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UNIVERSITY LIBRARY: RISK ANALYSIS

BIBLIOTECA UNIVERSITÁRIA: ANÁLISE DE RISCOS

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ABSTRACT

In this paper, we highlight the concepts of risk, danger and vulnerability in the scenario of the Central Library Santa Monica (BCMON), with the main goal of analyzing the risks that this space may pose to its visitors, its heritage and its historical memory. In this sense, BCMON was selected, among others, because it is the main and oldest library of the Federal University of Uberlândia (UFU). Therefore, the methodology used had a qualitative approach, with exploratory nature. Still, we selected as a reference base a work by Spinelli and Pedersoli Jr., Safety Inspection Report - (RIS) 25/2013 -, Minas Gerais Fire Department's technical instructions, Preliminary Visual Inspection Report and publications of the Preventive Conservation Project for Libraries and Archives. From this, we conducted a survey by observing the physical structure, as well as furniture and equipment that make up the library. Thus, we note how vulnerable are the building, the collection under its guard and those who transit the site. Among the ten agents established by Spinelli and Pedersoli Jr., which characterize and define the types of risks, the study has found that the BCMON has seven. A necessary action would be the construction of a risk map and investment in fire prevention and fire prevention actions, among others, that will minimize the danger, the crisis and, finally, the damage.

KEYWORDS

Libraries – Special collections. Library security - Libraries – Buildings and installations.

RESUMO

Neste trabalho, destacamos os conceitos de o risco, o perigo e vulnerabilidade no cenário da Biblioteca Central Santa Mônica (BCMON), cujo objetivo principal é analisar os riscos que esse espaço pode representar a seus frequentadores, patrimônio e memória histórica. Neste sentido, a BCMON foi selecionada, dentre outras, por ser a principal e mais antiga biblioteca da Universidade Federal de Uberlândia (UFU). Para tanto, a metodologia utilizada teve abordagem qualitativa, com natureza exploratória. Ainda, selecionamos como base referencial a obra de Spinelli e Pedersoli Jr. - Biblioteca Nacional: plano de gerenciamento de riscos: salvaguarda & emergência -, o Relatório de Inspeção de Segurança (RIS 25/2013), instruções técnicas do Corpo de Bombeiros de Minas Gerais, o Relatório de Inspeção Visual Preliminar e publicações do Projeto de Conservação Preventiva em Bibliotecas e Arquivos. A partir disso realizamos um levantamento mediante observação da estrutura física, além de mobiliários e equipamentos que compõem a biblioteca. Assim notamos o quanto vulneráveis estão o edifício, o acervo sob sua guarda e aqueles que transitam por esse local. Dentre os 10 agentes estabelecidos por Spinelli e Pedersoli Jr. que caracterizam e definem as tipologias de riscos, o estudo detectou que a BCMON possui 7 deles. Uma ação necessária seria a construção de um mapa de risco e investimento em ações de prevenção e combate a incêndio, entre outros que venham minimizar o perigo, a crise e por final o dano.

PALAVRAS-CHAVE

Bibliotecas - Coleções especiais. Segurança de bibliotecas. Bibliotecas – Prédios e instalações.

1 Introduction

Large Investment Projects (GPIs) are able to influence the communities in which they are inserted, changing their the economic, cultural and social systems, which are mainly focused on infrastructure. In this sense, it is possible to highlight the risks they pose to those who frequent these spaces, directly or indirectly. In this paper, we emphasize the concepts of risk, danger and vulnerability and the identification of risks in the scenario of Santa Monica Central Library (BCMON), which was selected for storing informational material that covers the historical and cultural memory of a country.

BCMON is one of the nine libraries of the Federal University of Uberlândia (UFU) Library system, and also the oldest of them. The university that was authorized to operate in 1969 and had its later federalization, on May 24, 1978, through the sanction of Law No. 6,532/1. Today, the institution operates directly in four cities in the state of Minas Gerais: Uberlândia, Ituiutaba, Patos de Minas and Monte Carmelo. UFU is considered a major undertaking in the city of Uberlândia, Minas Gerais, because according to the latest published statistical guide, this institution ended 2016² with 1,779 professors, 3,302 technical-administrative staff and 20,461 students enrolled in the second semester of this year, running a total budget of R\$ 1,383,250,808.92. Such statistics illustrate the magnitude and relevance of the university to the academic community, to the residents of host cities and regions. Considering that, it promotes economic, cultural, technological and demographic growth through job offers, community outreach activities, the offer of Lifelong learning and research applied to the region.

