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Uncertainty Avoidance in Library Architecture. An Analysis of Selected New Library Buildings in the Former East Germany

(*Wymiar „Unikanie niepewności” w architekturze bibliotek. Analiza wybranych nowych budynków bibliotecznych w byłych Niemczech Wschodnich*)

Słowa kluczowe: kultura organizacyjna, unikanie niepewności, budynki biblioteczne, biblioteki niemieckie.

Abstrakt: Artykuł porusza problem przestrzeni bibliotecznej będącej jednym z elementów kształtujących kulturę organizacyjną biblioteki. Model wymiarów kulturowych Hofstedeego stanowi podstawę analizy oraz porównania budynków bibliotecznych zaprezentowanej w artykule. Tekst skupia się na wymiarze unikania niepewności. Artykuł jest kontynuacją wcześniejszej publikacji dotyczącej wymiaru indywidualizmu/kolektywizmu.

Keywords: organizational culture, uncertainty avoidance, library buildings, German libraries.

Abstract: The article addresses the problem of library space as a component of a formative element of organisational culture. In particular it uses Hofstede's cultural dimensions as a tool to analyse and compare library buildings with each other and with an idealised theoretical model of a library. This paper focuses on uncertainty avoidance and is a continuation of an earlier one covering Individualism and Collectivism.

The aim of the article is to address library space as a formative element and manifestation of the organisational culture of a library. It makes use of Hofstede's five dimensional culture model as a tool to analyse and compare library buildings both with an idealised theoretical model and each other. This is a second article covering these issues and therefore it will skip over the basics of culture theory, a description of Hofstede's model, and justification for using it in this context. These can be found both in the first article in this series [8] and in my other work [6; 7; 8; 9]. The aforementioned article also explains the nature of the research method used and the research area. While that text analysed Individualism and Collectivism, this article focuses on Uncertainty Avoidance.

Hofstede defines the Uncertainty Avoidance Index (UAI) as the degree of anxiety felt by members of a given culture in the face of the inevitable uncertainty of the future [2; p. 187-198]. This anxiety justifies the need for stability, punctuality, and strict compliance with regulations. Among the countries examined by Hofstede, Greece has the highest UAI (UAI=112) and Singapore (UAI=8) has the lowest [2, p. 192–194].

In cultures with a low UAI, uncertainty is considered a natural part of life that does not cause special concern. Law and regulations are approached with a degree of latitude and common sense is believed to be superior to rigid rules. Efforts are also made to reduce the number of laws and regulations in the workplace. A certain degree of chaos in the workplace is tolerated (the specifics depend on the nature of the work) and attitude towards punctuality is fairly lax. Freedom of discussion and an open approach to the topic are valued in teaching. Teachers cooperate with parents, and learning outcomes are attributed to students' abilities rather than coincidence and luck, as is often the case in cultures with high UAI. In cultures with low uncertainty avoidance, readership is higher than in countries with high UAI, and new technologies are adopted faster. People in such cultures worry less and are more likely to consider themselves happy than those in countries with high uncertainty avoidance.

In cultures with high UAI the unpredictability of life is considered as a danger that must be constantly mitigated. Everything that is not known is seen as a threat. However, avoiding the unknown does not mean avoiding risk-taking, provided that these are known risks and the chances of success are determinable [2, p. 197]. Strict rules are instilled in childhood, leading to the development of a strong „superego”. Inhabitants of countries with high Uncertainty Avoidance often feel stress and anxiety, worry a lot, and are more likely to consider themselves unhappy, than people in cultures with low UAI. At school the teacher is expected to know the one true and unambiguous answer to each question. New technologies are accepted reluctantly. Readership is also lower. There is a strong need to put everything in the frame of laws and regulations in the workplace. Employees feel the need to be constantly busy. Punctuality is also very important. On the other hand, little emphasis is placed on innovation and inventiveness.

What follows is a description of the questions in the research tool (it is described in detail in my previous article in *Library Management* [8]) which relate to Uncertainty Avoidance. The first indicator distinguished in the studied libraries was flexibility, which is a key feature of modern library architecture [1; 4]. Three standard answers to the question whether a library building is flexible were distinguished: yes, no, or partially. The first means that the entire library building, or a very large part of it, adheres to the principle of flexibility. A negative answer means that the building is not flexible at all, or only small areas can be considered flexible. For example, a large reading room is a flexible space, but compared to the scale of the entire building it is not enough to talk about even partial flexibility. Partial flexibility means that some significant area of the library is flexible, but it does not make up most of the library space. This answer is also adequate if individual areas of the library are flexible, but its overall structure is impossible to change. This is the case in the Main Library of the University of Warmia and Mazury (pol. *Biblioteka Główna Uniwersytetu Warmińsko-Mazurskiego*) in Olsztyn, which consists of separate parts, each of which can be considered flexible. Even though these parts make up the majority of the library, the building as a whole is not flexible.

