 2023)*. Since the workers had no other choice, the landowners put them to work in construction – with zero qualifications/experience within the field. With the increase of people migrating, there was an *'increasing need for shelter'*, in which people took matters into their own hands and begun to build *'shanty houses' (Sayin. N, 5th May 2023)*, these were known as "Gecekondus". The term "Gecekondu" translates to "put up overnight" which in essence *'describes a makeshift, uncomfortable hut erected overnight on land owned by the state, municipality or individuals in defiance of the building codes and property rights' (Karpat. K, 2004)*. These structures were seen as illegal however, they *'were not demolished but were made legal and their owners gained much greater construction rights' (Sayin. N, 5th May 2023)*, essentially allowing people to get away with it and continue what they're doing. This led to the view that there was no longer a need for architects, engineers and *'professional people to supervise the construction' (Sayin. N, 5th May 2023)*. So, how does this link to the earthquakes?

FIGURE 5

Shanty Houses

If buildings are still being built with this mindset, If the old buildings that are still around were built this way, If the people constructing the buildings aren't qualified, If the new buildings built don't follow the current building regulations, If buildings aren't inspected during construction and completion of the building then how can we say the buildings are fit for earthquakes...

CHAPTER ONE

PAINTING A PICTURE OF THE EVENT

FIRST HAND ACCOUNT

Imagine. You've just woken up to people screaming and the ceilings and walls around you caving in, not knowing whether you would make it out alive or if you'd see your friends and family again. The house you once called home – full of memories, just flattened to pieces in the space of a few hours, like it was made of dust. That's what crossed the minds of the people affected as well as family members living in other regions in Turkey/overseas.

FIGURE 7
Necla's son - Yagiz after surviving under the rubble for 90 hours

There are multiple miracle scenarios of people being pulled out of the rubble up to 200 hours after the earthquake, in particular Necla Camuz who had only just given birth to her son 10 days prior to the earthquake. Necla and her son Yagiz were trapped under the rubble for over 90 hours – 3/4 days. They lived *'on the second floor of a modern five-storey building' (Cuddy. A, 13th February 2023)* – as she tried to reach her husband in the other room – the earthquake started and a *'wardrobe fell'* onto her husband. When the earthquake stopped, she realised that she had *'fallen one floor down'* and that there was a wardrobe next to her which *'saved their lives by preventing a large slab of concrete from crushing them' (Cuddy. A, 13th February 2023)*. She called and called for help, like everyone under the rubble would have, but she wasn't heard until more than 90 hours underground when she *'heard the sound of dogs barking'* followed by the sound of voices asking if she was ok. She was asked how old Yagiz was but she was unaware – *'she only knew that he was 10 days old when the earthquake struck' (Cuddy. A, 13th February 2023)*. Could you imagine being trapped under concrete slabs – with no escape – just complete darkness and dust from the rubble around you. Furniture that you bought becoming a dangerous obstruction to you in a situation like this. But worst of all, the uncertainty of making it out alive but if you survive what are you left with – is it better to not survive?

RESCUERS & RELIEF

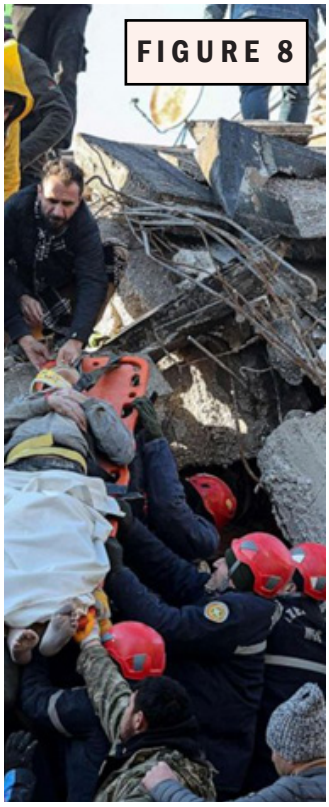


FIGURE 8

'Every minute, every hour that passes, the chances of finding survivors alive diminishes' (Toksabay. E & Hayatsever. H, 8th February 2023). Immediately after the earthquake, the rescuers struggled *'to reach some of the worst hit areas, held back by destroyed roads, poor weather and a lack of resources and heavy equipment' (Toksabay. E & Hayatsever. H, 8th February 2023)* – after all no one is prepared for a destruction of this level. Residents desperately *'picked through rubble'* with whatever tools they could find until help came. Once rescuers arrived, they searched night and day as people waited around *'clinging to the hope that friends, relatives and neighbours might be found alive' (Toksabay. E & Hayatsever. H, 8th February 2023)*. There are multiple videos online showing the raw image of what was happening in the region. From the videos you can hear rescuers and residents shouting - "everybody be quiet", "turn the machines off" – so the calls for help could be heard from within the rubble. With every person they pulled out of the rubble, people cheered and were filled with happiness.

Turkey was sent rescue workers, equipment and aid (blankets, tents, medical supplies) from countries all around the world. Using the supplies to create shelter and privacy for the victims of the earthquake - Shigeru Ban who is a Japanese Architect, known for building temporary housing for victims in disasters – worked with volunteers in Turkey to create shelters. Shigeru Ban is known for making these houses out of paper tubes that slot into one another, ensuring for a quick *'construction time at site' (Shigeru Ban Architects, 2023)*. To achieve this, the foundation of the structures was composed of *'beer crates filled with sand bags'* along with *'wooden panels'* for the walls which were *'between the paper tube columns, placed at every 1.2 metres'*. The roof was also made of *'paper tube frames and plywood decking' (Shigeru Ban Architects, 2023)*. Having these spaces allows people to have somewhere that can feel like a home in a time of uncertainty.