In its physical academic structure, BCMON stands out as a large extension unit located at Santa Monica Campus in Uberlândia. It is one of nine libraries that integrates UFU Library System (Sisbi / UFU). The current facility was inaugurated on November 7, 1991 (figure 1), resulting from the project developed by architects Paulo Zimbres and Luís Antônio Almeida Reis. The imposing building stands out from the other campus buildings for its unique architecture which stores informational material that encompasses the country's historical and cultural memory. The Library has great institutional representation, as it stands out for the quality of its products and services, being the best evaluated unit in the last UFU institutional self-assessment processes. It is also important to note the considerable flow of people, its average daily frequency is approximately two thousand people per day.

Figure 1. Santa Monica Central Library



Source: The author.

¹ Cf. http://www.planalto.gov.br/ccivil_03/leis/1970-1979/L6532.htm

² Cf. <http://www.proplad.ufu.br/sites/proplad.ufu.br/files/media/arquivo/folder - 2017 ano-base 2016 0.pdf>

The preparation of this research was motivated by the content addressed in the discipline Socio-spatial Effects of Large Enterprises, which the author attended as a special student in the Graduate Program in Geography, UFU. During the classes, it was noticed that BCMON was on alert and that it had already been subjected to an inspection by the UFU Occupational Safety Sector which indicated some non-conformities, as described in the report: several irregularities in the amphitheater, in the storeroom, in some doors and in the video room; unorganized environment; storage of liquefied petroleum gas in the environment; obstructed corridors; stair without internal railing; blocked fire hydrants and extinguishers; hydrant situation; poor electrical installations; water infiltration points on the roof; exposed power boards; material stored in an inappropriate place; absence of emergency exits; lack of escape route signs; no emergency signaling and fire alarm (FEDERAL UNIVERSITY OF UBERLANDIA, 2013).

The understanding that a study would be necessary to highlight the problems of the building, led us to analyze the risks that BCMON may pose to its visitors, to patrimony and to historical memory. This was the main purpose of this paper.

According to Veyret and Richemond (2007), the risk is the perception of a danger that may happen, which may or may not be predictable, by those involved with a given scenario. In this sense, the manifestation of the risk generates crisis, while the danger is something intermediate, that is, it occurs between risk and crisis. The risk analysis of the referred library is justified by pointing out the impacts of a possible crisis and has as a consequence the involvement of those responsible for solutions.

Since its construction, the building has received minimal preventive or structural corrective maintenance, as well as few improvements to comply with the current safety laws and regulations. Given this, this study can be considered an instrument that emphasizes the need to invest in measures that are capable of ensuring the mobility and the preservation of informational material.

Therefore, in this research, we opted for an qualitative approach, with exploratory nature. We still selected BCMON as the object of this study because it is UFU's main and oldest library and for the fact that it stores informational material that covers the historical and cultural memory of a country. Thus, we use as a theoretical reference base the work of Spinelli and Pedersoli Jr., *Biblioteca Nacional: plano de gerenciamento de riscos: salvaguarda & emergência* (National Library: risk management plan: safeguard & emergency); the Safety Inspection Report - RIS 25/2013, issued by UFU Occupational Safety Sector; technical instructions from Minas Gerais Fire Department; Preliminary Visual Inspection Report prepared by UFU Faculty of Civil Engineering (FECIV); Publications of the Preventive Conservation Project for Libraries and Archives, available at the National Archives website. Based on those, we carried out photographic recording and risk assessment by observing the physical structure, furniture and equipment that make up the library, as well as consulting files, statistical data, images and administrative documents held by Sisbi / UFU.

