

Forensic architecture in Colombia

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Summary

This article presents an overview of forensic architecture in Colombia, starting with the definition, establishing the professional and personal characteristics that a forensic architect should have and his social responsibility, in the same way, forensic architecture is shown as an instrument in the management of the risk and finally the characteristics that an efficient forensic report should have.

Definition

Given the circumstances of a country like Colombia and fundamentally in aspects such as architecture and construction, in recent years the discipline of forensic architecture has gained great importance. There are few situations where there have been flaws in the design and construction of buildings that have led not only to generation of human damage but also materials, originating lawsuits in which it has been required the evaluation and expertise on the part of trained professionals who allow judges to make logical decisions in each case or fail to provide information to ordinary people who require the services of a trained professional to give a concept that allows them to take a right decision about damage in a building.

For this reason, it is important to train professionals in the field of forensic architecture with qualities and values such as honesty, ethics, professionalism, methodology, and foundation. In this context, it becomes important to begin by defining the concept of forensic architecture. Etymologically the word architect came from the Latin *Architectus*, and this from the Greek *Arkhitecton*, formed by *Arkhein* "the first, the one who commands" and *Tekton* "worker, carpenter" *Tekton*, also comes from *Tiktein* which means "to build, give light, create" (Elcastellano. org, 2018), then in a general sense the word architect means the first worker, who also gives light, gives ideas. On the other hand, is the concept of forensic that comes from the Roman era where the forum was the place where they were discussing and listening the causes to discuss certain issues many of them related to legal aspects, there attended the population and witnessed the accusations, defenses, and verdicts of the various disputes that could be presented.

Also, forensic architecture is related to legal medicine, since the latter is the branch of the medicine that is orientated to advise the courts by the development of skills and studies. In the Colombian context, by article 226 of the General Code of the Process, which refers to the expert evidence, of the coroner or expert, is a person specially qualified for his or her artistic and scientific experience or technical knowledge in relationship with the also special facts that require that particular capacity for their proper perception and the correct verification of their relations with other facts of their causes and their effects or simply for appreciation and interpretation (Devis Echandía, 2006)

Forensic characteristics

The work of the forensic, and in this case of the forensic architect, involves a social commitment to justice. In this sense, the forensic architect must have particular characteristics of the exercise of his

work how they are: to be a researcher with great sense of observation, to be able to identify every one of the details that may be associated with a particular situation, identifying its causes and its consequences from a scientific perspective; it must also have specialization in the topic on which it should give its concept or associate with experts who dominate it and can offer new possibilities of knowledge to argue. Must have great ethical principles that allow it to evaluate the situation without passion and without bias that take it to wrong diagnoses or biased, in the same way, should be honest to have a high credibility power and be recognized by the people that impart justice and the community in general. Must be objective, avoiding that their interests are mixed with their professional work which implies at the same time having a great instinct of responsibility and being socially committed with the community. In addition to the above, the must be methodical in the collection of information in the analysis and organization of the results to facilitate judicial work or to issue concepts that are clear to the people who hire him and that also those concepts are recognized by the general public.

Knowledge of phenomena, management of instruments

One of the factors that allow the forensic architect to approach an objective opinion is the knowledge of the phenomena both natural and anthropic character which allows him to evaluate, relate the Variables involved and issue concepts in an objective way that allow a judge or the community in general to make the best decisions. This implies the management of basic concepts associated with other disciplines such as physics, chemistry and all those that have to do with the phenomenon being studied, which in many cases will involve consulting other professionals to obtain the necessary information to have an adequate argument when issuing concepts. The above implies what the appropriate level of communication must possess for this interdisciplinary work, which includes at the same time the management of instrumentation and resources that will allow you to support the analyses you make. The knowledge of the phenomena in many cases implies a study of past situations identifying the variables involved in both the past and now; therefore, the analysis of documentation, as well as the collection of pieces of evidence through mechanisms, like the interview, they can be determining elements to be able to relate the variables in a specific situation to evaluate. There is also is the methodology that uses both for the collection and for the analysis and the conclusions that will present to the Judicial authorities or to any person who requires it. In this context, the use of instruments and tools suitable for each of these phases is not only necessary but indispensable, to give sustenance to the concepts you issue in the final report.

Social responsibility and forensic architecture

Since in the institutional vision of the La Gran Colombia University is the concept of Social responsibility it is important to note the transcendence that in this sense has the forensic architecture and the diploma that was carried out between the months of June and July where concepts, procedures, methodologies and everything related to this topic were socialized.