FIGURE 9
Shigeru Ban paper tube homes

CHAPTER TWO

THE TURKISH RESPONSE

This chapter discusses the responses given by Turkish Architects and Professors of Architecture, who have published journals online, especially those found in Yapi Dergisi and Arkitera. Yapi Dergisi is diverse in its topics - ranging from the latest projects in Turkey to projects around the world, covering areas such as the environment, urbanism, materials etc. Yapi Dergisi and Arkitera are widely used in Turkey by the architectural community.

The journals/quotes I will be using in these sections; I have translated to English – the original Turkish quotes can be found in the Appendix. Throughout this chapter the responses will be split into subheadings which determine what they are categorised as.

PROBLEMS

2.1 Materials

In 2013 Turkey was *'ranked first in world cement exports and ready-mix concrete production' (Bayrak. S, 18th April 2023)*, so how can it be that in 2023 Turkey has had the worst earthquake destruction to date, with majority of the buildings collapsing made of reinforced concrete. Why is the reinforced concrete system still *'being encouraged' (Özbay. H, 25th April 2023)* when there's so much evidence pointing to this being the problem? Not only is the system getting *'heavier' (Özbay. H, 25th April 2023)* but inspections have been carried out on the buildings - which has shown the concrete mix to be composed of *'excessive water, dated cement' and 'salty sand' (Erman E, 2004)*. If we can't trust the concrete mix to be done correctly, what can we trust?

So, why does this happen? Why are poor quality materials being used? With Turkey's on-going economic crisis, people have been looking to cut *'construction costs' (Avunduk. A, 14th March 2023)* wherever possible. In this case people have made 'savings' in *'concrete, iron'* and the *'rough structure' (Avunduk. A, 14th March 2023)* of the building. Unknowingly and out of desperation the public have *'rushed to buy these houses'* which were *'decorated nicely'*, and were sold *'cheaply' (Avunduk. A, 14th March 2023)*. Whilst appealing to the eye, its what's underneath all the decoration that has costed people their lives.

Whilst reinforced concrete has been highlighted as a problem, in not only this earthquake, but previous ones, such as the 1992 Erzincan and the 1999 Izmit, it still remains one of the *'best construction techniques' (Avunduk. A, 14th April 2023)* for earthquakes. Acar Avunduk – a Turkish architect wrote to Arkitera 2 months after the earthquake on the matter of reinforced concrete:

> *'Reinforced concrete, if its architecture, static and reinforced concrete calculations are done by experts and experienced people and especially if its application is supervised (on site), is still one of the best construction techniques we have, for earthquakes…'*

Potentially, all along the material hasn't been the problem, but the way in which it is made/used to cut costs is the issue.

REINFORCED CONCRETE

Corroded Reinforcement Bars Found in Collapsed Buildings

2.2 Illegal work

Even though there are rules in place in terms of building regulations/standards, without the proper enforcement how can we be sure people will follow the rules. One would assume, even without enforcement – people would do the right thing, especially when it comes to constructing a building that hundreds of people are going to live in. But in a lot of cases, that just isn't what happens and this build up has unfortunately caused the earthquake of today. In many cases people care more about profit and look to cut costs wherever possible. Şengül Gür, a professor stated in her *'Devils Triangle' journal on Yapi Dergisi (11th May 2023):*

> *'Planners who make urban zoning plans by turning a blind eye and ear to the warnings of earthquake experts for the sake of doing business, architects who do not know how to do project control, unauthorized, undocumented, undiplomatic contractors who steal materials and implementation time with excessive and unfair profit ambition and produce reinforced concrete buildings with incomplete reinforcement and are not subject to any exams…'*

She says these people are guilty for the deaths of thousands. Especially when majority of *'the people who do contracting are not technical personnel' (Özbay. H, 25th April 2023)* and there are companies who see construction work as *'commercial activity'* and therefore do not *'employ experienced' (Özbay. H, 25th April 2023)* people. In a country that enforces rules and if broken faces consequences – illegal work like this would not occur. Perhaps, the reason this is occurring in Turkey, has stemmed from the illegal shanty houses that were built after the 1950 migration wave which made these illegal structures *'legal and their owners gained much greater construction rights' (Sayin. N, 5th May 2023)*. The fact that the system "hasn't" changed since the 50s is astonishing – it should be made *'mandatory for craftsmen or sub-teams'* who work on construction to be *'trained'* and receive a *'certification' (Özbay. H, 25th April 2023)*. Otherwise, how can we trust the buildings we enter?

It was also found that buildings were constructed *'on or near active fault lines' (Özbay. H, 25th April 2023)* – which is an accident waiting to happen, especially if the buildings are not built up to earthquake standards, but even if they were – could they survive? Some of the structures they analysed after the earthquake were not built illegally but according to the zoning plans, it was *'how these plans were made and how they were approved' (Özbay. H, 25th April 2023)* - was the beginning of the problem.

2.3 Architecture Education System

Turkish architect – Acar Avunduk, who has been qualified for 40 years didn't receive *'any training or courses on earthquakes other than one or two semesters focusing on statics and reinforced concrete' (Avunduk. A, 14th March 2023)*. Whilst this is more than 40 years ago now, he still believes that the current architecture education system isn't *'much different'* as he sees graduates signing projects of *'10, 20, 30 storeys'*

high, when it has become known that buildings shouldn't exceed 4 storeys. He also comments:

> *'Although we memorized in all our school textbooks which war was won on which day and date, which country was conquered when, we had never read or learned which major earthquakes shook Istanbul or Turkey in history, and to what extent our country's structures were damaged in which earthquakes'*

From my experience as a final year architecture student (undergraduate level), I would not be ready to have the responsibility of an architect, and I'm not expected to until I have completed Part 3. However, in Turkey students can register in the *'professional institution'* once they have completed *'four years undergraduate education' (Erdoğan. N, Özdoğan. M, Korkmaz. S, 2021- Page 111)*. During the four years, students participate in an *'internship'* within a practice and all *'professional skills required'* for an architect are *'expected to be learned' (Erdoğan. N, Özdoğan. M, Korkmaz. S, 2021 – Page 112)* during this time. The duration of these internships isn't set and they vary *'for each university' (Erdoğan. N, Özdoğan. M, Korkmaz. S, 2021 – Page 112)* – whether they range from a few months to a year - how can they be expected to have the same responsibilities as an experienced architect?