2. Literature Review

GPIs are usually related to the discourse of providing better quality of life for individuals or promoting the economic development of the region in which they are located. In this sense, Bresser-Pereira (2014, p. 53) conceptualizes the term as “[...] historical process of capital accumulation incorporating technical knowledge that increases the living standard of the population.” These constructions, however, may pose risks to those involved directly and indirectly because there is no fully secure venture. According to Veyret and Richemont (2007b), risk is something potential that identifies and perceives a latent crisis, danger, accident or catastrophe, it is the translation of a threat and involves the individual who foresees or suffers it. Veyret and Richemont (2007a) consider that risks interact and may belong to several categories at the same time. Individually, they may be:

- a) environmental: arising from natural processes worsen or not by human actions or occupations;
- b) industrial: are related to the maintenance of toxic products, production and transportation of hazardous materials; promote the regular action of the phenomenon in some cases slow and diffuse;
- c) technological: consisting of technical, spatial, temporal, social and political aspects;
- d) social: motivated by migration and urban growth; responsible for causing insecurity, poverty and violence in cities;
- e) economic: generated by economic policies and globalization;
- f) geopolitical: originated by political decisions in varying scales.

As noted in the cited categories, risks are present everywhere, they must be monitored to prevent the next steps from manifesting themselves, which are danger and crisis. The danger is the exposure of the risk that constitutes the crisis. Crisis is the full manifestation of risk, crises are emergency and may have different origins. Given this, it is the managers and political leaders function to prevent the establishment of a crisis in a venture, in order to prevent mainly the occurrence of a disaster. After all, it is something that could be avoided, unlike an accident that arises from an unexpected situation.

Actions that precede the crisis to minimize loss and damage to targets are inherent to professionals and managers related to the object, in this case BCMON. Librarians, whose duty is to assume the responsibility and commitment to watch over their work environment, over users, servers and collaborators who are there daily, and also over the patrimony and historical memory of a society. BCMON has a university characteristic, meets the faculty, students and administrative staff information needs, supporting the university's research and extension teaching activities (CUNHA; CAVALCANTI, 2008).

In this case, it is worth pointing out as a theoretical framework, a study by Spinelli and Pedersoli Jr. (2010) which presents 10 deterioration agents that guide the description and typology of risks, as follows:

- a) physical forces: shock, vibration, tension, compression and friction.
 - risk typology: rare and catastrophic event; sporadic event of moderate impact; continuous process;
- b) criminals: theft, robbery or vandalism.

- risk typology: rare event of significant impact; sporadic event of moderate impact;
- c) fire: fire
 - risk typology: rare and catastrophic event; rare / sporadic event of moderate to significant impact;
- d) water: floods, seepage, leaks, spates, splashes, etc.;
 - risk typology: rare and catastrophic event; sporadic event of moderate impact; continuous process;
- e) pests: insects, rodents, birds and bats;
 - risk typology: sporadic event of moderate to significant impact; continuous process;
- f) pollutants: natural or anthropogenic gases, aerosols, liquids or solids;
 - risk typology: sporadic event of moderate to significant impact; continuous process;
- g) light and ultraviolet (UV) and infrared (IR) radiations: sun and lamps
 - risk typology: continuous process;
- h) incorrect temperature: too high or too low.
 - risk typology: sporadic event of moderate to significant impact; continuous process;
- i) incorrect relative humidity: Very high, low or fluctuating relative humidity.
 - risk typology: sporadic event of moderate to significant impact; continuous process;
- j) decoupling: loss of objects from collection, loss of data and information, loss of ability to retrieve or associate objects and information.
 - risk typology: rare and catastrophic event; sporadic event of moderate impact; continuous process.

When analyzing the 10 agents, it was found that BCMON is vulnerable to the elements. This is a matter of concern, as the collection maintained by BCMON is extremely relevant for the dissemination of information, for the promotion of knowledge and for the historical and social patrimony. Thus, we highlight the concern about the special collections stored in the library. They are extremely important for the preservation of the history of Uberlândia and the region. These are works received by renowned personalities or anonymous donors. In these cases, they may be cited: Jacy de Assis Special Collection (legal books and periodicals); Aricy Curvello Special Collection (Humanities); Yan Michalski Special Collection (books and plays); Antonio Mercado Neto Special Collection (legal area); Special Litto Collection (books and plays); Jodacil Damaceno Special Collection (various types of music material); Homero Santos Special Collection (legal works); Special Memory UFU Collection (produced and published by the university); Special Collection Texts and Posters of Theater (texts and plays); Special Art Collection (works related to art); Special Collection of Rare Works; besides special collections of varied works.

