

APPROACHING SOCIETAL SAFETY FROM THE URBAN PERSPECTIVE

Llopis Alvarez, Ana¹, Njå, Ove²

¹*Department of Safety, Economics and Planning, University of Stavanger,
(NORWAY)*

²*Department of Safety, Economics and Planning, University of Stavanger,
(NORWAY)*

ana.l.alvarez[at]uis.no, ove.njaa[at]uis.no

Abstract

The interaction of individuals with their environment is continuous and dynamic. This interaction implies that the urban territory and community are mutually modified. The frame conditions of the urban community provide the individuals with their perceptions of safety. Safety is seen as a key element for the use of public space, as well as a relevant indicator for people's quality of life. The various forms of interactions can lead to relevant repercussions on the feeling of safety experienced in certain spaces, which in turn will influence their use, generating a spiral restricting the use of some spaces or stimulating the frequentation of others. Approaching the concept of societal safety by adopting systems safety engineering raises interesting discussions. The legal, the moral and the cultural frameworks need to be modelled in its social contexts by use of constraints and control structures. We emphasize that our approach does not encourage comprehensive surveillance of people, but rather address levels of societal safety knowledge needed amongst urban planners. Given the importance of conflicts in the perception of safety, a conciliation mechanism should be created, which requires political will, adequate legislation and collective effectiveness. This paper is a contribution to assess the spatial conditions related to the safety concept. It includes developing constraints by using system safety theory that will form the framework for social and urban practice and performance seen from the urban planning perspective.

Keywords: Societal safety, system theory, community behaviour, citizen coexistence, quality to urban life, spatial conditions, collective effectiveness, migration process.

1. SOCIETAL SAFETY: THE CONCEPT

This paper discusses spatial conditions related to the safety concept. It includes developing constraints by using system safety theory. It is a first step of forming a framework for social and urban practice and performance seen from the urban planning perspective.

Societal safety is a concept developed in Norway during the two last decades. The concept is heavily focused and currently Norway has a specific national directorate holding societal safety in its name. One definition reads: 'The society's ability to maintain critical social functions, to protect the life and health of the citizens and to meet the citizens' basic requirements in a variety of stress situations' [1]. Some would argue that this concept is heavily subjected to crises and crisis mitigation, which we claim addresses only one part of the concept. In our terms societal safety aims to be a systematic approach for understanding, mitigating and responding to general social problems such as extraordinary stresses and losses, interferences in complex and mutual dependent systems, or lack of trust in vital societal institutions.

Globalization of the economy, changes in demography, terms of trade, concentration in economic resources, complex and interlinked global technologies and infrastructures, increased mobility due to wars, crises, disasters or just tourism, environmental changes, responses to pandemic diseases, uncontrolled spread of weapons of mass destruction and global networks organizing terrorism or criminal activities - they all entail changes that can affect the vulnerability of society.

Societal safety is a systematic approach for understanding and responding to social challenges that encompasses the works of urban planners. Thus, societal safety also entails coordination, organization and assignment of clear roles of the different actors working with public issues at the international, national and local levels. It has to deal with the policies and measures needed to ensure that vital functions of society are maintained, thereby enabling the population to organize their lives regardless of the form of government and national boundaries.

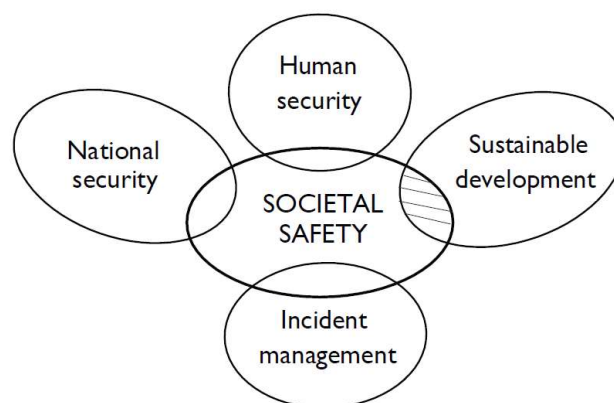


Figure 1: Societal safety and other safety-related areas [1].