By encouraging change and innovation in spatial organization, flexibility helps build a culture with lower Uncertainty Avoidance. A lack of flexibility suggests the belief, typical

of cultures with strong Uncertainty Avoidance, that one should be prepared for any eventuality, as opposed to the contrary view that the future is inherently unpredictable and the only way to prepare for it is adaptability. The inability to change associated with inflexible spatial structure also favours the entrenchment of procedures and behaviours, which in turn leads to the creation of an organizational culture with high Uncertainty Avoidance.

Flexibility may also be associated with time orientation. The goal of flexibility is to give a library the ability to easily adapt to changing circumstances in the future. Planning for the future is a feature of long-term cultures. Although it should be noted that short-term cultures tend to follow current trends. Since flexibility is widely recognized as a must-have in modern library architecture, it is not in itself proof that designers recognize its long-term value (though of course it can be). This is one of the reasons why partial flexibility can be considered an indication of short-term orientation. In practice, in order for flexibility to fulfil its role in the long term, most of the building must be flexible. If only parts of it are flexible, it may indicate a certain short-sightedness of the designers and suggest that flexible solutions were used not because of a deep belief in their effectiveness, but because it is the current norm in library planning. The context of a building should also be considered, as there may be external factors limiting the use of certain solutions.

Another issue analysed in the observations is the so-called „centre of gravity” of a building. It is the central point of the building, which is usually more or less equidistant from all its parts and easily identifiable and/or reachable. In the centre of gravity of a library building one may find the reader, the librarian, or the book (e.g. the stacks). Sometimes, e.g. if there are open stacks in the centre of gravity, several answers must be considered true (in this case, the reader and the book). The centre of gravity is an important organizational feature of every building. Apart from its obvious practical meaning, it can be said that what is placed in the centre of gravity indicates what is most important in the library. This choice may be the result of cultural conditioning. What is more, this aspect of spatial organization, through its obviousness, can have a strong impact on shaping organizational culture. It is all but impossible to ignore the centre of gravity. It is also very difficult to limit its impact on the functioning of the library, as everything else literally „revolves around it”. At the same time, in the initial period of operation in a new building, it can be a source of anxiety if it does not fit into the current organizational culture¹.

Placing the librarian in the centre of gravity means that a rental desk, information desk, or another librarian’s workstation has been placed in the central point of the library. It is also conceivable that in the centre of the entire library building there are the staff rooms (librarians’ work space unavailable to readers). However, this solution is not used in any of the analysed libraries. Placing the library staff in the centre² has obvious practical advantages, allowing the reader to easily find a librarian and ask for assistance. This encourages the

¹ This seems to have been the case in the new building of the Medical University Library in Poznań. During my visit in its first year of operations, the librarian at the centrally placed information desk seemed utterly terrified. At the same time, my attempts to get a permission to take photographs proved that the organisational culture was very high on Uncertainty Avoidance and Power Distance.

² See for example the famous reading rooms of the Library of Congress and the British Museum.

reader to take advantage of this help. Therefore, a central position emphasizes the role of the librarians and thus their status. A central position usually also gives librarians a better view and greater control over readers. All this suggests that placing the librarian in the centre of gravity of the library building may be associated with higher uncertainty avoidance and greater power distance.

Placing the book (in closed stacks³) in the centre of gravity has similar connotations for organizational culture. Closing off readers' access to bookshelves increases the security of the collection and allows a greater degree of control over the readers' activities, which can be a manifestation of strong Uncertainty Avoidance. At the same time, since this system means that a reader cannot use the collections without the mediation of the librarians, it emphasizes their importance in the institution and raises their status. Thus, it can also be associated with greater power distance. Every closed stack space has these features, but placing the stacks in the centre of gravity of the building is a very clear symbol highlighting these trends⁴. Therefore, it can be considered as reinforcement of Uncertainty Avoidance and Power Distance in the organizational culture of a library.

We can say that the reader is in the centre of gravity when the readers' desks, the catalogues, or the main hall of the library – every space in which readers are the primary users – are placed in the middle. It could even be a café, but most often it is the main hall, from which readers enter other parts of the library. Placing the reader in the centre of gravity is a symbolic expression of focusing on the reader. It usually gives users a greater sense of freedom. It also has a practical dimension, allowing readers easier and faster access to various parts of the library. As it pushes the librarians aside, limiting their control over the readers' activities, it deprives them of the status symbol of a central position. All this suggests that placing the reader in the centre of gravity can be considered a sign of low Uncertainty Avoidance and low Power Distance.