Silveira (2010) considers that libraries are privileged spaces of knowledge. There, the patrimony, the collective memory and the cultural heritage of humankind are ideally placed for their dissemination and preservation. According to Castro (2006), this contributes for the society not to forget its past, its history. Thus, it is still possible to make sense of the present, so that it becomes a knowledge society.

For the collection, in its respective characteristics, to be useful for current and future generations, the application of conservation and preservation the practices is imperative. The latter is described as he act of keeping them safe from danger and deterioration in a safe and organized environment so that their essential characteristics are safeguarded. Such practice is a more bureaucratic process that involves strategies, policies and actions aimed at guaranteeing information and meanings of a cultural good (DIAS; PIRES, 2003). On the other hand,

conservation consists of technical measures that prevent the degradation of these materials. However, it does not feature the reversal of a process of deterioration already completed (SPINELLI JÚNIOR, 1997).

3 Method

The methodology employed in this work had a qualitative approach, with exploratory nature, through a bibliographic survey on the subject of risks and safety in libraries, published in books, articles, theses, dissertations, among others. Thus, BCMON was selected because it is UFU main and oldest library, for its imposing building, which stands out among the other campus buildings, for its unique architecture that stores informational material that encompasses the historical and cultural memory of the country. The Library has great institutional representation, as it stands out for the quality of its products and services, being the best evaluated unit in the last UFU institutional self-assessment processes. We should also emphasize the considerable flow of people that the library receives, an average frequency of two thousand people a day.

To identify the risks, we employed the work of Spinelli and Pedersoli Jr. (2010), which presents 10 deterioration agents that guide the description and typology of the risks, namely: physical forces; criminals; fire; water; pests; pollutants; light; ultraviolet (UV) and infrared (IR) radiation; inadequate temperature; incorrect relative humidity and decoupling.

In addition, we based the analysis on standards and descriptions of other documents, such as the Safety Inspection Report (RIS 25/2013) - issued by UFU Occupational Safety Sector, which pointed out nonconformities and suggested control measures. We also relied on technical instructions from Minas Gerais Fire Department, the Preliminary Visual Inspection Report, prepared by the Faculty of Civil Engineering (FECIV) of the same university, and publications from the Preventive Conservation Project in Libraries and Archives, available at National Archive website.

After identifying the risks according to the 10 agents mentioned, we conducted a survey, observing the physical structure and the furniture and equipment that make up the library, as well as consulting files, statistical data, images and administrative documents held by Sisbi / UFU. Subsequently, we made photographic records of elements considered risky or elements that were close to this situation.

4 Results and Discussion

BCMON currently (2018), serves the areas of Exact and Earth Sciences, Humanities, Applied Social Sciences, Engineering, Linguistics and Arts. Its ^{5,735} m² are divided into three floors, which accommodates the top management of Sisbi / UFU, digital library management, the internal service sectors that manage the selection, acquisition and cataloging of informational material from all UFU libraries, as well as the structure to meet the demands of its users. The building has the following spaces, specifically:

- a) external hall: a 24/7 study space and an amphitheater;

- b) ground floor: reception, luggage storage, journal collection, catering services, elevator, Jacy Assisi Special Collection Room, Digital Library Division, multipurpose room, Information Technology Center (NTI), information material relocation room, pantry, rest room for servers, self-revolving equipment room, toilets and storage of cleaning equipment (DML);
- c) first floor: book collection, Reference Sector, Circulation and Special Materials Sector, Special Collections, multimedia collection, computer support, toilets, DML, group study rooms, double study seats;
- d) second floor: collection of books, individual study seats, administration, secretariat, internal services, restrooms and DML.

In 1991, BCMON inauguration was impacting and positive for both academic community and the population of Uberlândia and region, as it was a new, well-structured and large space dedicated to studies and research. At the time, the city had only one public library - Juscelino Kubitschek de Oliveira Municipal Public Library, located since 1976 in the central area, approximately five kilometers from the Santa Monica Campus.