The maintenance of societal safety and national security relies on some overlapping conditions, depicted in Figure 1. The overlapping conditions of societal safety and the sustainable development are relevant when referring to urban planning. The World Commission on Environment and Development's (WCED) definition of sustainable development [2] stands strong taken into consideration the consequent use of the trichotomy of environmental balance, economic feasibility and social equity. However, there is no overall and recognized definition for sustainable urban development, particularly with regards to its qualitative aspects [3]. Fulfilment of physical, social, intellectual and psychological needs of the individual is not only a precondition for social sustainability but also for individual well-being and thus, for high quality of life. Quality of urban life can be interpreted as an integral part or a goal of the holistic urban sustainability framework. The good community is one in which the legitimacy of the social order comes from a mutual and negotiated compromise between the residents, the mediating institutions and the agencies in charge of applying the law.

2. SYSTEM THEORY APPLIED

System theory dates from 1930s and 1940s and was a response to limitations of the classic analysis techniques in coping with the increasingly complex systems emerging at that time [4]. "System safety goes beyond the hardware and associated procedures of system safety engineering. It involves: attitudes and motivation of the designers and production people, employees/management rapport, relation of industrial associations among themselves and the government, human factors in supervisions and quality control, public safety with design and operations, the effects of the legal system on exchange of information, political considerations, public sentiment and many other non-technical but vital influences on the attainment of an acceptable level of risk control. These technical aspects of system safety cannot be ignored (...)" [5]. System safety provides the theoretical foundation for systems engineering, which views each system as an integrated whole. Systems theory goes beyond engineering, by involving different actors achieving the concept of "safeness" by planning, designing and using spaces. Safeness is the noun of safety and addresses in this article the expression and influence urban spaces have on various groups of people. Systems theory requires attention to the social, environment and urban aspects, fulfilling every requirement from the specified fields.

Systems theory is relevant for systems attaining organized complexity, which by Leveson [5] is described as "too complex for complete analysis and too organized for statistics; the averages are deranged by the underlying structure". The system approach assumes that some properties of systems can be treated adequately only in their entirety, taking into account all facets relating the social factors to the technical aspects. Imposing safety constraints plays a fundamental role in the approach of safety. Control in open systems implies the need of communication.

2.1 The Hierarchical Safety Control Structure

Systems are viewed as hierarchical structures, where each level imposes constraints to the activity of the level beneath it, i. e., constraints from a higher level can control lower-level behaviour. Safety management is defined as creating a safety control structure that will enforce desired behaviours and ensure its continued effectiveness as changes and adaptations occur over time.

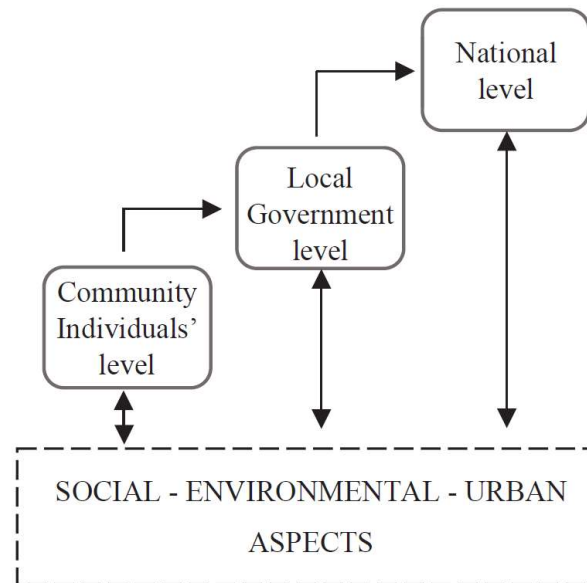


Figure 2: Systems theory applied in this study.

The structure considered for this study is restricted to the three different levels depicted in Figure 2. The *individual* interactions between neighbours (the community behaviour) encompassing trust, reliance and proper social interaction is needed in order to achieve citizen coexistence. There is a relevant role expected from the community, since it is necessary a solid basis. The purpose of this community behaviour is a proper social interaction between the individuals of a community, as well as a proper use and behaviour towards the urban areas they use.