One more spatial arrangement needs to be considered – open stacks in the centre of gravity. Should this be interpreted as placing the reader or the book in the centre of gravity? It would seem to be a symbolic indication of the equivalence of the reader and the book. However, it should be emphasized that open stacks are definitely a solution directed at the reader – security of collections is sacrificed here for the benefit of the patrons. At the same time, it weakens the librarians' position – it physically pushes them away from a prestigious position in the centre, increases the independence of the readers, and hinders oversight. All in all, it should be recognized that such an arrangement emphasizes lower Power Distance and Uncertainty Avoidance. Although it is also worth paying attention to the organization of the open stacks area – if it, especially in its central part, has no reading desks or main communication routes, it can be concluded that this area mainly serves as storage space – and so it can be said that the book rather than the reader is in the centre of gravity.

³ If they are open stacks, the reader is at the centre too.

⁴ See for example the Silesian Library in Katowice, with its dominant central stacks tower, „great mechanical librarian”, and huge Power Distance. It is a modern testament to a bygone era of library sci-fi that seems to serve books more than it serves readers (see also [11]).

Image 1. Library of Congress reading room with the librarians in the centre and the Silesian Library with closed stacks in the centre



Source: <https://commons.wikimedia.org/w/index.php?curid=15709590>, <http://www.bs.katowice.pl/bs/poziomy/>.

The next point in the observation form related to Uncertainty Avoidance concerned the division into the reader and librarian zone. In a modern library with open stacks, it is impossible to fully preserve the traditional division into the book, reader, and librarian zone, as well as the principles of non-intersecting roads. The open stacks area is a common reader and book zone, in which the paths of readers, books, and librarians cross. However, the library still needs some space for librarians, where organizational work, such as cataloguing, is carried out. A reader who keeps encountering „staff only” signs and closed doors, feels like an intruder in the library. This discourages from both visiting the library and „exploring” it. Therefore, paradoxically, a clear separation between the space for the readers and librarians promotes patrons’ freedom of movement by limiting the number of closed passages and hiding areas inaccessible to them. At the same time, it helps maintain order, preventing readers from accidentally entering the librarians’ areas. This solution may result from strong Uncertainty Avoidance, but it also serves to reduce Power Distance.

Another aspect is important in the context of interior divisions of a library building. The very way in which these divisions are marked may say a lot about the level of Uncertainty Avoidance (as well as Individualism) that the library building favours. Introducing a clear, unambiguous division into parts limits the readers’ freedom, psychologically if not physically. More importantly, it also makes the readers’ movement in the library much more predictable. For example, if the library is divided into specialized reading rooms, in which the reader must additionally sign the proverbial list before using the collections, most readers will use the services of only one reading room during one visit. Even if this division does not involve physical barriers (e.g. it is introduced within the undivided space of open stacks), if it is clearly marked, most readers will tend to remain in „their” zone. So one

can associate this solution, as well as other forms of clear zoning, with strong Uncertainty Avoidance and limited Individualism. Conversely, the lack of such divisions makes the readers' behaviour less predictable, but also gives them more freedom to organize their work independently. It can therefore be associated with low Uncertainty Avoidance and greater Individualism.

The way in which readers have been provided access to the Internet may itself point to many aspects of the library's organizational culture. The librarians' attitude to Internet access in libraries has changed significantly in recent decades. An idea that once was controversial, today is an essential service in the library. First of all, it is increasingly recognized that Internet access must be universal and unrestricted. In part, this change in attitude is simply a sign of the librarians "getting used" to this idea. However, one can also surmise other reasons. One of them is the steady increase in the number of sources available on the Internet. It is currently the norm for the readers to need simultaneous access to library collections and the Internet. At the same time, the passage of time has dispelled many of the initial concerns related to the possibility of using the library Internet for nefarious purposes. It should be noted that these concerns were often unfounded from the beginning and were rather a symptom of fear of new technology.

Another reason may change the perception of the role of both the library and the Internet. As more and more matters are handled on the Internet, it becomes increasingly difficult to draw the line between using the Internet in the library for scientific or educational and private or entertainment purposes. At the same time, even if such a distinction were possible, the belief that there is something wrong with using library resources for „private” purposes is disappearing. If the library is to be the „third place” where readers spend time in a café or at social gatherings, it would be absurd to prohibit them from using *Facebook* on library computers. This issue is also largely solved by the growing availability of the Internet access. According to 2018 official statistics 82.7% of households in Poland had a computer, and 84.2% had access to the Internet [5; 2]. As a result, readers who use the Internet in the library for private purposes, because they cannot do it at home, are vanishing. This trend is reflected in abandoning the idea of separate computer labs, where access to computers was controlled, in favour of workstations located throughout the library.

This change in the approach to the place of a computer with Internet access in the library is only one of the effects of rapid technological progress in this field. Not so long ago, providing access to the Internet also required providing readers with access to computers. Nowadays, all librarians have to do is set up a wireless router in the library to provide unlimited Internet access to any reader with a computer (or tablet, or smartphone, or even a e-book reader). Although obviously one cannot just count readers bringing their own computers. However, for various reasons, including organisational culture, these changes reach libraries at different speeds.