In 2017, there was a collection of 218,292 copies of books, as well as other informational material such as theses, dissertations, scores, technical standards, DVDs, among others. There were also 32 computers for research and 313 seats for study.³ In terms of staff and users, there were 72 outsourced and permanent employees (not considering service providers), and the average attendance of 2,426 people per day. The statistic showed BCMON's greatness and warned about the feasible risks, if disaster prevention and crisis establishment are not taken.

The foreseen risks are mainly of social nature, due to the large circulation of people and the possible damage to the historical patrimony, which involves the building itself, of architectural prominence, and its collection. Since BCMON inauguration, its facility has not received any kind of preventive or corrective maintenance, except for the installation of roof blankets and other roof renovations to prevent river infiltration, which were not fully efficient, as there are still many leaks.

In 2007, Uberlândia City Hall included BCMON in the inventory of protection of the cultural collection of the state of Minas Gerais⁴. In the document, we noted that the building was generally in a good state of repair, but there were some defects on the linings of the restrooms, on some metals, doors and countertops; We also noticed the existence of small cracks in the masonry (UBERLANDIA, 2007).

In 2016, there was onemaintanance that changed the architectural structure of the building, in which concrete planters were removed. Those planters were suspended by concrete structures located in its surroundings (figure 2). This measure was inevitable, after a Preliminary Visual Inspection Report, prepared by UFU Faculty of Civil Engineering (FECIV), mentioning that such pieces generated moisture and consequently, corrosion of the external armor of the enterprise.

³ Dados dos arquivos do SISBI/UFU.

⁴ Cf. http://www.uberlandia.mg.gov.br/uploads/cms_b_arquivos/5498.pdf

Figure 2. Suspended planters removed in 2016



Source: Uberlândia (2007).

According to Veyret and Richemond (2007b), there is no zero risk, therefore it is necessary to anticipate the crisis, manage the risk and establish prevention and relief measures, thus, efficient actions are able to reduce damage to the minimum possible. Therefore, it is important to contextualize that the construction of the risk is defined in three moments. The first one involves the identification and calculation of eventual damages, considered controllable after analysis by specialists and managers. The second moment comprises the intervention of the actors who pressure managers to conduct studies by denouncing the dangers, issuing warnings and opening discussions on the subject. Finally, the third moment occurs when the information is more concrete, based on more reliable data, and defines the degree of risk apprehension.

To achieve the aim of the work, we found the risks mentioned below, whose targets are the BCMON regulars, the building architecture and the collection therein. Considering that, we emphasize that a thorough study is needed on the following aspects:

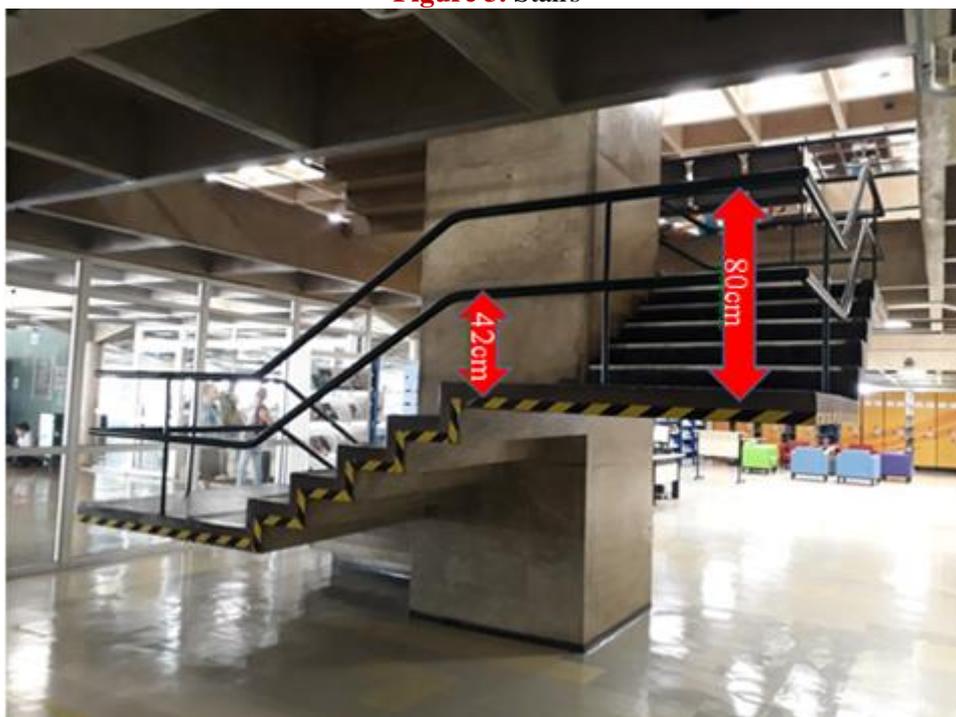
- a) fire⁵ - fire as its agent: according to Technical Instruction (IT) 09 of the Minas Gerais Fire Department, libraries are classified as high risk of fire because they have a fire load⁶ above 1,200 MJ / m² (MINAS GENERAL, 2017a). Specifically, BCMON has the following requirements with this type of potential:
 - fire brigade: staff are not trained, organized or qualified to perform emergency response;