The *local government level* is referred to as the maintenance of public and spatial order as well as the local political and regulatory enforcement. Rehabilitation of public spaces, control over specific activities, housing policies or rational distribution of specific services are some examples of what is expected at the local government level. The *national level* covers phenomena such as migration impacts (social integration, cultural mix, etc.), laws and justice, labour and housing market or economic aspects, which of some parts could be referred to as regional, but we omit the regional perspective. The three levels are presented into a hierarchy characterized by different concepts in each level. Communication between the three is therefore necessary in terms of enforcement and effectiveness.

2.2 Public safety and urban planning

In the dynamic interaction between individuals and their environment, the sense of safety is a key element for the use of public space. Thus, it is a relevant indicator for people's quality of life [6].

We are often not aware of the continuous interaction we have with the space in which our daily life develops, i. e., it limits or facilitates certain actions or relationships, reminds us of historical figures or, models our attitude and behaviour, at the same time that we modify it or give it meanings and essence with our own activity.

In this complex dynamic of mutual influences, the perception of public safety [7] plays a relevant role, since certain morphologies or spatial arrangements promote different sensations and attitudes.

Vigilance, obviously, is a key element in this dynamic, as well as one of the most marked features of contemporary society [8]. The desire to achieve a transparent and easily monitored urban environment is acquiring new features in our days thanks to the new technologies [9], such as video cameras and swipe terminals contribute to transparency to the urban pattern and resituate very diverse activities. However, the spatial morphology itself influence individuals and the perception of safety, while creating conditions for the repression of conflicts and crimes. Rudolph Giuliani in his plans to avoid crime in the city of NY, proposed a strategy based, partially, on what had become popular as the theory of "broken windows" [10]. Small damages, faults or alterations of order, i. e., broken windows or lanterns or uncontrolled street noise, they create a certain sensation of absence of control that generates a spiral that tends towards disorder and, later, towards the breach of the norm. The spatial and aesthetic aspects appear as a key element of the strategies that relate to the problem of urban safety.

From the spatial perspective, when referring to the term of societal safety, a wide range of urban interventions must be analysed, which could range from lighting systems to rehabilitation policies in some neighbourhoods, with the aim of displaying strategies of public order management. It would lead urban planners to provide a methodology to address societal and public safety and where we can find clues for interventions that promotes coexistence that increases the sense of security and well-being.

2.3 Case Study: Storhaug

2.3.1 Immigrant situation

One of the main factors of growing populations is the arrival of immigrants in European cities that is transforming their structure. The irreversible changes of territorial and social concentrations of ethnic diversification, changes in social and cultural composition and with the generation of new social needs imply consequent problems of coexistence and urban segregation. Thus, personal safety is also

influenced [11]. Cities are places of relationships, contacts, creativity and innovation. Historically, large urban centres have always been areas of greater freedom, refuge for the poor and minorities. This has encouraged many people to emigrate, not to specific countries, but to cities [12].

2.3.2 The case study

The background for our study was the need to understand perceptions and behaviour of residents of urban areas that had a high proportion of immigrants. We wanted to contrast and compare views of people living in coexistence and shared urban spaces. This is part of a wider research study that compares the Norwegian society and immigrant population based on their residential conditions and quality of life [13].

The first author interviewed 125 residents (60% Norwegian, 40% immigrants), and connected their responses to satisfaction about their personal safety with other indicators related to social integration, neighbourhood characteristics, the social environment or the reason of locating in the area. This is the first assessments of societal safety aspects from the study.

Storhaug is a neighbourhood in Stavanger, Norway. Its population is 17.174, with a 20.6 % of immigrant population, which situates it the first in terms of immigrant population in Stavanger.

2.3.3 Results

The Norwegian respondents are more satisfied about their personal safety in the area of Storhaug than their immigrant neighbours (Fig.3). However, the proportion of dissatisfied persons is rather small, only 9 of the 125 persons were very dissatisfied or dissatisfied.

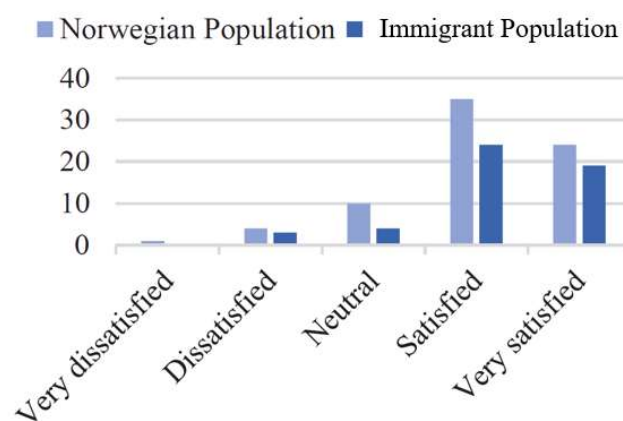


Figure 3: Level of satisfaction about personal safety among different population groups.