Whilst the current education system is nothing like the UK for example, there has been steps towards improving the system. Especially since - in September 2019, MiAK was formed which is *'The Association for Accreditation of Architectural Education'* in Turkey, which was once in *'cooperation with the Chamber of Architects'* between 2006 – 2019, but has now become an *'independent structure' (MiAK, 2019)*. MiAK's main goal is to *'improve the quality of architectural education by accrediting, externally evaluating and conducting briefing studies on architectural education programs'*, with a variety of different members within the board such as *'graduates, employers, and professional organizations' (MiAK, 2019)*.

2.4 TOKİ

TOKİ also known as "Toplu Konut İdaresi Başkanlığı" which translates to "Mass Housing Development Administration". TOKİ works alongside the government to develop *'mass housing projects for the low and middle-income target groups'* due to the demand for *'qualified and affordable houses in several regions' (TOKİ Website).* As TOKİ is working with the government, it means that they are following the building codes closely to ensure illegal work isn't occurring. Before the earthquake in Kahramanmaraş, they had been constructing TOKİ residences, it was noticed that they were *'also damaged, but did not collapse like "pancakes"' (Avunduk. A, 14th April 2023)* like majority of the buildings in the vicinity. It was stated *'that their locations were well chosen' (Avunduk. A, 14th April 2023)* in terms of the ground but also that they were only *'3-4 stories'* tall. Whilst TOKİ buildings are safer and ensure building standards are followed; architects believe that all the residences are *'similar to each other'* and have *'no aesthetic value'* and therefore they *'will never be homes that people can call "home" and live in with enthusiasm' (Avunduk. A, 14th April 2023).* But what is more important; living in safety or fragile luxury.

Whilst TOKİ is closely following the current building regulations, it begins to question whether they will *'demolish all the buildings built according to the old regulations'* especially if the new regulations have proven them *'inadequate and poorly equipped' (Avunduk. A, 14th April 2023).* Does Turkey have the resources and money to do this? After the Kahramanmaraş earthquake in 2023, TOKİ started a *'rapid and unplanned housing production'* despite the *'"slow" warnings' (Karabey. H, 25th April 2023)* and the need for time to rethink the *'planning and construction process' (Avunduk. A, 8th August 2024).* This has caused mixed reactions, especially since it has been said many times that *'TOKİ shelters cannot create a city'* and...

> *'at most it can create a dormitory city. In this case, the first shock of a person leaving his safe house will be "I am alive, but where am I?" "Where is my street, my market, my barber, my neighbours, my place of worship?"' (Karabey. H, 25th April 2023)*

Architect – Acar Avunduk has released a new article this year in response to his 2023 articles focusing on what he thinks should happen to Hatay/Kahramanmaraş: *'if famous/star architects redesign Hatay's project, the people of Hatay will not collapse in the next earthquake, they will live in sturdy and safe houses, they will live happily and Hatay will be a more beautiful, interesting and livable city than before' (Avunduk. A, 8th August 2024).* What happens to the new TOKİ buildings if this happens? Especially since there are talks of Foster + Partners creating a masterplan for the area – this will be addressed later on.

TOKİ

Mass Housing Development

FIGURE 12

FIGURE 13

CHAPTER THREE

THE INTERNATIONAL RESPONSE

This chapter discusses the responses given by international architects and journalists, who have published journals online, especially those found in the 'RIBA Journal' and 'Architects Journal'. The 'RIBA Journal' which releases daily articles on its website is used by architects – especially those in practice – aiding in providing inspiration and technical insight that can be applied in their own projects. The 'RIBA Journal' also provides regular webinars reaching both architects and built environment professionals. Whilst the 'Architects Journal' specifically targets architects and showcases recently completed buildings - they also show emerging talents to celebrate the next generation of architects.

Throughout this chapter the responses will be split into subheadings which determine what they are categorised as, similar to the previous chapter.

PROBLEMS

3.1 Illegal Work

On the 10th February 2023, four days after the earthquake struck, journalist Will Hurst took to the Architects Journal; he had spoken to Turkish Architects living and working in the UK on their opinion, to which they said earthquakes aren't *'killing people, bad buildings'* are *(Hurst. W, 10th February 2023*). Following this, it had been reported that:

> *'tens of thousands of buildings in Turkey were granted 'construction amnesties' over several decades. These enabled owners of structures built without the required safety certificates to gain legal exemption upon payment of a fee, a situation that critics say has long risked catastrophe.'*

Its shocking to see that bribes are still being taken in this day and age and thus this has *'prompted accusations that the Turkish construction industry'* prioritises *'cost over safety' (Panedigrano. G, 23rd May 2023).* If the regulations were enforced on the people in charge of the design and construction phases and the consequences of not abiding the rules were known and if qualified inspectors and contractors were hired then surely the likelihood of accepting bribes would decrease. In relation to this earthquake alone, *'more than 100 arrest warrants'* have been made for people involved in the *'construction of buildings that collapsed' (Waite. R, 2023)*. One would hope after this, Turkey will learn and welcome *'further constraints'* to protect the people living in the buildings and the professionals who have done nothing wrong, as the *'guidelines'* are only there to *'protect'* them from *'invisible threats' (Panedigrano. G, 23rd May 2023)*.

