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Triggers That Redefine a City: Antifragility, Resilience, and Fragility in the Case of Skopje

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Abstract

Cities are constantly transformed or reshaped by various triggering natural or political events, which can lead to positive or negative outcomes in the urban environment. When such events trigger the urban condition of a city, the reaction toward its improvement is more important than the trigger itself. This paper explores outcomes for such reactions in an urban context, relying on the conceptual framework of Taleb (2012) and Lefebvre (2017) regarding antifragility, resilience, and fragility. The city of Skopje in North Macedonia was chosen as a case study area for exploring how this city evolved and reacted to two major events that happened specifically in this city: the 1963 earthquake and the transition period after 1991 independence. By employing a qualitative descriptive literature review and implementing Taleb's asymmetry test, this paper evaluates how these triggering events redefined the city's spatial and social condition. The findings indicate that Skopje reached antifragility as a response to the massive earthquake, then stabilized into a resilient state in terms of seismic controls, and afterward dropped into a fragile state as a response to the socio-political and economic challenges during the post-independence period. The paper opens a discussion about the future development of Skopje, arguing that in order to improve the current state of the city and reach the antifragility condition again, lessons from the previous situations should be considered.

Keywords: triggering events, urban development, Skopje, antifragility, resilience, fragility

Introduction

The urban environment is in constant change, being influenced and gradually shaped by various triggering events. These triggering events, which can be natural or political, play a crucial role in defining the future development of a city. A triggering event can be explained as a situation that causes several transformations in the spatial, social, and economic aspects.

Triggers can have various meanings according to different perspectives. They can appear suddenly, or they can be caused intentionally. A triggering event can be defined as "a tangible or intangible barrier or occurrence which, once breached or met, causes another event to occur" (The Definition, n.d.). These triggers redefine the city under different conditions: from *antifragile* to *fragile*, with a *resilient* moment in between.

The term *antifragile* combines the ideas of delicacy and strength. It goes beyond recovery from disorder, chaos, harm, or uncertainty; it describes a system that gains more than it loses and improves as a result of these conditions (Taleb, 2012). Lefebvre (2017) defines antifragility as "the ability to thrive and prosper in chaos and adversity."

The concept of *antifragility* was introduced by Nassim Nicholas Taleb (2012), who argued that no existing word in major languages captures its meaning. He explains it by contrasting it with "*fragile*" and "*robust*" (or "*resilient*"). For example, if a package of champagne glasses is labeled "*fragile*," it risks damage if mishandled. A "*robust*" package might survive mishandling but will not improve from it. Taleb proposes the idea of an "*antifragile*" package, which would actually benefit from mishandling (Taleb, 2012, pp. 49–50). In his words: "The fragile is the package that would be at best unharmed; the robust would be at best and at worst unharmed. And the opposite of fragile is therefore what is at worst unharmed" (Taleb, 2012, p. 49).

Lefebvre (2017) categorizes systems into *fragile*, *resilient*, and *antifragile*. *Fragile systems* perform well under normal conditions but fail instantly under stress (e.g., race cars). *Resilient systems* endure stress without improving (e.g., farm equipment). *Antifragile systems* benefit and evolve under stress (e.g., the human body strengthens through exercise; the mind develops through learning).

The analogies from Greek mythology can be convenient metaphors. According to the legend, Hydra is a creature with multiple heads that, if harmed, grows more

heads, representing *antifragility* (Garcìa & Miralles, 2016, p. 174). Whereas Damocles is a courtier threatened by a hanging sword on the ceiling that can hit him in a matter of time, representing *fragility* (Taleb, 2012, p. 51).

Research Objectives

This research deals with how to recognize the state of antifragility, resilience, and fragility in a certain city, caused by triggering events, and what lessons can be extracted from them. The research is focused on the city of Skopje as a case study area, due to its experience in terms of both a natural trigger, such as the 1963 earthquake, and a socio-political trigger, such as independence after the dissolution of Yugoslavia. The main objective of this research is to determine how these events affected the city and to evaluate in which direction Skopje has evolved under different conditions, positioning it within the framework of antifragile, resilient, or fragile.

Methodology

In order to recognize antifragility and fragility in cities, the methodology of this research follows the theoretical framework of Taleb (2012) and Lefebvre (2017), who define the three systems: *antifragile, resilient,* and *fragile*. Taleb (2012) states that it is crucial to note that these terms are relative and limited to a specific situation. Therefore, he suggests a simple asymmetry test as a method for detecting these conditions:

- Systems with more upside than downside from shocks are antifragile.
- Systems with more downside than upside are fragile.