Six standard responses have been identified at this point in the form. The library may provide readers with access to the Internet through a wireless network without any restrictions or with limited access, e.g. limited to some areas, certain times or for a limited

time, or restricted by technical difficulties. It should be emphasized that the necessity of prior registration in order to obtain a network access password is not a limitation for regular users, especially if they log in via a universal registration system, such as the *eduroam* network used at universities throughout Europe. In some libraries, Internet access from a user's computer is still only possible through a wired network, although today it is very rare. It is also possible for the Internet to only be available on library computers, sometimes only on some of them. The last possibility is that the library does not provide readers with access to the Internet at all. Currently, this is unheard of, but such an option had to be included.

Differences in the way Internet access is provided can be linked primarily to Individualism and Uncertainty Avoidance. The easier and more unfettered access to the Internet is, the greater independence of patrons (associated with greater Individualism). At the same time, it is more difficult to supervise the readers – both where and when they use the Internet, and what they use it for. This may be associated with Uncertainty Avoidance. A total lack of the Internet access in a modern library can be considered a serious anachronism, which may indicate a strong orientation towards the past, and therefore short-term orientation. It also seems that arrangements requiring the readers to ask the librarian for help before using the Internet may indicate high Power Distance.

The way librarians oversee the library and its readers can reveal a lot about organizational culture. Three standard answers are distinguished in this point: supervision is strict and the readers are aware that they are supervised; the readers are supervised in a manner invisible to them; supervision is less strict. It should be emphasized that it is not only important whether control is strict or not, but also how the reader perceives this control. The very fact of closely supervising readers' behaviour and library work may indicate strong Uncertainty Avoidance. It also seems that stronger oversight can mean greater emphasis on the protection of collections, and thus a stronger long-term orientation. Another aspect of this issue is the feeling of discomfort that control can cause in the readers. First of all, perceptible oversight exercised by library staff emphasizes their status, and therefore can be an indication of greater Power Distance. In turn, the sense of lack of control or supervision increases the reader's freedom and independence, and thus can be associated with Individualism. Therefore, constant and perceptible presence of librarians „looking over the reader's shoulder” matches the first answer, the lack of any forms of supervision the third answer, and for example CCTV camera surveillance, the second response.

The next point in the form concerned the freedom of movement of the reader in the library. Every library has areas that the reader cannot access – workshops, offices, storage spaces. Depending on the number and distribution of these areas, the library may appear more or less open. The sense of openness can also be affected by various types of prohibitions on the readers. Barriers such as doors, long corridors, etc. restrict freedom of movement. Accumulation of access bans, areas inaccessible to the reader, and other barriers may be a manifestation of the need for reader control, which demonstrates high Uncertainty Avoidance in the library's organizational culture.

Another expression of this need for control over the reader may also be found in the signs present in the library. It is worth noting what kind of signs dominate the library – whether they take the form of prohibitions and orders, or rather information. Prohibitions and orders are a tool of control; it can be said that as such they serve the librarians' purposes, while informational signs are intended to help the readers, not restrict them. Therefore, the predominance of prohibitive signs may indicate strong Uncertainty Avoidance. On the other hand, a limited number of signs in general, just as the predominance of information signs, indicates low Uncertainty Avoidance.

Having identified the key aspects of library space that can be associated with Uncertainty Avoidance it is worth considering the views on those aspects expressed in subject literature. In other words, what is the Uncertainty Avoidance Index of an idealised library following the modern trends and best practice?

Flexibility is undeniably one of the most important desirable features of a modern library building. The more flexible, the better [1; 4]. As for the so-called „centre of gravity” of a library, the literature concerning this subject does not offer a clear answer, but the most frequently recommended flexible library model with open stacks places the reader firmly in the centre of both gravity and attention. The lack of a clear division into the reader and librarian area may be confusing to the readers and indirectly limit their freedom of movement around the library. For this reason, it conflicts with the principles of openness and accessibility.

How clearly should the interior division of the library be marked? On the one hand, a clear division into zones with different functions creates a more organized and legible space. It can also be associated with interior design diversity, although it is not necessary for it. On the other hand, the current trend is (and for good reason) an accessible library with open stacks, in which various types of documents and records, as well as different categories of users [3], mix and rigid divisions are abandoned [12]. It is also difficult to reconcile a clear division of space with open stacks, which work better if they cover the whole of diverse collections, among which the readers can move freely. Such a division (e.g. into specialized reading rooms) will usually also be more or less permanent, which contradicts the principle of flexibility, which is one of the basic features of a modern library building. Furthermore, collections in open stacks, which are less physically and psychologically separated from the reader, are more easily accessible. So it seems that it is better if the division of the library into areas with different functions is less overbearing (although it should be legible).