⁵ Fire prevention must be taken seriously so that accidents such as the one occurred in December 2015 in the city of São Paulo, SP, where a fire from a warming lamp partially destroyed the building of the Portuguese Language Museum⁵ and caused in the death of a civil firefighter. The tragedy was not greater only because there was backup of the entire collection and an insurance of approximately \$ 45 million.

⁶ It is the sum of the calorific energies that can be released by the complete combustion of all combustible materials in a space, including wall coverings, partitions, floors and ceilings (MINAS GERAIS, 2017a).

- fire prevention and prevention project execution: was created and approved in April by Uberlândia Military Fire Department. However, to this date, July 2018, the project had not yet been executed due to lack of financial resources, according to information from the Infrastructure Directorate of the City Hall. In this case, it describes that in the building there are priceless objects and provides security measures such as: police car access; addition of extinguishers; provision of emergency lighting, fire hydrants, fire alarm; emergency signaling, emergency exits, fire reserve depot; handrail installation as well as alarm and detection system creation;
- absence of emergency signs: some points in the library do not have any type of signage, such as the stairs;
- escape: The only escape route on the first and second floor is by a staircase. That route even has two aggravating factors. The first refers to the absence of handrail for support and safety on the inside (Figure 3). The second is related to the height (80cm) and the spacing (42cm) of the railing span. According to the Brazilian Association of Technical Standards (2001), the height of a railing should be at least 1.05cm, and the gaps should have a maximum opening of 15cm indiameter;

Figure 3. Stairs



Source: The author.

- high number of electronic equipment: in 2017 there were 32 user computers, 56 employee computers and approximately 163 active power points.
- fire hydrants: it is possible to observe the poor condition of fire the hydrants and hoses, besides the visible absence of some basic elements (figure 4) in the nine boxes containing these emergency objects, distributed on the building's floors - three in each;

Figure 4. BCMON Hydrants

Source: The author.

- extinguishers: BCMON has a total of 23 extinguishers, six on the ground floor, nine on the first and nine on the second floor. However, extinguishing agents or cargo types are not fully suitable for the hazardous area. The building has agents related to fire classes B and C, but there is only one fire extinguisher for classes A, B and C, located on the ground floor.

Fire Department IT-16 (MINAS GENERAL, 2017b) classifies fire according to the characteristics of combustible or flammable materials. In this sense, paper, the predominant material in the building under study, is classified in Class A. Class B contemplates fire in combustible or flammable liquids and / or gases and combustible solids that are liquefied by heat, and may or may not leave residues. Class C covers energized electrical materials, equipment and installations. The university's Engineering and Occupational Safety Sector reported that all extinguishers will have loads within these categories.