Referring to the concept of social integration or segregation, respondents were asked if they were feeling socially integrated in Storhaug. 68% of Norwegian population confirmed, while only 56% of the immigrant population felt socially integrated. When relating this concept to the degree of satisfaction about personal safety, the results obtained showed that those feeling socially integrated are also more satisfied about their personal safety (Fig. 4).

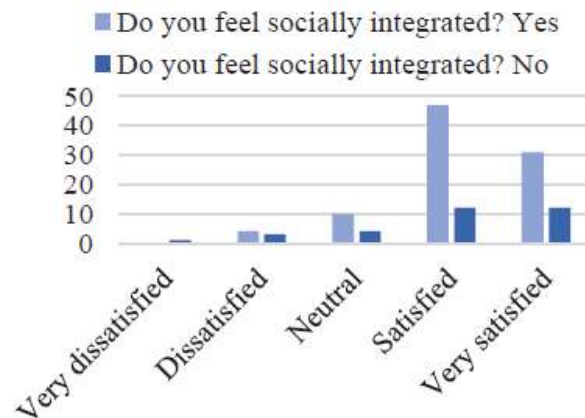


Figure 4: Level of satisfaction about personal safety based on social integration.

Figure 5 shows how the peoples' satisfactions about social environment are connected with feeling personal safe. It seems to be strong connections between these variables, which could be further assessed towards a common factor that we could denote; safeness.

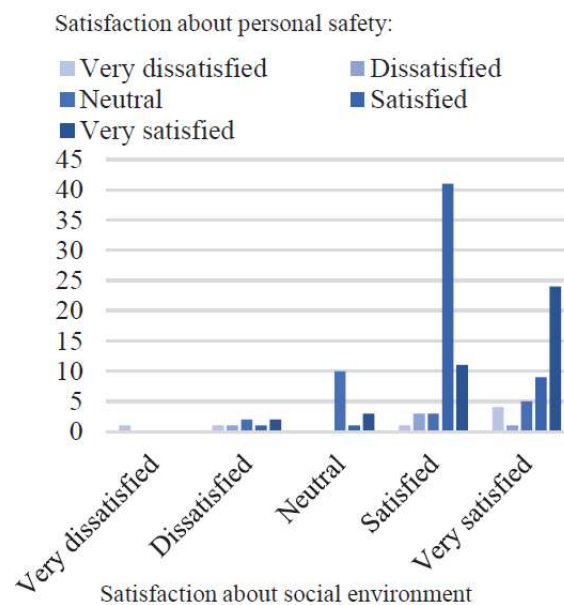


Figure 5: Relation between level of satisfaction about personal safety and social environment.

Respondents were also asked about the reason of locating their residence in the area of Storhaug. Figure 6 shows the distribution amongst respondents. One of the location preferences amongst the immigrant population when migrating was the acquaintance with the existing immigrant population in the area (referred to as social or family reasons), which has been the most given answer in this study. This factor helps the immigrant to a quicker adaptation both socially and spatially, and thus, a sense of security. Therefore, the relations between the reason of location and the satisfaction about personal safety is also confirmed (Fig. 6).