‘EARTHQUAKES ARENT KILLING PEOPLE, BAD BUILDINGS ARE’

Images of people being taken out of the rubble/concrete slabs

FIGURE 15

FIGURE 16

3.2 Foster + Parnters

Turkey's Design Council founder and chair *'Mehmet Kalyoncu'* spoke to the Architects Journal in regards to the *'challenges of redesigning'* the city *(Highfield. A, 3rd June 2024)*. Almost two years since the earthquake - Mehmet has said they have been carrying out *'extensive research and data collection on the regions historical and archaeological aspects' (Highfield. A, 3rd June 2024)* since the region is known for its rich *'roman and byzantine empires'* which overtime has formed a *'diverse ethnic and religious population'* with a *'rich local culture' (Kucharek. J, 2023).* With the big task at hand to redesign the entire city from scratch Turkey's design council is working with *'local and international companies'* with *'various disciplines' (Highfield. A, 3rd June 2024)* to ensure a highly skilled design team.

The main international company Turkey is working with is Foster + Partners, who were *'commissioned to develop a masterplan' (Pearman. H, 2024)* for the regions affected. Foster + Partners is one of the most well-known architecture companies with studios and projects all across the world – to have them involved in a project with such delicacy and vast area is what is needed to ensure the city is rebuilt to *'not collapse in the next earthquake'* and to transform the area to a *'more beautiful, interesting and liveable city than before' (Avunduk. A, 8th August 2024).* In order to achieve this, Foster + Partners have been compiling information from the local communities in the form of surveys (questions and maps) to ensure the new design of the city encompasses *'urban memory' (Highfield. A, 3rd June 2024)* of the region before the earthquake:

> *'Preserving these details ensures that residents do not feel alienated from the area. Notably, communal areas in the first buildings are being designed to revitalise neighbourhood relationships, creating opportunities for residents to reconnect and re-establish their daily habits'*

The plan for the region has been split into *'two separate projects'*, one being the *'reconstruction of the pilot areas'* and two, the *'masterplan for the wider city' (Highfield. A, 3rd June 2024)*. Whilst the pilot region is *'30km²'*, the plan for the wider city covers *'700km²' (Pearman. H, 2024)* – a project which could take over ten years to complete. To do this, Foster + Partners have set out *'eight design principles'* including the need to *'Build on safe land', 'Improve circulation',* and to *Improve open spaces' (Foster + Partners Website, 2024).* Their masterplan offers double the *'amount of green space'* whilst maintaining the number of *'stores and houses' (Highfield. A, 3rd June 2024)* as before, by building *'more compactly'* in the '*city centre' (Foster + Partners Website, 2024).*

Masterplan Designs


FIGURE 17


FIGURE 18


FIGURE 19

CHAPTER FOUR

ANALYSIS OF RESPONSES

This chapter compares the responses given by the Turkish and International Architects, to do this I will begin by analysing them against two theories related to Building Failures – previously mentioned in the Literature Review – *Building Failures: Case Studies in Construction and Design by Thomas Mckaig (1962) and Accidents Waiting to Happen by Adrian Forty (2019).* Using these theories and my findings in the previous chapters I will analyse the journals, focusing on who the writers were, when they were written - to see if the responses changed over time, all aiding in seeing how the commentary may have varied between local and international communities.

MCKAIGS THEORY

'Buildings fail through man's ignorance, carelessness, or greed' – something Mckaig said in 1962, yet it's not something that's gone away, instead it's gotten worse. Turkish Architect Haydar Karabey wrote to Arkitera on the 25th April 2023 questioning how the city of Antakya (also hit by the earthquake) can be rebuilt when it consists of:

> *'a group of structures that have been built layer upon layer, over at least 2000 years, and unfortunately, due to our ignorance, they were built on the Asi alluviums, and again due to ignorance and theft, they were built with a lot of completely unsafe, outdated construction techniques.'*

The city of Antakya has the Orontes/Asi River running through it – these *'alluviums'* that Karabey mentions form next to rivers and consist of a mixture of sand and clay. Whilst there are multiple problems with building in a location of this nature, the main problem lies within the ground conditions. The sand/clay ground condition is soft and malleable which isn't suitable to support the weight of a building block. However, if this location was the only option, then the building would require raft/deep pile foundations – these include long columns that go deeper into the ground – meeting with much stronger ground conditions. In the case of Antakya, these foundations weren't used – causing great destruction when the earthquake hit. Aside from this, Karabey points the blame towards the *'ignorance'* of the people in charge similar to Mckaig's theory that buildings will fail *'as long as men build'* especially if they don't *'properly supervise the work of others who may not realise the safety measures necessary' (Mckaig. T, 1962).* Mckaig hints that there are more qualified people than others, who should oversea the design/construction process, however in Turkey the building inspection system which is arguably one of the most important aspects of the process in ensuring the safety of the building, is said to be *'run by retired or newly graduated technical staff' (Özbay. H, 25th April 2023).* Unlike Mckaig's worry for "underqualified" people being supervised, Turkey has proven that even the qualified individuals need supervising.