A clear global example of the development and social utility of forensic architecture is the case of the Forensic Architecture Group of the University of London headed by the Israeli architect Eyal Weizman, who from the use of tools like videos, computer programs, photography and analysis of three-dimensional models has been able to offer evidentiary alternatives to humanitarian situations of an international nature in places as diverse as Syria, Mexico or Afghanistan in many of which only from photographs or videos sent by victims or witnesses, who have been close to the facts, this group of

professionals has reconstructed situations that have allowed them to prove criminal actions by State agents who in other circumstances had been hidden. The methodology used by Weizman and his group is very similar to that used by a forensic doctor with a corpse on which you want to know the causes and circumstances of his death. To do this, it is necessary to collect evidence through the information that can be available as images taken with cell phones or eyewitness accounts, which are complemented with third dimension reconstructions in software or scale models, this It allows to rebuild the moment in which situations occur like explosions, bombs, terrorist attacks or movements of people, this information is processed which purpose by time and by angle in what Weizman calls a technique of architecture image complex, which is to create three-dimensional models of buildings and places near the site of the event and even the reconstruction of entire cities where all perspectives are located to have an integral vision of the situation (Weizman,2017). This methodology has served to solve different cases such as that of Aleppo, Syria, in which the United States Army said to have bombarded with one of its drones a terrorist center producing the death of several people, however, the team of forensic architecture of the University of London showed that the building was a mosque in which dozens of civilians were killed when there is no visual information of the situation the Forensic Architecture team uses interviews with people whom they could witness the situation and through their memories, they rebuild the scenarios where the events occurred. A fundamental principle in this type of work is the collaborative research which, says Weizman, implies a slightly different perspective of the traditional research because while the latter is neutral in the collaborative research one assumes a position that is generally on the part of the victims and that seeks to confront the arguments presented by the entities of power (Vice in Spanish, 2017).

Although of course, the research carried out by the forensic architecture team of the University of London has brought them numerous drawbacks, such as accusations and demands, they have been able to contribute a new vision from an investigative point of view to the use of Elements related to architecture, to solve situations of crimes or abuses against the less favored persons; this already represents a great contribution and a new perspective of using the tools related to a profession as the architecture for the solutions of the social problems of the present day. For this, they have the collaboration in addition to specialists in other branches of knowledge as journalists or graphic designers, opening a new possibility of advancement in architecture as an instrument of social responsibility in extreme situations. In the Colombian case, there are many circumstances in which a methodology such as Forensic Architecture of the University of London could be used as a test element in confusing situations or where serious doubts exist in the facts reported and in the legal determinations that have been taken. Besides, the current situation where there are numerous construction works and architectural projects involved in legal litigation, where there have been flaws in design, constructive or structural, even with fatal victims makes necessary the training professionals in forensic discipline as a way to help the administration of justice so that it can make more objective and fair decisions.

Forensic architecture and risk management

The forensic architecture is related, from a professional point of view to the concept of risk management, on the one hand, because in many circumstances it is the forensic architecture that determines the origin and causes of the damage caused by a natural or anthropic phenomenon since the risk is the relationship between the threat and the vulnerability (Cardona, 2004), serves as a diagnostic tool to determine the degree of vulnerability of a building to the risk phenomena. Therefore,

the forensic architect can become an agent of prevention and vulnerability reduction and contribute in this way to the security of buildings and protection for people, this is directly related to social responsibility.

In risk management is important to take into account the historical information of the phenomena through studies, maps of threats, etc. that allow to evaluate to the future a specific situation that can affect a community these same instruments can be used by the forensic architecture in the study of a situation of certain damage because part of the forensic work implies to know, in some cases, the phenomena of the past that can affect in the present to make an adequate evaluation of all the factors related to the situation being studied. In Colombia, from law 1523 of 2012, a policy of disaster risk management is adopted and the National System of Disaster Risk Management is established, which leads, among other aspects, that each municipality must generate a local risk management plan, according to their particular conditions, this implies understanding the potential threats, vulnerabilities and in general possible affectations, mainly before natural events but also implies phenomena anthropic the management plan of municipal risk has led to the construction of the necessary information, through studies, historical data, tests, response plans, threat maps, etc. To have a closer knowledge of the phenomena and to use tools that can then be used by the forensic architecture, as evaluative elements of different situations.

The concern to achieve efficient risk management has allowed identifying natural threats such as floods, earthquakes, tsunamis, mass removal and anthropic nature such as fires, explosions or dumping and are being studied in depth to face them in a better way to mitigate the damage that may occur. But on the other hand, it has been sought that the population in general and especially the professionals of the architecture and the engineering can have a deeper knowledge of these phenomena so that in their designs and constructions the concept of risk management is involved as a fundamental part of comprehensive design. With law 1796 of 2016 of safe housing, emerged from the collapse of the building Space in the city of Medellín (October 12, 2013), was sought by the State to control the quality of construction and offer protection to the users who acquire housing. This leads to increased responsibility on the part of the designers, builders, and supervisors of architectural projects this in large part has been given by the works developed by the forensic engineering and architecture, which have determined the causes of disaster situations such as the Space building and which in turn have served to establish responsibilities by designers and builders ended up serving as a basis for the development of this law.

In this context, architecture and forensics and risk management are congruent with the use of some common tools and instruments to establish diagnoses that allow determining causes, effects, and responsibilities from the point of view Legal risk management needs a good measure of the forensic architecture to be able to develop, before, during and after the phenomena, either establishing levels of the vulnerability or the effects after the phenomena from some specific causes.