In this paper, the asymmetry test is drafted for the city of Skopje. It is based on a historical literature review of this city to identify its crucial events and their effects on the whole urban context. Positioning the literature findings into these three categories: *antifragile, resilient,* and *fragile* phases of development, enables a comparative analysis that defines how the city of Skopje has evolved.

Results

The Antifragile Phase: Post-Earthquake Reconstruction

On the morning of July 26th, 1963, a massive earthquake hit the city of Skopje, which was then part of the Socialist Republic of Macedonia in Yugoslavia. In this disaster, 1,070 people lost their lives, 150,000 people were left without their homes, and 80% of the city was destroyed (Ivanovski et al., 2015; Niebyl, 2021). This event created vague feelings and chaos all around, questioning the future of the city, whether it would remain like that and become fragile, whether it would become resilient toward natural disasters, or whether it would rise from the ashes and become antifragile.

As a response, an international collaboration emerged, in which 80 places from all over the world joined forces and donated to rebuild the city of Skopje. An international competition was opened for a Master Plan for the city, which resulted in a collaborative winning solution between the Japanese team led by Kenzo Tange with 60%, and the Zagreb team of Radovan Miščević and Fedor Wenzler with 40% (Ivanovski et al., 2015; Niebyl, 2021).

This Master plan was more than just a plan for rebuilding the city of Skopje and rethinking the entire city structure. "It was a chance to shape a modern society" (Deipenbrock et al., 2011, p. 90). Tange's idea can be identified within the framework of the modern style of Structuralism and within Japanese Metabolism. He focused on human communication and interaction as key elements for the spatial structure, mixed use as a new urban enhancement, and megastructures that could "grow, change and regenerate depending on people's current needs" (Deipenbrock et al., 2011, p. 96). His unique and outstanding futuristic concept was more representative in the central part of the city, which consisted of two significant components: the *City Gate* - a complex of vertical towers that symbolize the entrance to the city and a transportation center, and the *City Wall* - a complex of housing units with a ground-floor commercial space along a pedestrian zone, positioned like a borderline that defines the center of the city (Ivanovski et al., 2015; Niebyl, 2021).

Unfortunately, this Master plan did not realize its fullest due to insufficient funds, the long duration of planning and realization, and a mentality of solving issues straightforwardly but not in the best way. In the process of realization, there were many modifications, adaptations, and even completely unbuilt structures, such as the *City Gate* (Deipenbrock et al., 2011, pp. 101-182). That is why it is hard to read Tange's goals and visions when the whole urban plan cannot function at its best because pieces of the puzzle and their connections are missing.

Even though this Master plan was not realized completely, the realized parts reflect the zeitgeist of Modernism and have become landmarks of the city. During the post-earthquake period, Skopje developed like other world architectural legacies, with a high degree of quality and professionalism, in a rather short period (Ivanovski et al., 2015, pp. 81-82). It became more than just resilient toward natural disasters. Based on the asymmetry test, the right path was chosen. Skopje became a symbol of solidarity (Deskova et al., 2020; Trajanovski, 2021) with a huge modern legacy. It was antifragile.

The Resilient Phase: Institutional and Technical Adaptation

"Urban resilience is the capacity of a city's systems, businesses, institutions, communities, and individuals to survive, adapt, and grow, no matter what chronic stresses and acute shocks they experience" (Resilient Cities Network, 2022).

After the earthquake in 1963, the first seismic design codes, *Privremeni tehnicki propisi za gradenje vo seizmicki podracja. SI. List na SFRJ br. 39/64* were enforced, and since then they have been implemented and upgraded (Milutinovic & Garevski, 2005). "This mechanism assured the high quality of construction works, its full compliance with seismic safety requirements in effect, and monitoring/inspection (physical and financial) during the entire construction process" (Milutinovic & Garevski, 2005, p. 7).

In addition, the Institute of Earthquake Engineering and Engineering Seismology was formed in 1965, which represents a crucial institutional advancement and still functions as a research center, playing a mandatory role in the approval process for all construction activities, thereby reinforcing the city's capacity to manage seismic risk.