Access to the Internet is nowadays absolutely necessary for library users and should be as easily accessible as possible. Due to the development of mobile technologies, a wireless network is necessary for this. At the same time, completely open and unregistered access to the network exposes the library to its illegal use, and users to hacker attacks, which is contrary to the principle of security. A similar balance between user convenience, accessibility, and security is required from patron supervision in the library – it is necessary for the safety of the collections (and the readers themselves), but if too strict it can act as a deterrent and conflict with the principle of openness and open stacks. Therefore, it is best if supervision is exercised, but remains invisible to the patrons (e.g. CCTV cameras).

Restrictions on the freedom of movement of patrons also conflict with the principle of accessibility. They can also limit the convenience of using the library, and to some extent also its flexibility, as well as conflict with Ranganathan's principle of saving the time of the reader [10]. It seems that there should be as few restrictions as possible in a modern library with open stacks.

Signs play a very important role in a library, especially one with open stacks, and should be numerous and legible. At the same time, however, it should be noted that this applies primarily to information signs. Orders and prohibitions may play a role in ensuring organization and security, but are not necessary in large numbers. At the same time, they can have a negative impact on readers' sense of comfort.

In summary, the recommendations in subject literature strongly lean towards a space conducive to low Uncertainty Avoidance, but not extremely low. This was also the case with Individualism, as discussed in my earlier article in *Library Management* [8]. However, it should be noted that arrangements related to greater Uncertainty Avoidance can arise from decisions not directly related to security (e.g. information desks facilitate supervision over readers, but this is not their main purpose). Therefore, it seems that (in the light of publications on spatial organization) it is advisable to minimize Uncertainty Avoidance, as it may unavoidably be increased, at least somewhat, by other necessary arrangements.

With that in mind let us now turn to a detailed analysis of the eight German libraries included in the study.

Philologische Bibliothek der Freien Universität

The Philologische Bibliothek der Freien Universität building in Berlin (image 2), designed by Norman Foster and opened in 2005, is part of the so-called Rost- und Silberlaube – a complex of buildings housing the Freien Universität campus in the Dahlem district of Berlin. Patrons enter the library building housing 750,000 volumes from one of the campus buildings, although the library itself is a free-standing structure. The form of the 6,000m², four-storey building on an oval plan was designed to resemble the human brain.

Image 2. Interior view of the FU Philological Library from the entrance



Source: self-elaboration.

The building is essentially flexible – most of the library area is an open space without divisions, although the relatively small size of the library means that solid elements, such as stairs, elevators, and sanitary facilities, take up a lot of space. There is also a certain paradox here – the specific architecture of the library on the one hand would allow for the introduction of far-reaching changes if necessary, but at the same time it is clearly dictated by the desire to apply specific (current) organizational arrangements. Collections and reading and information desks could easily be moved or re-organized, but there would be no practical sense in doing so in this building.

The reader is undoubtedly in the „centre of gravity” of the building. In the physical centre of the library there is an open staircase, from which the reader has direct access to the shelves. Additionally, there is really no librarian's zone in the library (except for one small room). It seems that the cataloguing offices and such are located outside the library (maybe in the campus buildings). Neither does the interior have any clear zoning – basically, the entire library space performs the same functions.

Using the Internet via each of several wireless networks available in the entire library requires prior registration. There is also a wired network connection available in several places, but it also stands in need of having an account in the system. This seems to be the only mechanism of control. Other than that, there seems to be no supervision over readers – there are no librarians' posts outside the main hall or even a visible monitoring system. Neither is the freedom of movement of the reader in the library restricted. The whole space is one open area, in the building there seems to be only one closed room, and the only door

(in the corridor leading to group study rooms) opens automatically. There are also few signs here – other than those necessary for the library to function, there is only a note about the need to leave bags in lockers and instructions for their use.

The space of the Philologische Bibliothek suggests, as recommended by the theoretical model, very low Uncertainty Avoidance. The few elements that may point towards somewhat stronger Uncertainty Avoidance are associated with the fairly conservative interior design.

Veterinärmedizinische Bibliothek der Freien Universität

The Veterinärmedizinische Bibliothek der Freien Universität in Berlin (image 3) has been housed in a former riding school building at the Düppel campus since 1998. It holds approx. 160,000 volumes on three above-ground and one underground floor. The building was adapted (rather than built) for library use, but it should be stressed that originally it was a completely open space of simple shape, so the designers of the library were basically limited by nothing but its volume. The library is therefore suitable for the comparative analysis required in this work.

Image 3. Building of the Freien Universität Library of Veterinary Medicine in Berlin



Source: self-elaboration.