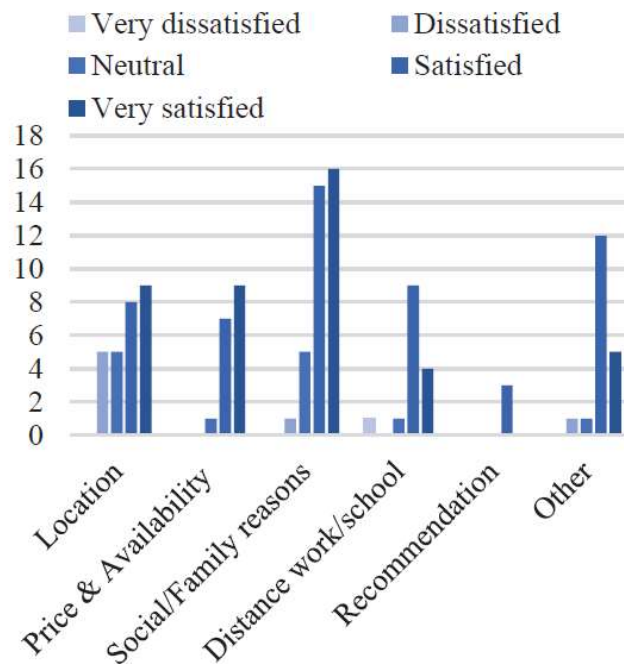


Figure 6: Relation between level of satisfaction about personal safety and reason of location.

Respondents were asked about the use of the urban spaces in Storhaug or the activities they carry out in their daily routine. Those who use the urban outdoor spaces are more satisfied about their personal safety than those who do not use the outdoor spaces (Fig. 7). An extended use of outdoor areas can represent the feeling of safeness among the population.

We finalised the interviews with a general question about the respondents overall satisfaction of their quality of life.

Since it is a general and wide question, the respondents were expected to consider different aspects, e. g. transport systems, green areas among others. We related their general satisfaction about life to their satisfaction about personal safety. The results obtained were expected: the concept of safeness has an impact on people's quality of life (Fig. 8).

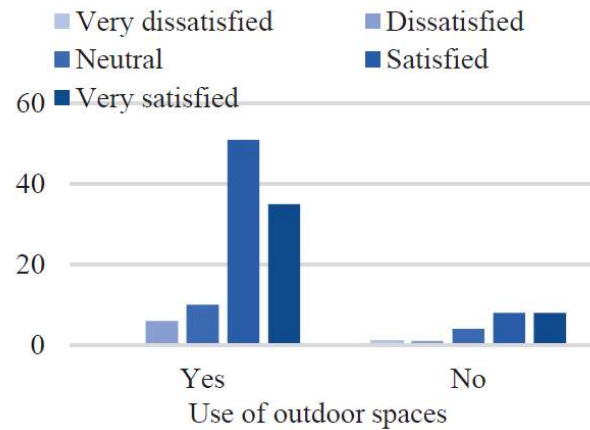


Figure 7: Relation between level of satisfaction about personal safety and the use of outdoor spaces.

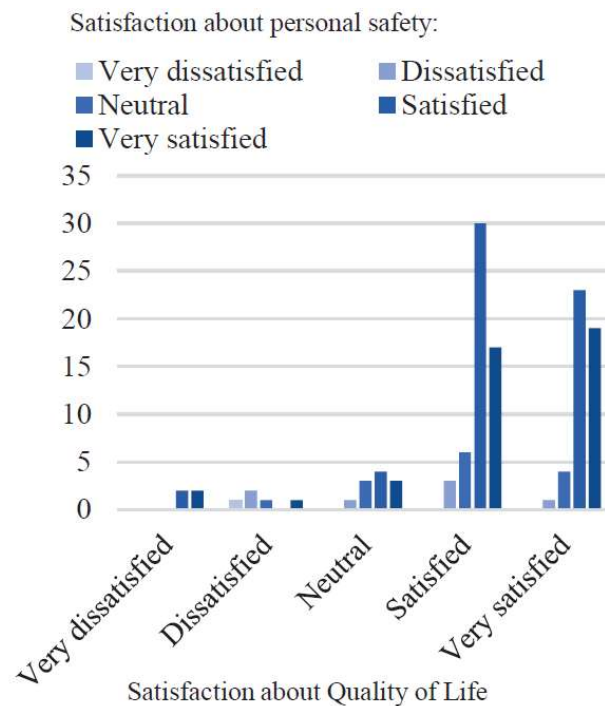


Figure 8: Relation between level of satisfaction about personal safety and overall quality of life.

3. QUALITY OF LIFE, PERSONAL SAFETY AND ITS RELATIONSHIPS TO SPATIAL CONDITIONS

Our preliminary results shows that quality of life and aspects relating to perceptions of safety are closely related. In future studies we want to explore our results with

the psychometric research on risk perception in daily life, for example related to the emotional self-assessment manikins; valence, arousal and dominance [14]. Other important factors, such as gender, race, political worldviews, affiliation, emotional affect and trust are strongly correlated with risk judgements [15].