Through these initiatives, Skopje became (and still is) resilient in terms of natural disasters such as earthquakes. However, this resilience remained largely within the technicalities and regulations of the seismic domain. It did not extend to the maintenance and preservation of the modern legacy established during the post-earthquake period. The existing modern buildings of that timeframe are nowadays renovated to a minimal extent, or even hidden, because another trigger occurred that did not make the city antifragile, but quite the opposite.

The Fragile Phase: Post-Independence Transformation and Urban Reconfiguration

On 8th September 1991, North Macedonia gained its independence from Yugoslavia and became a democratic state. This huge step looked like another positive opportunity for North Macedonia, but instead, crisis, uncertainty, ethnic issues, and national identity problems prevailed (Deipenbrock et al., 2011, p. 186).

Just like all countries of the former Yugoslavia that entered a transition period, North Macedonia, with its capital city of Skopje, endured profound socio-economic changes that had a direct impact on the planning systems, regulatory frameworks, and the overall urban form. According to Stefanoska and Koželj (2012), this process can be divided into three stages. The first one (1992-1993) represents the initial stage of privatization with undefined building regulations; the second one (1993-2004) represents urban instability marked by rapid spatial development under decentralized governance; and the third one (1993-2004) represents the market-oriented stage, where private profit dominates over the public interest.

Within this context, the then-ruling Macedonian government, the Ministry of Culture, and the Municipality of Centar joined forces and, in 2010, presented a project called *Skopje 2014* to its citizens (Macedonian Information Centre, 2010). The purpose of this project was to redefine the visual identity of the city center through the adoption of a neoclassical architectural style. It consisted of a wide range of interventions, such as the construction of new buildings, multi-story garages, new facades, squares, underground garages, bridges, sculptures, fountains, and other infrastructural elements (Skopje 2014 Uncovered, 2018).

This project disrupted the financial situation of the country, costing over 684 million euros (Skopje 2014 Uncovered, 2018). Spatially, it also contributed to the reduction and fragmentation of public space in the central part of Skopje, occupied by the new developments. Architecturally, the style of the buildings has been critically described as "kitsch," characterized as superficial and unauthentic (Deipenbrock et al., 2011, p. 206). Among economic, urban, and architectural issues, other fragile moments occurred.

This response to the transitional crisis revealed and emphasized core problems that were more than just architectural. "Reconstruction in Skopje is no longer purely architectural. It goes beyond a matter of taste, provoking questions of political or social intent" (Deipenbrock et al., 2011, p. 188). The "new look" of Skopje fueled

the ethnic conflicts between Macedonian and Albanian communities and provoked even more tensions with neighboring countries by promoting contested historical narratives as a foundation for identity construction. It also ignored and suppressed the built legacy from the post-earthquake period, as well as the voices of citizens and professionals who protested and debated against this project. "Skopje 2014 was an undemocratic, opaque, top-down, and nepotistic undertaking. It was also an assault on Skopje's architectural heritage" (Sidzimosvska, 2019).

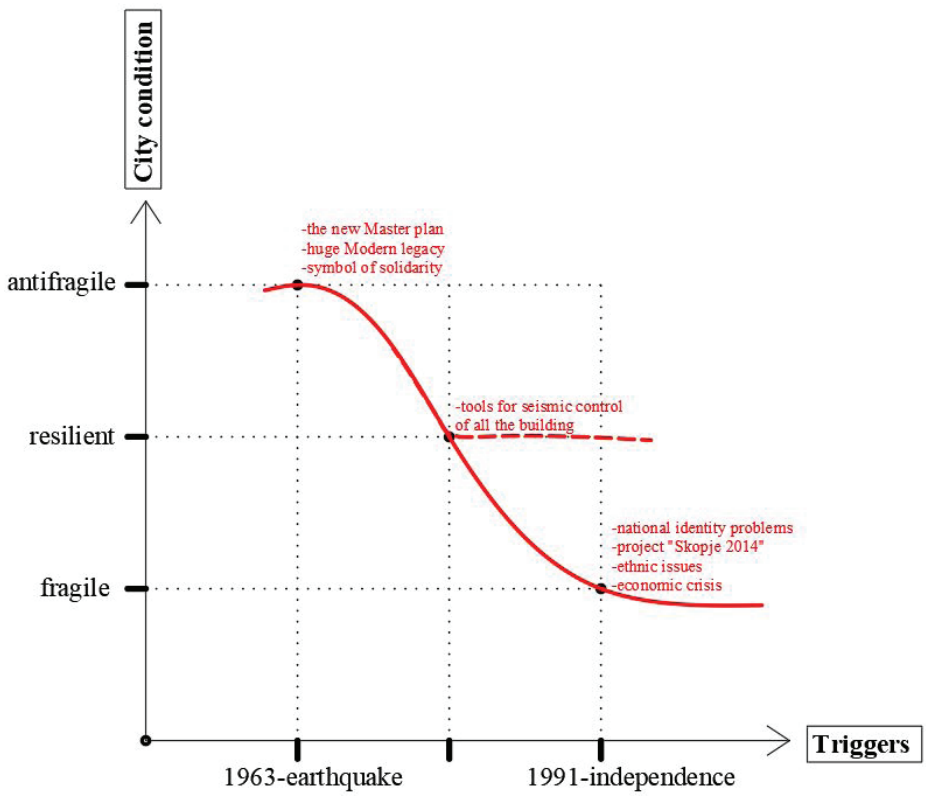
This project officially stopped in February 2018, when the new government replaced the former one that initiated it. Some of the projects remained stuck in the construction phase. This layer of Skopje reflects a critical period, as it deteriorates the image of the city and the spatial memories of its inhabitants. As a result of this situation, spatial and social alienation appeared (Petrunova & Rustemoska, 2019; Sidzimosvska, 2019).