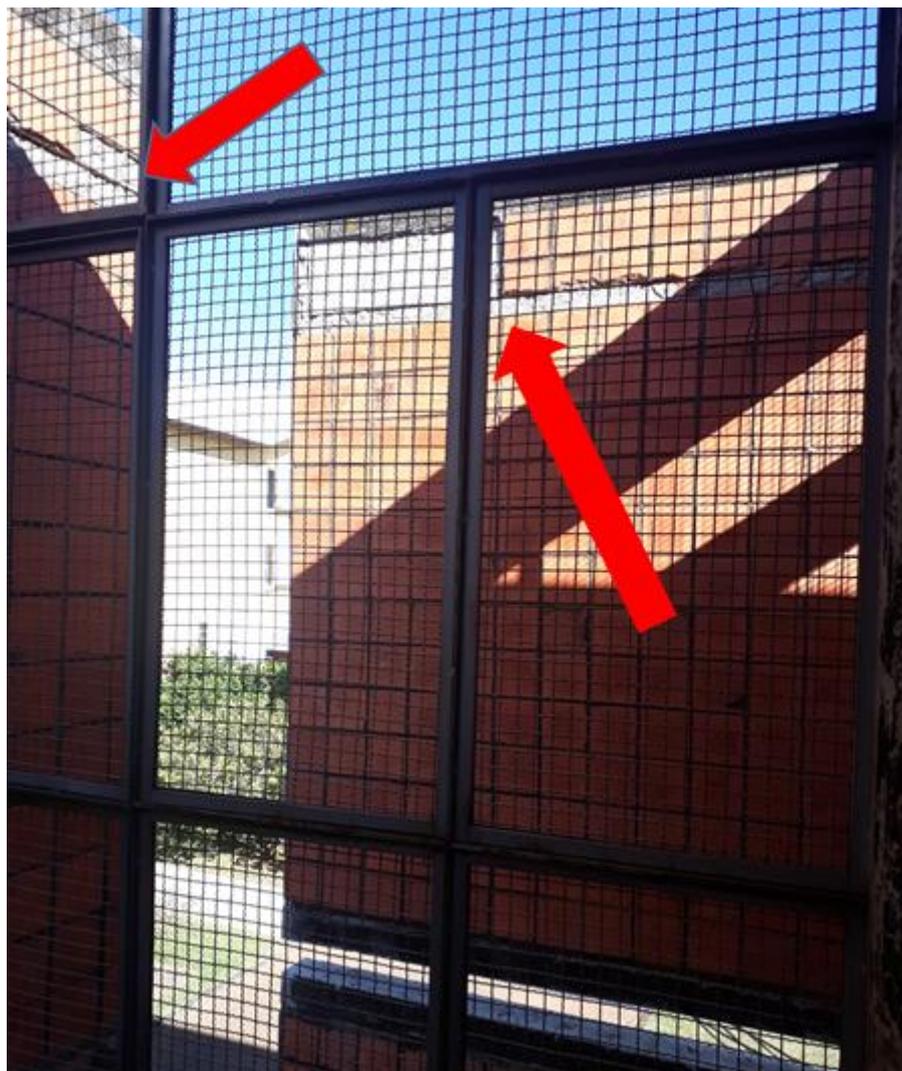
- rainwater seepage through the roof - Water has as its agent: seepage into the slab on the top floor damages the informational material and can short the power grid (figure 5). In some areas, the collection is protected only by tarps;

Figure 5. Rainwater infiltration on the roof

Source: The author.

- b) displacement of latticework - has as its agent the physical forces: the ceramic hollow bricks that composes the library facade, and are prominent objects in its construction, are becoming loose (figure 6). Thus, a consequent fall can cause serious damage, especially if it hits any living being. In a report by FECIV in 2016, it was recommended to place a vertical screen on the facade masonry or a tray at the first floor level to protect against possible falls of these objects, but such suggestions have not yet been accepted;

Figure 6. BCMON - displacement of latticework



Source: SISBI / UFU Collection

- c) fall of the guardrail - has as an agent the physical forces: the guardrail presents rust, even in its supports. Thus, the fall of these pieces can be severe if it also hits a person or animal (figure 7). In addition, this situation puts the collection at risk as we consider that informational and / or furniture material and equipment can be easily thrown out of windows. In figure 7, it is also possible to observe the corrosion process in the reinforcement of the external beams, caused by the humidity of the suspended overalls and the lack of maintenance;

Figure 7. BCMON - Hardware Show Starts

Source: SISBI / UFU Collection

- d) windows - have the physical forces as their agent: windows are facing the interior of the building (figure 8), however, some of them do not have a device to keep them open safely. Also, because they are very old, these parts can no longer be found for replacement. Given this, as the wind forces, the windows rotate 180 degrees and routinely clash with users and staff. The effect of this can be severe if it hits a person's head, for example;

Figure 8. Windows

Source: SISBI / UFU Collection.