FORTYS THEORY

The responses in both Turkish and International Journals are notably similar in terms of the problems and solutions mentioned in the previous chapters. Turkey's government run housing administration – TOKİ has become more widespread and whilst it follows the regulations closely, many of the Turkish responses argue that they *'cannot create a city'* and fear that people will become alienated

to the region especially if companies start building without taking the *'time to think again'* from a *'different perspective' (Karabey. H, 25th April 2023). Acar Avunduk*, who shared three articles to Arkitera in the following months of the earthquake, agreed with Karabey. On the *8th August 2024* he stated:

> *'The mistakes made or excessive greed for profit resulted in the death of over 50 thousand people and the formation of billions of dollars in property and damage. In order to not make similar mistakes, it was stated that it would be more appropriate not to rush the planning and construction process, but to start the planning and construction process with the participation of all actors (the local user population, local civil society organizations, professional chambers...)'*

The *'greed'* that Avunduk mentions is similar to what is mentioned in *Adrian Forty's 'Accidents Waiting to Happen',* where he says its more than possible to reinforce *'every building in an earthquake zone'* but people *'choose not to, because the cost of doing so, is so much greater than that of repairing or replacing damaged buildings'.* These individuals have the power to protect people but at the cost of a short-term gain/wealth they choose to hurt people in the long run with the *'sudden'* destruction of their homes, caused by the *'gradual' (Forty. A, 2019)* failures in the building. In theory, this large sum of over 200,000 buildings that were affected in the earthquake could have been prevented or not as severe as it was if there weren't greedy/careless individuals in charge of the safety of peoples lives as well as the people who bribe their way with money in order to '*gain legal exemption'* without the '*required safety certificates' (Hurst. W, 10th February 2023*).

Aside from this, what Avunduk says should happen is already in play by international companies – Foster + Partners and Buro Happold as well as local companies – DB Architects and KEYM. As mentioned previously, Fosters are working with the people as well as Turkey's design council to ensure the people don't feel alienated in their own city, unlike TOKİ's buildings. Whilst many Turkish architects have voiced their dislikes in TOKİ buildings, they fail to give credit to the improvements and strive for safer buildings that the government has taken. Not only are the TOKİ buildings earthquake resistant – proven by the *'133,759 houses built'* in the region – *'none of which were damaged' (Daniaalasali, 2024)*, they also offer affordable prices to '*low and middle-income target groups' (TOKİ Website).* This has led me to question – with a well-known company like Foster + Partners, will the low-income people be able to afford the new proposed homes? On the *4th February 2024* – a year from the earthquake, *Ruth Michaelson* – a journalist based in Istanbul interviewed a family who survived the earthquake but lost 23 of their extended family members said to The Guardian that the aim of Foster + Partners project is 'to push poor people out of town' and if they're rebuilding the 'centre for the rich and to leave the poor aside, it would be better not to do it at all' (Michaelson. R, 2024). Afterall how can a city maintain its heritage and culture if the people who created these leave the region. If the rich take over the area, they have no connection to the city like its people did.

CONCLUSION

MY RESPONSE

CONCLUSION

Throughout this dissertation I have collated a lot of responses from both international and local architects and a higher proportion of them highlight the problems, whether that's with the building system/education or materials or illegal activities. Majority of the responses have focused on the illegal work that goes on in Turkey, but they haven't arrived at a definitive solution to this problem, which doesn't provide much hope for the future.

Whilst these illegal activities have most commonly been found in private companies, it has proven more difficult to enforce regulations upon them therefore, the formation of TOKİ could be seen as a way of preventing this as they only hire trained personnel who ensure all the correct materials and inspectors are being used. However, a lot of the Turkish responses shared a similar view that TOKİ cannot create a city for the main reason that they offer *'no aesthetic value' (Avunduk. A, 14th April 2023),* I partially agree with them because they are very simple and look alike but, from what I see in England a lot of the residential blocks offer a similar modern aesthetic to one another, just like TOKİ. The question that pops into my mind is, why do Turkish architects dislike TOKİ so much? After some thought, I'm wondering if its down to TOKİ taking majority of the residential jobs from the private companies. In theory TOKİ is more likely to get approved since its working with the government and can be trusted, whilst the private companies are harder to monitor. Additionally, a lot of the responses thought *'famous/star architects'* should *'redesign Hatay' (Avunduk. A, 8th August 2024),* which I agree with, as TOKİ couldn't take on a project of this scale and like the architects, I don't believe TOKİ could revitalise the area to what it was – the culture and history within the region is so dense and the people who lost their homes and families deserve more than living in an unrecognisable city.

If we look at Japan for example, a region that is prone to earthquakes but ironically has *'some of the most earthquake resistant buildings in the world',* from the development of a strict building code which takes into consideration the *'type of soil, the depth of the buildings foundation, and the height of the building' (Housing Japan Web, 2023).* This should be Turkey's first point of change followed by the enforcement of the regulations. The reason Japanese architecture can withstand the force of frequent and high magnitude earthquakes is down to the *'flexible structure'* it consists of, as it enables the building to *'move with the ground' (Housing Japan Web, 2023)* during the earthquake. Japan's advanced technology equips buildings with an *'early warning system'* which detects the earthquake and *'automatically shuts off gas and electricity to prevent fires' (Housing Japan Web, 2023)* - if one country can be this technologically advanced then, why can't Turkey produce a building capable of standing. Japan has even created a structure for *'skyscrapers and high-rise apartments'* – Menshin Structure, which sits the building on *'lead, steel or thick layers of rubber'* and allows the '*foundation of the building to move'*, minimising the force on the *'upper frames' (TRT World Web, 2023).*

Whilst Turkey has made a step in the right direction with its TOKİ buildings, the next focus should be learning from Japan's systems and in cooperating them, because as much as TOKİ is trying to produce low rise buildings – there will always be a need for high rise buildings especially since the population is increasing.