Most of the interior of the building is an open space without divisions, but there are also elements which would be difficult to change. First of all, the building is small, which means that permanent elements, such as staircases and sanitary facilities, take up a lot of space. The middle of the ground and upstairs levels have no floor, opening a view of the lower levels from above and the roof from below. It gives the impression of openness, but

this space cannot be used in any way. This is a fairly common arrangement (found for example at the Warsaw University Library or the Central Library of the University of Gdańsk), but because the Veterinärmedizinische Bibliothek building is so small, this empty space takes up a significant part of its area. On the perimeter of the ground floor and first floor there are various closed rooms (individual and group study rooms, etc.) which cannot be easily eliminated to e.g. expand the open stacks area. Thin ceilings and the lack of an internal supporting structure also indicate that the upper floors could not support compact stacks. So, although the open stacks area is devoid of unnecessary divisions and therefore quite flexible, it is too small part of the building to make it fully flexible.

In the physical centre of the library there is a large light well and basically the thing closest to this centre is, due to its height, a giraffe skeleton standing on the bottom floor. The central point of this floor holds a block of eight reading desks, and on the upper floors the open space is surrounded by passages (surrounded in turn by open stacks), so there is no doubt that it is the reader who is placed in the centre of gravity of the building. All the collections, both prints and museum exhibits (skeletons and preparations, which due to the library's subject matter are quite numerous) are located in one open space. As in the *Philologische Bibliothek der Freien Universität*, there are several wireless networks available here, each of which requires prior registration.

The work of readers in the library is not supervised – there is only one librarian at the entrance, who cannot see everyone even in this relatively small space; there is also no visible monitoring system. Neither is the freedom of movement of the reader in the library restricted. Apart from a few rooms for the staff, the reader has unlimited access to the entire library. The only method of controlling the behaviour of readers comes in the form of numerous signs that could be described as „instructional” – informing how the readers should behave, what is not allowed, and what should be done. Some of them (e.g. the ban on entering in laboratory clothes) is associated with the nature of the library. To sum up, the spatial organization of the Veterinärmedizinische Bibliothek der Freien Universität indicates very weak Uncertainty Avoidance, which is in agreement with the assumptions of the theoretical model (see above).

Jacob-und-Wilhelm-Grimm-Zentrum

The Jacob-und-Wilhelm-Grimm-Zentrum building houses the Central Library of Berlin's oldest university – the Humboldt University (germ. *Zentralbibliothek der Universitätsbibliothek der Humboldt-Universität zu Berlin*). The ten-storey building with an area of over 20,000 m² was opened in 2009 (image 4). The library's collection has 2.5 million volumes, of which approx. 2 million were made available in open stacks. The building stands in a bend of the River Spree in the very centre of Berlin, in the immediate vicinity of the headquarters of the Humboldt University and so-called Museum Island (germ. *Museumsinsel*). The most characteristic part of the building is the central 70 m long, 12 m wide, and 20 m high reading room with reading desks arranged on terraces.

In the central part of the building there is an open space with reading rooms on graduated mezzanines surrounded by an open stacks area with stairs, group study rooms, individual work cabins, information points, etc. It is at the same time the largest and most impressive part of the library. In both the physical and emotional sense, the reader is in the building's centre of gravity. On both sides of the main reading room (along the long axis of the building) there are two lines of load-bearing walls (with staircases, elevators, and sanitary facilities between them) behind which there are further open stacks areas. As a result, the building is cut along its long axis into strips in a way that cannot be changed, which significantly limits its flexibility.

Image 4. The characteristic main reading room of Grimm Zentrum



Source: self-elaboration.

The library has a separate librarians' zone, which does not intertwine with the readers' area in any way – in fact, readers cannot even see how to get to it from their part of the building. At the same time, however, in different places in the readers' area one can find doors marked „staff only”. Areas with different functions (general and special reading rooms, computer rooms) outside the open stacks area (in which there are some reading and computer stations) are also located in closed rooms. All this puts many obstacles in the way of a reader exploring the library and alongside the aforementioned dividing walls turns the space into something of a maze.

A wireless network is available throughout the entire library, but requires login. At computer workstations, using the Internet (outside the university's website) also requires logging in. It should be noted that by default for the average academic library patron having an account in the system is not much of an obstacle.

Readers are not really supervised in the library. There are few librarians and they do not have a good view of the library interior, and there is no visible monitoring system. However, the patrons' freedom of movement is limited. In many places, especially on the upper floors, the reader encounters closed passages and doors. Freedom of movement is also limited by the rather unclear interior layout. Apart from the „no entry” signs, most of the notices in the library are informational – marking sections of the collection and room functions.

The spatial organization of Grimm Zentrum follows the theoretical model suggesting weak Uncertainty Avoidance, albeit to a slightly lesser extent, mainly due to very clear interior divisions.