The report

In the forensic architecture, as well as the methodology for the collection and analysis of information, is also important the way of presenting it, in particular when this information in most cases is going to be received by professionals from other disciplines such as the law or ordinary citizens, for this reason, some fundamental parameters are established, either by legal principles or because they allow clarity on the information presented and avoid confusion for the people who receive it. Therefore, is

important to know that the report of the forensic architect, in the Colombian case, is framed in what is called "expert proof" and is therefore governed by some legal aspects in this regard it is important to relate the jurisprudence of The third section of the Council of State of November 2017, in which it defines 11 budgets for an expert opinion to be effective and each one of these aspects should be reflected in some way in the report that is presented.

In the first instance, it is requested that the expert, in this case, forensic architect, "report in a reasoned way what, according to his specialized knowledge, knows of the facts" (Ámbito Jurídico, 2008). This, in a nutshell, means that it should be limited to give his opinion based on their experience and training concerning what has been required and nothing. Else is also requested that "their opinion is personal and contains their concepts on the subject matter of examination and not of other persons by authorized ones. This is without prejudice that you can use auxiliaries or apply on your behalf the competition of other technicians, under your direction and responsibility". In this regard, if taken about the work of the forensic architect, it implies that it can be supported by a team of work but that the final concept is of him and no one else and therefore it is necessary to have clarity and precision to emit that concept.

Thirdly, the Council of State states that "the expert is competent, that is, a true expert for the performance of the position". This, as indicated earlier in this writing, must be part of the condition of the forensic architect his academic training and his Experience that proves it as a suitable professional to emit the concept that they are asking. Attached to this aspect "that there is no serious reason to doubt its impartiality" what has to do with its honesty, respectability and professional ethics. Therefore, it is not only that it has adequate academic training, and expertise in the subject by which they summon but also a personal formation according to which it is respected by his colleagues of the profession and by the society in general, without having any impediment to issuing a concept.

It also, indicates "that a serious objection has not been tried". This has to do with the care that has been done the work and the professionalism of the expert, because to the extent that the work has been rigorous decreases the possibility of having objections for errors in issuing the concept related to the previous aspect the Council of State says that "that the opinion is duly substantiated and its conclusions are clear, firm and consequence of the reasons set out", because of the clarity and argumentation of the report depends on its effectiveness for the person receiving it, whether it be a judge or any citizen who will contract the forensic architect for a concept. Together, with this aspect, it is stated that "its conclusions are forceful about the fact to prove" the two aspects are intimately related because of a methodical, clear and serious argumentation are usually detached conclusions equally with weight. This plays an important role in the analysis of the data presented and in congruence with the conclusions to which.

The opinion should also, according to the Council of State, comply with "that has asserted the contradiction" that is to say that before an antagonistic position is so clear and precise that it does not generate doubt and therefore allow the judge to make a fair decision. Attached to this "that there is no withdrawal from the same by the expert" or that once issued the concept and presenting the respective report can not the expert, for the case the forensic architect, recant the asserted and concluded in that report to begin, he would have no presentation for a serious professional and with credibility act, that way and secondly would generate great doubts whatever his position and it would make the judge's work difficult. On the other hand "that other tests what distort", because if there is another test that can come to undermine the expert opinion because the work of the forensic architect will have been in vain because the safest thing is that the judge does not take into his concept and also

aware of the lack of expertise of the professional, the lack of care in the analysis of information and the use of an inadequate method.

Finally, among the aspects recommended by the Colombian State Council on the expert opinion is "that it be clear, precise and detailed, that is, to account for the examinations, experiments and investigations carried out, as well as the fundamentals Technical, scientific or artistic conclusions" this has to do with the methodology used by the forensic architect to collect information, test, analyze results and conclude. As indicated, in the characteristics of the forensic architect, It is required and clear domain of the methodology that allows arguing with clarity and precision to leave no doubt about the concept that he should give.

To conclude, as a reflection it is proposed that the work of the forensic architect in a country like Colombia, where there have been numerous situations related to architectural or constructive failures in buildings that have ended in disasters or where they are frequent litigation between neighbors for affections during the construction or operation of a building becomes a work of high social responsibility, as support to justice and as technical information that allows judges and people, in general, make the best decisions.

REFERENCES

Ámbito Jurídico (2018). 11 presupuestos para que un dictamen pericial sea eficaz. Available: 20/09/2018 <https://bit.ly/2UeMKZ9>

Cardona, O. (2004) Evaluación de la amenaza, la vulnerabilidad y el riesgo. Red de Estudios en Prevención de Desastres en América Latina. Panamá: La Red.

Devis, H. (2006). Teoría General de la prueba. Tomo 1 (quinta edición). Editorial Temis: Bogotá, Colombia.

Elcastellano.org (2018). Página del Idioma español: arquitecto. Available 10/09/2018 <https://bit.ly/2VsqaTs>

Vice en Español (2017). Vice Specials: El arquitecto Forense. Available 15/09/2018 <https://bit.ly/2SBgbDg>

Weizman, E. (2017). Forensic Architecture: Violence at the Threshold of Detectability. New York: Zone Books.