We will discuss aspects of quality of life, migration as part of urban development, insecurity in cities, and public safety related to citizens' coexistence, in order to establish some building blocks for a framework directed at urban planners in their planning and operation of urban spaces. We will advocate some safety constraints directed at domains necessary for urban planners to reflect upon. The purpose is to achieve an adequate situation where the social interaction and the use of urban spaces are perceived positively equally for every individual of a community.

3.1 Quality of urban life

Benavidez Oballos [16] defines quality of urban life as "the degree of satisfaction with the possibility to fulfil needs and aspirations by individual's occupying an urban space" [translated]. The architecture that integrates safety elements does not have to be unpleasant visually. However, in the urban system operation the communication between urban planners, social workers, the Police and Fire departments and the citizens must be designed for understanding coexistence. A typical safety constraint could be:

- Communication of quality of life aspects between system designers (urban planners) and system users (citizens, social workers, etc.) shall be able to identify and combat unfortunate circumstances.

Danger of any kind, such as natural hazards or crime, can be a source of fear and worry which can have a negative impact on the general quality [17]. We propose the safety constraint:

- Social interaction amongst the residents shall be considerate and based on shared activities.

Urban planning that prevents delinquency through public spaces fosters social interaction. This social interaction is a threat to privacy, since social interaction seeks quality of life in public and shared spaces, where cohabitants of certain spaces can enjoy common spaces strategically designed for greater security.

3.2 Phenomenon of migration in urban development

Immigrants have historically played an important role in demographic and economic development, particularly in cities. It is therefore important to study the factors that explain initial and subsequent location choices among immigrants. Location preferences can be based on pull factors of the area of destination. Immigrants are attracted to regions with labour market opportunities, existing immigrant populations, housing market possibilities, as well as welfare benefits.

We find three different stages in a migratory process: the arrival stage, the settlement and the stabilization stage. Preferences about location can differ in the three stages, due to new social bonds, participation in the housing market or deeper

knowledge about the area of destination. However, these preferences may be of personal nature (education, family ties or predilection) and differ between initial and subsequent stages [13].

Van Kempen and Şule Özüekren [18] describe the advantages and disadvantages of segregation. In relation to the disadvantages, they assert that the fact that immigration is segregated means a brake and an impediment to the opportunities of a social participation of this population. Van Kempen and Şule Özüekren [18] point out the linguistic factor as one of the main factors involved in social integration, since a good knowledge and use of the language allows a better communication and social interaction. A safety constraint might be:

- Language barriers shall be reduced as a local task for ethnic Norwegians as well as immigrant people in the area.

Another of the great disadvantages of residential segregation is the negative image that the host society has of the areas of segregation and the population that resides in them. This generates a social stigmatization, which limits the chances for the immigrated groups of developing in the host society.

However, segregation also has many advantages for immigrants. Van Kempen and Şule Özüekren [18] point out the fact that immigrants are segregated motivates the existence, development and cultivation within a specific group. It also allows the emergence and preservation of the culture and values of this specific ethnic group. This creates in the neighbourhood a social atmosphere, where the immigrant develops more naturally in an environment that is familiar. In this sense, the concentrations of specific immigrant groups are seen as "first entry ports" for new immigrants, allowing a progressive adaptation to the host society, with an important role in survival strategies after arrival in the new society, and with less conflict when residing population with similar standards and values. We propose:

- The urban area shall provide a balance of the culture, religion and coexistence characteristics of its population.

From the Storhaug case study, we experienced that immigrants who already had an existing bond also felt safer. Thus, bringing in characteristics of culture, language or religion will provide more effective community behaviour, and therefore, a solid basis.

3.3 City and insecurity: an inevitable relationship

As Curbet [19] expresses, the city seems to have become the "natural" habitat of unsafeness, to the point that the concept formed by the terms "urban insecurity" seems increasingly indissoluble.

Violence seems to be always present in contemporary cities, i. e., in public spaces, in the streets or walks through parks. Unfortunately, it can also be found in homes, problems such as drug trafficking, human trafficking, bullying, interfamily and gender violence, arms trafficking, kidnapping or disappearances, extortion,

executions, corruption, impunity and illegality are facts that affect the social environment.