Volkswagen Universitätsbibliothek

The so-called Volkswagen-Haus houses the Zentralbibliothek der TU und UdK Berlin, which is the common library of the Technische Universität Berlin and Universität der Künste Berlin, together known as the Volkswagen Universitätsbibliothek (image 5). The five-storey building was opened in December 2004. On ca 30 thousand m² it houses around 2.7 million volumes. The building is located on the edge of a vast area occupied by the Berlin Technical University.

Image 5. So-called *Volkswagen-Haus* housing the Zentralbibliothek der TU und UdK Berlin



Source: self-elaboration.

Virtually the entire building is an open space in which the few existing walls are glazed and have a „temporary” character, which makes it very flexible. On each floor in the centre there is a main hall, usually surrounded on two sides by open staircases, and on the third by an information desk, which clearly places the reader in the centre of gravity.

Reader and librarian zones are clearly separated from each other. There are three or four staff rooms in the readers’ area, off to the side and unobtrusive. Other than that, only the closed stacks in the basement are separated by a wire mesh partition from the periodicals reading room. It is difficult to say where the librarian’s zone is located at all (either it is well hidden or in some other building). The readers’ area itself, on the other hand, is devoid of clear divisions and all of its space seems to perform similar functions. Apart from the entrance hall, only the periodicals reading room and a small media room have been clearly separated.

There are several wireless networks in the library (including *eduroam*), all of which require some form of prior registration. However, not all of the numerous computer stations provide Internet access.

There is no strict supervision over readers. There is a single security guard at the entrance, and other than that, there is neither tangible librarian oversight nor visible monitoring. Neither is the freedom of movement of the reader in the library restricted. Apart from a few small rooms, the only area inaccessible to readers is a closed stacks area (but it is hard to accidentally come across the closed door leading to it, because it is located in the farthest

part of the basement). Other than that, there are no walls or doors inside the library (except for necessary ones leading to individual and group study rooms). The only form of control consists of the few (and polite) order and prohibition signs.

To sum up, in terms of Uncertainty Avoidance, the space of the Volkswagen Universitätsbibliothek is very similar to that of the idealised model.

Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden

Opened in 2002 the main building of the City, University, and State Library of Saxony (so-called SLUB) consists of two five-storey buildings and two underground floors (image 6). On over 40 thousand m² it holds a collection of ca 8.3 million units, including extensive special collections – photographs, maps, music, manuscripts, and old prints. The library is located on the edge of the vast grounds occupied by the Technische Universität Dresden.

Image 6. One of the twin buildings of the Sächsische Landesbibliothek – Staats- und Universitätsbibliothek in Dresden



Source: <https://commons.wikimedia.org/w/index.php?curid=1924954>.

Though modern, the building is not very flexible. Like the Grimm Zentrum in Berlin, the SLUB building has been laid out around a three-storey-high empty space in the „centre of gravity”, where the main reading room is located. This is an eye-catching arrangement which gives the building character, but this space would be difficult to use in any other way. The external part of the building, in which open stacks areas are located, is divided into quite large (and flexible), but clearly separate areas. The aboveground part of the library should be treated as separate buildings connected to the library, rather than as an integral part of the library space.

The reader and librarian zones are very effectively separated. Administrative and technical offices are located in the above-ground part of the library. Nowhere in the readers’ area are there any technical or administrative spaces (except, of course, from information desks). The only conspicuous „backstage” part of the library is the book transport system, which has been deliberately made visible to the patrons. The Internet is available via a wireless network and computer workstations, but in both cases requires login. Given that SLUB is also a public library, the need for prior registration can be considered something of a hindrance (greater than in the case of academic libraries, where most readers are „regular customers”).

Readers have no sense of being supervised by librarians. There is also no visible monitoring system. Neither is the freedom of movement of the reader in the library restricted. The only obstacle in the path of the reader is the sheer size and somewhat unclear layout of the library. There are also slightly too few vertical communication lines, or maybe they are not visible enough. Apart from the main stairs, staircases are hidden behind closed doors, and some of them only connect two floors. Information notices are the most common type of signs in the library.

To sum up, the spatial organization of the Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden suggests weak Uncertainty Avoidance, very similar to the idealised model.

Bereichsbibliothek DrePunct

The Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden (*SLUB*) also has several subsidiary libraries, including the Bereichsbibliothek DrePunct, located opposite the main library, which collects primarily collections in engineering and related fields (image 7). The library collection has over 600,000 units. The single-story building, with two sides covered floor to ceiling in windows, has an area of approx. 4 300 m². Out of these, 3 000 m² belong to the free-standing main building which houses open stacks. The library was opened in 1998. Since 2014, the so-called *Makerspace* – workshops in which users can create practical projects using, among others, 3D printers – has been adjacent to the library.

Image 7. Rear view of the main part of the SLUB – DrePunct library building



Source: self-elaboration.