"Architecture has always been a product of its time and sparked resistance, but the question in Skopje has taken on new dimensions" (Deipenbrock et al., 2011, p. 188). In contrast to the post-earthquake phase, this phase represents a regression, interpreted as a shift from authenticity to constructed imagery, from solidarity to alienation, and ultimately from an antifragile to a fragile city.

Based on the literature review regarding these three phases explored in the city of Skopje, **Diagram 1** is formed as a visual representation of the asymmetry test according to Taleb (2012). It represents how Skopje has evolved in response to two major triggering events: the 1963 earthquake and the 1991 independence. The curve shows how Skopje gained its peak moment of antifragility as a response to the big earthquake, then stabilized during a resilient state where the tools for seismic control took place, and reached its lowest point of fragility during the post-independence phase due to socio-political and economic changes. This diagram highlights that whenever a city faces a triggering event, it is up to the governance, social responsiveness, and adaptive planning to determine whether the outcome will be antifragile or fragile.

Diagram 1

Triggers that redefine a city, explored through the asymmetry test by Taleb (2012), in the case of Skopje. (Source: Author, 2026).



Discussion

Nowadays, North Macedonia, with its capital city of Skopje, still remains in a state of liminality, aiming for entry into the European Union. These two major trigger events (the 1963 earthquake and the 1991 independence) have reshaped the city of Skopje in both positive and negative ways (Diagram 1), leaving behind layered interventions, each carrying its own narrative. Deipenbrock et al. (2011, p. 264) note that the city appears as a compilation of contrasts between Modern and Baroque, poor and rich, large and small, old and new, as well as Muslim and Orthodox Christian elements, all positioned in proximity. In the transitional period between these two events, a moment of resilience can be identified, expressed through the

implementation of seismic control measures applied to buildings in response to earthquake risks (Diagram 1).

Can a city that once performed successfully in the asymmetry test of antifragility, but later declined (Diagram 1), rise again and become antifragile for a second time? Or will it evolve into something else?

This paper opens a discussion around this question and reflects on several lessons that can be drawn from the situations the city of Skopje has undergone, such as:

- the importance of following contemporary architectural expressions that reflect their time while maintaining a vision for the future;
- the need for collaboration with citizens to prevent forms of spatial and social alienation;
- the development of urban resilience tools when necessary;
- the promotion of inclusive governance to restore trust in professional practices;
- and the strengthening of an inclusive cultural approach, to foster acceptance of the built environment.

As Bakalcev (2017) suggests, "we should avoid the method that *Skopje 2014* used, to destroy everything else." He further argues that *Skopje 2014*, despite its controversial nature, represents a distinct layer in the city's biography and should be preserved as such, serving as evidence that "the top-down planning of monolithic cities is not possible anymore."

What is needed is "an awareness that fosters the ability to critically engage in dialogue with existing vulnerabilities and to define forms of redress that can meaningfully reshape the situation" (Zupančič, 2021). It is crucial to detect the vulnerabilities of a city in order to understand what kind of initiatives for improvement can be implemented. For example, the Happiness Research Institute in Copenhagen is constantly researching the aspect of happiness in different contexts. The results have an impact on public policy, and working according to them has ranked Denmark as *the world's happiest country* (Wiking, 2016).