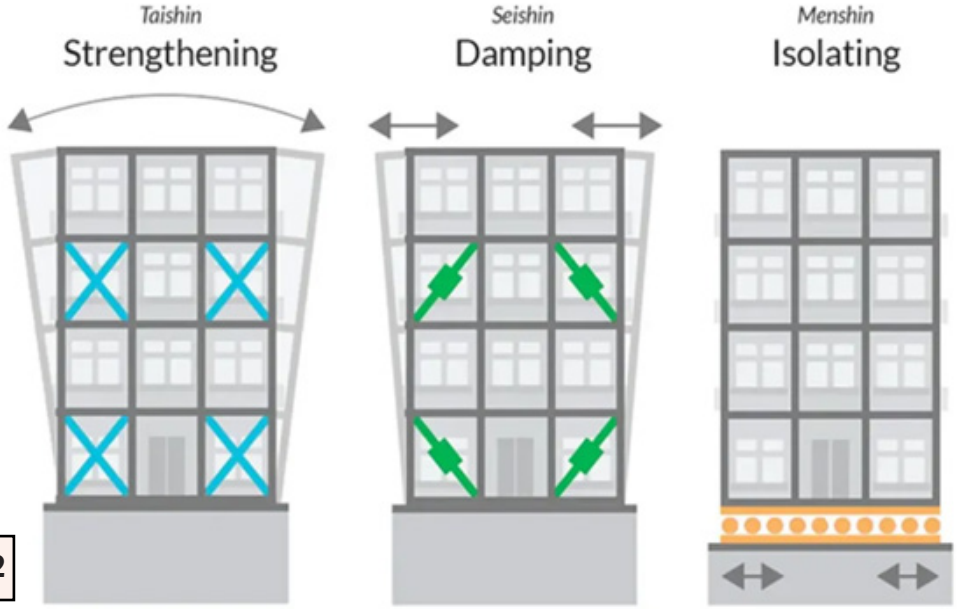


FIGURE 22

Despite everything that has happened there's one main aspect which falls into every category – money. Why have people used poor quality materials – cost, Why aren't trained/professional people being hired – cost, Why is the standard of education going down – cost, Why can't Turkey use structures like Japan - cost. Whilst cost won't always be the only factor, it will always be there as long as Turkey's economy doesn't improve. As someone who travels to Turkey every year, I have progressively watched the economy decline more and more, and whilst money cannot be an excuse for the destruction that was caused, I understand the desperation the people face. With the influx in migrants into the country is has put more of a strain on the economy as well as the government in producing homes for the ever-growing population.

To conclude, after all the research I have accumulated, I hope that severe changes are made to the building codes and enforcements are put into place to ensure the codes are followed. Other than rebuilding Kahramanmaraş, the other focus should be on rebuilding homes that were built before the new building codes and don't comply with them, to ensure in the next earthquake they don't collapse. I hope all the plans in place to revitalise the region are carried out to a high quality and the region doesn't have to suffer an event like this again. Overall, this dissertation has broadened my knowledge on factors that occur in industry that I wasn't aware of before, and as someone who has progressively been thinking about being an architect in Turkey, it has opened my eyes to how different architecture is, and has made me want to work there even more – for the people who became collateral in the earthquake and to put a stop to it. Whilst *'No one can bring back what was lost' (Michaelson. R, 2024),* efforts can be made to make their life more bearable and one day heal the hearts of the people who *'lost everything'*.

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FIGURE 15:
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FIGURE 22:
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APPENDIX

Date Order - In terms of Journals

JOURNAL	TURKISH QUOTE	TRANSLATION	CATEGORY
Köksal. A (4th April 2023) '"Istanbul cannot survive an earthquake without an earthquake..."' *Yapi Dergisi*	'Suffered more damage than any army bombing'	'Bombalamasından daha fazla zarar gördü'	Response
Bayrak. S (18th April 2023) 'Concrescere*: What Can Architects Do After an Earthquake?' *Yapi Dergisi*	'Ranked first in world cement exports and ready-mix concrete production'	'Dünya çimento ihracatında ve hazır beton üretiminde 2013 yılına kadar ilk sırada yer almıştır.'	Response
	'Earthquakes were not seen as a disaster that needed to be prepared for in every way, but as an excuse to accelerate construction activities even more.'	'deprem her yönüyle hazırlanılması gereken bir afet değil, inşaat faaliyetlerini daha da hızlandıracak bir bahane olarak görüldü.'	Problems with the System
Özbay. H (25th April 2023) 'It's Not the Earthquake, But the Crooked Building System in the Country That's Killing' *Yapi Dergisi*	'Reminded us that these settlements are on or near active fault lines'	'Bize bu yerleşimlerin aktif fay hatları üzerinde veya yakınında olduğunu hatırlattı'	Illegal Work
	'How these plans were made and how they were approved is the beginning of the problem.'	'Bu planların nasıl yapıldığı, nasıl onaylandığı sorunun başlangıcını oluşturuyor'	Illegal Work
	'The fact that every archi-tect and engineer who graduates from school en-ters the sector without gaining any experience and uses unlimited authority'	'Okulu bitiren her mimar ve mühendisin hiçbir deneyim kazanmadan sektöre girme-si ve sınırsız şekilde yetki kullanması sadace bize ve bizim gibi az gelişmiş ülkelere özgü bir durum'	Education Problems
	'Of course there will be changes, but the fact that the reinforced concrete sys-tem is being encouraged and this system is getting heavier is another danger'	'Geleneksel yapım yöntem-leri ve ahşap gibi malzemeler tekrar gündeme gelmeli.'	Material
	'The system, which is run by retired or newly gradu-ated technical staff, does not work. The main reason it does not work is that there is almost no one re-sponsible for the building.'	'Emekli olmuş veya yeni mezun teknik elemanlarla yürütülen sistem çalışmıyor. Çalışmamasının temel nedeni ise yapının sorumlusunun neredeyse olmaması.'	Problems with the System