- e) Scorpions - Pests are their agent: Users and servers routinely encounter scorpions, especially in bathrooms and other rooms on the ground floor. According to zoonosis control agents, this is due to the lack of protective screens, as well as due to the inadequate structure of the sewage system that allows the return of insects and other animals;
- f) Cracks - has as an agent the physical forces: the construction presents some problems, possibly of structural order, as the cracks shown in figure 9. We believe that this may have been caused by the overload of dungarees fixed in its construction;

Figure 9. Cracks in the structure where the suspended dungarees rested



Source: The author.

- g) insufficient accessibility - not classified according to the 10 agents of Spinelli and Pedersoli Jr.: The building has some circulation barriers; for example, access to the upper floors is possible only by means of a lift, which may eventually cease to function. The absence of tactile and visual signaling is also noted;
- h) incorrect light - its agent is light and ultraviolet radiation (UV) and infrared radiation (IR): part of the collection is affected causing the degradation of material, especially paper (RELLY; NISHIMURA; ZINN, 2001);
- i) improper Relative Humidity (RH) - Incorrect Relative Humidity as Agent: According to Ogden (2001), high-level relative humidity promotes chemical

reactions that trigger mold proliferation and insect activity; while at a low level, it causes dryness and increased brittleness of certain materials;

- j) incorrect temperature - has as agent the wrong temperature: heat accelerates material deterioration through chemical reactions, which double with each 10° C increase in temperature (OGDEN, 2001).

Given the above, besides taking care of the physical structure of the library, it is essential to control its environmental conditions (through its own equipment) and adequate storage of informational materials, especially those considered special, that is, that already have deterioration in its library. Support. It is worth mentioning paper, as it is a very fragile material that becomes brittle, when it comes in contact with long and successive chemical changes, responsible for promoting the rupture of the chains of the cellulose molecules, according to the temperature and humidity (RELLY; NISHIMURA; ZINN, 2001). In this sense, Ogden (2001) recommends a stable temperature up to 21 degrees and stable relative humidity between 30% and 50%, ideally the lowest possible level within this range.

It is noticeable how vulnerable BCMON's building, holdings and regulars are. However, the dangers can be avoided as long as there is commitment from the Library System professionals and managers, as well as from the university.

5. Final Remarks

BCMON was not created to be a risk area, but to provide access to information and, consequently, contribute to the formation of the academic community of UFU, Uberlândia city and region⁷. The notes made in this work, however, without the aim of warning about the dangers that surround this space, highlight the need of the involvement of organs and professionals from inherent areas to better understand the risks described and record other possible problems in this context.

Among the 10 agents established by Spinelli and Pedersoli Jr. (2010), which characterize and define the risk typologies, the study detected that BCMON has 7 of them, as follows:

- a) physical forces: lack of maintenance on the guardrails, windows, as well as corrosion of the reinforcement in the external beams and cracks in the structure;
- k) fire: occurrence of fire-causing elements and absence of preventive and combat measures;
- l) water: infiltration occurrence;
- m) pests: routine appearance of scorpions;
- n) light and ultraviolet radiation (UV) and infrared radiation (IR): frequency of direct light in part of the collection and use of fluorescent lamps;

⁷ Mission Provide access to information, through products, services and dissemination of UFU intellectual production, contributing to the development of teaching, research and extension activities, keeping up with technological, cultural and social changes.

|||UNTRANSLATED_CONTENT_START|||Visão: Ser referência regional, nacional e internacional na gestão da informação e do conhecimento, com padrão de excelência no atendimento às necessidades da Universidade Federal de Uberlândia, na valorização das relações humanas e na promoção do desenvolvimento sustentável e tecnológico.|||UNTRANSLATED_CONTENT_END|||

See <http://www.bibl.libraries.ufu.br/institutional>

- o) incorrect temperature: collection without temperature control;
- p) Incorrect relative humidity: There is no control of the relative humidity in the collection.

These issues could be solved by constructing a risk map to identify threat points and elements, which could even be developed by UFU Labor Safety and Engineering Sector. Another measure would be the investment of the institution's senior management in the implementation of the fire prevention and fire prevention project, among others, that can minimize the danger, the crisis and, finally, the damage. In this way, disasters would be prevented while public assets, memory and lives would be preserved.

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