In the case of Skopje, there is no need to wait for another sudden trigger to occur in order to take action. The state of liminality is the trigger itself. A possibility for improving the curve in the asymmetry test can be found in the lessons extracted from previous situations. Creating different tools in practice, based on those lessons, can be the first step toward the future development and improvement of this city.

References

Bakalcev, M. (2017). *Zoshto treba da go zashtitime Skopje 2014?* [Why should we protect Skopje 2014?]. *Respublica*. https://respublica.edu.mk/blog/javen-interes/o-e-2014/

Deipenbrock, E., Held, M., Herbst, Ch., Kaulen, Ch., Kohler, L., Pudimat, M., Rohde, M., Vincent, K. (2011). *Skopje – A Modern City?* HafenCity Universität Hamburg.

Deskova, A. I., Deskov, V., & Ivanovski, J. (2020). Constructing the City of Solidarity: Alfred Roth's Elementary School in Skopje. *Histories of Postwar Architecture, 6,* 121–137. https://doi.org/10.6092/ISSN.2611-0075/10412

Garcìa, H., & Miralles, F. (2016). *Ikigai: The Japanese Secret to a long and happy life.* Hutchinson.

Ivanovski, J., Deskova, A. I., Deskov, V., Karanakov, B., Marina, O., Mickovski, G., & Radevski, A. (2015). *Naodi: Nacionalen paviljon na Republika Makedonija: 14. Megjunarodna arhitektonska izlozhba, Bienale vo Venecija* [Findings: National pavilion of the Republic of Macedonia: 14th International Architecture Exhibition, Venice Biennale]. Mladinski kulturen centar.

Lefebvre, M. (2017). What is antifragility, and how can it help me? *Primos Populi.* https://www.primospopuli.com/en/what-is-antifragility/

Macedonian Information Centre. (2010). Skopje is to have a new look by 2014. http://micnews.com.mk/node/20979

Milutinovic, Z., & Garevski, M. (2005). National reporting and information on disaster reduction. World Conference on Disaster Reduction.

Niebyl, D. (2021). Skopje's 1963 quake: From ruins to modernist resurrection. *Spomenik Database.* https://www.spomenikdatabase.org/post/skopje-s-1963-quake-from-ruins-to-modernist-resurrection

Petrunova, I., & Rustemoska, E. (2019). *Gradot vo tranzicija: Od ekoloshki, socio-prostorni i arhitektonski promeni do odrzhliv grad: Skopje pomegju teorijata i mozhnostite* [The city in transition: From ecological, socio-spatial, and architectural changes to a sustainable city: Skopje between theory and possibilities]. Friedrich-Ebert-Stiftung.

Resilient Cities Network. (2022). *What is urban resilience?* https://resilientcitiesnetwork.org/what-is-resilience/

Sidzimosvska, I. (2019). After overthrowing its government and changing its name, North Macedonia faces up to the urban crisis in Skopje. *The Calvert Journal.* https://www.calvertjournal.com/features/show/11141/after-overthrowing-its-government-and-changing-its-name-north-macedonia-faces-up-to-the-urban-crisis-in-skopje

Skopje 2014 Uncovered. (2018). http://skopje2014.prizma.birn.eu.com/en

Stefanovska, J., & Koželj, J. (2012). Urban planning and transitional development issues: The case of Skopje, Macedonia. *Urbani Izziv, 23*(1), 91–100. https://doi.org/10.5379/urbani-iziv-en-2012-23-01-002

Taleb, N. N. (2012). *Antifragile: Things that gain from disorder.* Random House.

The Definition. (n.d.). Triggering event - definition and more. https://the-definition.com/term/triggering-event

Trajanovski, N. (2021). The city of solidarity's diverse legacies: A framework for interpreting the local memory of the 1963 Skopje earthquake and the post-earthquake urban reconstruction. *Journal of Nationalism, Memory and Language Politics, 15*(1), 30–51. https://doi.org/10.2478/JNMLP-2021-0007

Wiking, M. (2017). *The little book of hygge*. Harper Collins.

Zupančič, T. (2021). Editor's foreword "Občutek za ranljivost" and artifice of redress. In *The artifice of redress*. https://ar.fa.uni-lj.si/2021/tadeja-zupančič-občutek-za-ranljivost-and-artifice-of-redress