	‘The easiest profession to get in the country is contracting. It is very easy to become a contractor and get construction work without any prerequisites.’	‘Ülkede en kolay elde edilen meslek müteahhitlik. Hiçbir ön koşul olmadan müteahhit olmak ve yapım işleri almak çok kolay.’	Problems with the System
	‘Most of the people who do contracting are not technical personnel. They are inexperienced people or companies that see construction work as a purely commercial activity and do not employ experienced personnel.’	‘Yapım işini salt ticari bir faaliyet olarak gören, yanında deneyimli personel çalıştır(a)mayan, deneyimsiz kişi veya firmalar. Artık yapım işlerinin ciddi bir kayıt sistemi içine alınması şart.’	Problems with the System
	‘It should be mandatory for craftsmen or sub-teams who do the work items that make up the construction to be trained and to request certification.’	‘İnşaatı oluşturan iş kalemlerini yapan usta veya alt ekiplerin eğitilmesi ve sertifika istenmesi zorunlu olmalı.’	Solutions
Sayin. N (5th May 2023) ‘Optimistically, We Need a 20-Year Period’ *Yapi Dergisi*	‘Turkey experienced a major migration wave from rural areas to cities’	‘Türkiye 1950’den sonraki politikalar nedeniyle kırsal kesimden kentlere doğru büyük bir göç dalgası yaşadı’	Problems of the past
	‘Two types of people came from rural areas; landowners who had enough money to do whatever they wanted, and agricultural workers who were too poor to do anything they wanted’	‘iki tip insan gelmişti; her istediğini yapacak kadar çok parası olan toprak ağaları ve hiçbir istediğini yapamayacak kadar yoksul olan tarım işçileriydi bu gelenler’	Problems of the past
	‘Shanty houses were built to meet the increasing need for shelter due to the migration of people from rural areas. The increasing shanty houses turned into “illegal structures” after a while.’	‘kırsal kesimden gelenlerin göçleriyle artan barınma ihtiyacı için yapılan gecekondular oluştu. Artan gecekondular bir zaman sonra “kaçak yapı”lara dönüştü.’	Illegal Work
	‘illegal buildings were not demolished but were made legal and their owners gained much greater construction rights’	‘kaçak yapılar yıkılmadıkları gibi yasal konuma getirilerek sahipleri her imar affında bir öncekinden çok daha büyük inşaat hakları elde ettiler.’	Problems with the System
	‘there was no longer a need for projects prepared by architects and engineers and approved by authorized institutions, and there were no longer any professional people to supervise the construction.’	‘Yasal olmayan işleri yaparken mimar ve mühendisler tarafından hazırlanmış, yetkili kurumlar tarafından onaylanmış projelere ve inşaatın denetimini yapacak meslek adamlarına da artık gerek kalmamıştı.’	Problems with the System

Gür. Ş (11th May 2023) 'Devils Triangle' *Yapi Dergisi*	'Planners who make urban zoning plans by turning a blind eye and ear to the warnings of earthquake ex-perts for the sake of doing business, architects who do not know how to do project control, unauthorized, un-documented, undiplomatic contractors who steal mate-ri-als and implementation time with excessive and unfair profit ambition and produce reinforced con-crete buildings with in-com-plete reinforcement and are not subject to any exams'	'İş yapmış olmak uğruna deprem uzmanlarının uyarılarına gözünü-kulağını kapatarak kent imar plan-larını yapan plancılar, proje kontrolü yapmayı bilmey-en mimarlar, aşırı ve haksız kar hırsı ile malzeme ve uygu-lama süresinden çalarak donatısı eksik betonarme binalar üreten ve hiçbir sınava tabii olmayan yetkisiz-belgesiz-diplomasız üstleniciler, bu uygulamaları kontrol et-meden onaylayan ve binaya oturma izni veren belediye yetkilileri'	Illegal Work
Avunduk. A (14th March 2023) 'When the Earth Shakes…' *Arkitera*	'I do not remember receiving any training or courses on earthquakes other than a one or two semester course focusing on Statics and Reinforced Concrete.'	'Statik ve Betonarme ağırlıklı bir veya iki yarı yıllık bir dersin dışında deprem konusunda herhangi bir eğitim veya ders aldığımızı hatırlamıyorum.'	Education
	'although we memorized in all our school textbooks which war was won on which day and date, which country was conquered when, we had never read or learned which major earthquakes shook Istanbul or Turkey in history, and to what extent our country's structures were damaged in which earthquakes'	'Yine tüm okul kitaplarında hangi savaşın hangi gün ve tarihte kazanıldığını, hangi ülkenin ne zaman fetih edildiğini defalarca ezberlediğimiz halde, İstanbul veya Türkiye'nin tarihte hangi büyük depremlerle sarsıldığını, ülkemiz yapılarında hangi depremlerde ne ölçüde hasar aldığını hiçbir şekilde okumamış ve öğrenmemiştik'	Education
	'I don't think that architecture education in today's sign universities is much different, and when I see my new graduate colleagues signing every project (10, 20, 30 storeys), I am amazed'	'Günümüzdeki tabela üniversitelerindeki mimarlık eğitiminin de pek farklı olduğunu düşünmüyor ve yeni mezun çiçeği burnunda meslektaşlarımın her projeye (10, 20, 30 katlı) imza attığını görünce, şaşırıp kalıyorum…'	Education
	'made savings (stealing!) in concrete, iron and especially in the rough structure, brought the construction costs down, then decorated them nicely, made them cheap, sold them cheaply and in an environment where there was no control system among our people, they rushed to buy these houses.'	'beton, demir ve bilhassa da kaba yapıda ekonomi yaparak (çalarak!) yapı maliyetlerini ucuza getiriyor, sonrada üstünü güzelce süsleyerek, ucuza mal edip, ucuza satıyor ve insanımızda hiçbir denetim sisteminin olmadığı bir ortamda koşa koşa bu evlerden almaya çalışıyordu.'	Materials/ Illegal Work