The perception of insecurity leads people to seek safe spaces by taking refuge in their own homes, enclosing themselves. Therefore, urban spaces must promote the feeling of safety encouraging the community to use them. Several aesthetics constraints help designing spaces where the individuals can feel safer and therefore change the perception about them:

- Visual perspective: users of an urban space must have a visual control over it. This visual control promotes a calm feeling and therefore a more enjoyable situation.
- Maintenance: users must take care of the urban spaces [10]. A space visually pleasant and environmentally healthy promotes a sense of safety.
- Lighting and illumination: dark areas, corners or low-closed spaces can promote negative feelings about a place. As previously mentioned, a visual control over the area helps promoting the feeling of safety.
- Elements for inclusion: social inclusion in terms of age, hobbies or nationalities must be achieved by gathering different elements in the same urban space. In this sense, any group of population will be excluded. An urban space that gathers everyone's needs promotes a sense of inclusion and therefore a sense of safety.

Implementing these measures must be complemented by a responsible behaviour from the individuals using the spaces, as well as the local government controlling the mentioned concepts. A proper behaviour and a supervision from the higher levels of the system theory structure will accomplish this sense of safety.

3.4 Public safety and citizen coexistence

The concepts of societal safety and citizen coexistence call the debate on the fight against insecurity, violence and crime. Consequently, it is considered important to put into discussion that coexistence should recognize the existence of a social knowledge. This knowledge is inscribed in different "systems" (Fig. 9): the legal framework

(that which is instituted, legal and already given), the moral framework (that which is learned and inserted into human existence, evident from child-rearing practices) and the cultural framework (it involves all symbolic systems and principles of plurality, inclusion and participation) [20].

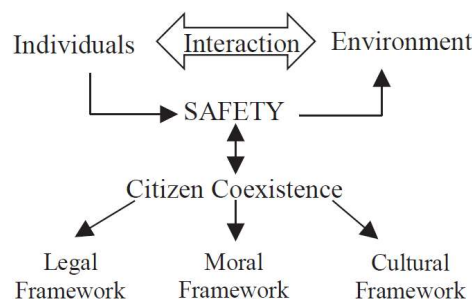


Figure 9: Model of relationship: social safety and citizen coexistence.

Coexistence happens in every home, in educational institutions, in work or living in public spaces. Daily situations exemplify the triangulation exposed (legal, moral and cultural). For example passing a red light, throwing garbage into the street, evading taxes, show that the three dimensions are always in permanent interaction in daily routines [21].

Coexistence includes the promotion of attachment and the adherence of citizens to a civic culture based on respect for the law, respect for others by basic rules of behaviour and social coexistence [22].

Collective efficacy suggests, firstly, that information is a necessary tool to govern neighbourhoods. A second implication for the governance of neighbourhoods refers to the visible symbols of public disorder, based on the previously named theory of "broken windows".

4. CONCLUSION

Given the importance of conflicts in the perception of safety, mechanisms should be created in order to establish a conciliation structure, which requires collective effectiveness, political will and adequate legislation. The basis of this structure initiates from the individual or the community level. A proper social interaction or citizen behaviour is the starting point for achieving societal safety. Furthermore, it must be promoted a political sensitivity that deals with the useful mechanisms to reinforce the bonds of social cohesion, which is especially relevant in the trends that lead towards isolation and individualism. It is necessary to promote a broad, creative and socializing use of public space, with all its repercussions on a multitude of aspects, ranging from strictly morphological or urban planning to transport management, among other aspects. Degradation, ghettos or functional uniformity are very interrelated phenomena. The rehabilitation of public spaces, the control over recreational or commercial activities, the social housing policy or the rational distribution of certain social services are some of the measures that can contribute to reinforce the sense of safety. Participatory policies are more likely to succeed than decisions taken unilaterally by the municipal authorities. Efficiency in the intervention is decisive in these matters. Plans that analyse the problem of safety from a broad perspective can offer strategic actions, many of them with clear territorial implications. Systems theory is a new perspective for urban planners, in which developing constraints and using control mechanisms to promote societal safety. This study is a first step to explore its use.

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