Avunduk. A (14th April 2023) 'Commonly Known Misconceptions About Earthquakes' *Arkitera*	'Reinforced concrete, if its architecture, static and reinforced concrete calculations are done by experts and experienced people and especially if its application is supervised (on site), is still one of the best construction techniques we have, for earthquakes…'	'Betonarme, mimarisi, statik ve betonarme hesapları uzman ve deneyimli kişilerce yapılırsa ve özellikle uygulaması (yerinde) denetlenirse, halen elimizdeki en iyi yapım tekniklerinden biridir, deprem için…'	Materials
	'Will we demolish all the buildings built according to the old regulations?'	'Tüm eski yönetmeliklerde yapılan yapıları yıkacak mıyız?'	Response
	'they were also damaged, but did not collapse like "pancakes!" Of course, it was stated that their locations were well chosen (in terms of ground) and after all, the buildings were 3-4 stories…'	'onlarında hasar aldığı, ancak "pankek!" şeklinde çökmediği anlaşıldı. Tabi yerlerinde (zemin açısından) iyi seçildiği belirtildi ve nihayetinde yapılar 3-4 katlı idi…'	Response
	'almost all of which are similar to each other, have no aesthetic value at all'	'kurumlar aracılığı ile yapmaya çalıştığımız, neredeyse hepsi birbirinin benzeri'	Response
	'but they will never be homes that people can call "home" and live in with enthusiasm, which will make them happy.'	'ama hiçbir zaman insanları mutlu edecek "yuvam" diyebileceği ve coşku ile yaşayabileceği evler olmaktan uzak kalacaktır.'	Response
Karabey. H (25th April 2023) 'Question: How can a destroyed city (in the example of Antakya) be rebuilt?' *Arkitera*	'After the Kahramanmaraş earthquake, despite all the "slow" warnings, TOKİ started a rapid and unplanned housing production. However, it has been said many times that TOKİ shelters cannot create a city.'	'Kahramanmaraş depremi sonrası, tüm "yavaş" uyarılarına karşın TOKİ, hızlı ve plansız bir konut üretimine girişti. Ne var ki, defalarca söylendi, TOKİ barınakları, bir şehir oluşturamaz'	Response
	'at most create a dormitory city. In this case, the first shock of a person leaving his safe house will be "I am alive, but where am I?" "Where is my street, my market, my barber, my neighbors, my place of worship?"'	'bir yatakhane kent oluşturacaktır. Bu durumda, güvenli konutundan çıkan insanın ilk şoku "yaşıyorum ama neredeyim ben?" demekle başlayacaktır. "Sokağım nerede, çarşım, berberim, komşularım, ibadethanem nerede?"'	Response
	'Let's look at Antakya. It is a group of structures that have been built layer upon layer, over at least 2000 years, and unfortunately, due to our ignorance,	'Antakya'ya bakalım. En az 2000 yıldır katman katman üstüne, eklemlenerek gerçekleşmiş ve ne yazık ki cehaletimiz yüzünden Asi alüvyonları üzerinde ve yine	IGNORANCE

	they were built on the Asi alluviums, and again due to ignorance and theft, they were built with a lot of completely unsafe, outdated construction techniques.' 'It is time to think again and from a very different perspective.'	cehalet ve hırsızlık nedeniyle tümüyle güvensiz bir sürü çağdışı inşaat teknikleriyle üretilmiş bir yapılar topluluğu' 'Yeniden ve çok farklı bir bakış açısı ile düşünme zamanıdır'	Response
Avunduk. A (8th August 2024) 'Rebuilding Hatay Destroyed by Earthquake' *Arkitera*	'unfortunately, the mistakes made or excessive greed for profit resulted in the death of over 50 thousand people and the formation of billions of dollars in property and damage. In order not to make similar mistakes (in Hatay and other earthquake zones...), it was stated that it would be more appropriate not to rush the planning and construction process, but to start the planning and construction process with the participation of all actors (first of all, the local user population, local civil society organizations, professional chambers' 'In other words, if famous/star architects redesign Hatay's project, the people of Hatay will not collapse in the next earthquake, they will live in sturdy and safe houses, they will live happily and Hatay will be a more beautiful, interesting and livable city than before'	'Ancak ne yazık ki yapılan hatalar ya da aşırı rant hırsı 50 bini aşkın insanın ölümü ve milyarlarca dolarlık mal ve hasarın oluşumu ile sonuçlanmıştı. Benzer hataları yapmamak adına (Hatay ve diğer deprem bölgelerinde...) yeniden planlama ve inşaat sürecinde fazla acele edilmemesini, konun her yönüyle derinlemesine analiz edildikten sonra tüm aktörlerin katılımıyla (öncelikle kullanıcı yerel halk, yerel sivil toplum örgütleri, meslek odaları' 'Yani ünlü/star mimarlar yeniden Hatay'ın projesini yaparlarsa, Hataylılar bir dahaki depremde yıkılmayacak, sağlam güvenli konutlarda oturacak, mutlu mesut yaşayacak ve Hatay eskisinden daha güzel ilginç ve yaşanılır bir kent olacak'	Solution Solution

TREMORS TO TEARS

Yasemin Taylan