Most of the library area is one undivided open space with a regular shape. The few enclosed areas are separated by lightweight partition walls that do not even reach the ceiling. However, the library also uses rooms located in the neighbouring building, which it is attached to on two sides, and here there is no such flexibility. Nevertheless, these areas constitute but a small part of the whole. They also do not serve the main tasks of a library – they contain study rooms, sanitary facilities, entrance halls, and the aforementioned *Maker Space* – an area of creative work consisting of a group study room and workshops. The *Maker Space* seems to be a separate institution under the care of the library rather than its integral part.

In the building's „center of gravity” there are open stacks (covering most of the area of the library), but it contains only collections, not reading desks or computer workstations, all of which are located on its perimeter. On the perimeter of the open stacks area there are also some of the study rooms, while other spaces with specific tasks are not clearly separated (it is quite easy to wander into a corridor filled with old catalogue cabinets).

The library can be divided into two separate parts – one (larger) has an open space with open stacks and the other is the so-called *Maker Space*, i.e. rooms for creative and group activities; in this section there is also a room for parents with children, a photocopier, etc. This division is very clear for two reasons: first, *Maker Space* is divided by walls, while the main part of the library is open space; secondly, *Maker Space* occupies an area not in the main library building, but in the neighbouring one. It is also a smaller area of the library and does not seem to be an integral part of it. The main part of the library itself has no visible divisions.

Internet in the library is available via a wireless network and at computer workstations, but in both cases login is required. In addition, there is basically no oversight over the readers – librarians are present only at the entrance, no cameras are visible. Neither is the freedom of movement of the reader in the library restricted. As already mentioned, most of the library is a large undivided open stacks area and there are basically only two closed areas – workshops and a reading room for parents with children. In summary, the spatial organization of the DrePunct library points to low Uncertainty Avoidance, though not extremely so. It seems slightly higher than recommended by the theoretical model due to a slightly smaller number of arrangements related to weak Uncertainty Avoidance.

Zweigbibliothek Erziehungswissenschaften

Zweigbibliothek Erziehungswissenschaften (eng. The Pedagogical Faculty Library) of the Dresden Technical University is one of SLUB's several subsidiary libraries (image 8). Its modest three-storey building houses approx. 125 thousand volumes on pedagogy and education. The library has been located at August-Bebel-Straße since 1997, in the same district as the university grounds, but not within and not in close proximity to them.

Image 8. SLUB Pedagogical Library



Source: self-elaboration.

The building is flexible – most of it is a uniform open space. At its centre of gravity there is an open stacks area. Reading desks are located around this area, but a corridor also runs through it, which readers walk along. A division into the reader and librarian zone has been retained. One can find doors to offices and inaccessible areas in the reader's area,

but they are few and discreetly placed. Part of the periodicals collection has been placed in a separate reading room, but otherwise there are no clear divisions in the main part of the library.

As in the entire SLUB library network, the Internet is available over a wireless network and at computer workstations after logging in. The readers are not supervised – there is only one librarian at the entrance (who does not see most of the interior), and there is no visible monitoring system. Neither is the freedom of movement of the reader in the library restricted. In several places there are closed doors to staff rooms and access to group study rooms is also difficult (through a closed staircase), but most of the reader area is an open space – even the stairs are open. In the library there are few signs, especially such that would have been added by librarians in the course of the library's operation, and among those that are present informational signs dominate.

In summary, the spatial organization of the Zweigbibliothek Erziehungswissenschaften points to weak Uncertainty Avoidance, similarly to the idealised model.

Zweigbibliothek Forstwesen

Tharandt near Dresden is home to the faculty of forest sciences of the Dresden Technical University and the faculty library – Zweigbibliothek Forstwesen – which is one of SLUB's subsidiary libraries (image 9). After the old library was destroyed during the flood that hit Tharandt in 2002, it became necessary to build a new library building, opened in 2004. The architecture of the building housing more than 126 thousand volumes – with closed stacks on the second floor, open stacks on the first floor and the canteen on the ground floor – which ensures safety in the event of floods to the collections gathered on the upper floors, is dictated by this experience.

The reader and librarian zones have been separated very carefully so that the reader does not notice the presence of „back-room” facilities most of the time. Equally clear are the divisions in the reader's zone. This is probably due to the small size of the library and the structure of the building – there is a clear division into the recreational area on the ground floor (most of the ground floor is occupied by a canteen), an open stacks area on the first floor, and closed stacks and offices on the second floor. A special reading room has also been clearly separated on the first floor. Reading desks are also gathered in groups rather than integrated into the space of the open stacks area.

The building seems flexible. The entire upper floor and a significant part of the ground floor is an open, adaptable space. The third floor houses closed stacks. In the physical centre of the building there is a corridor or entrance hall – when entering the library, the reader standing in this place is in front of the open stacks area, with an information desk on the left, and catalogue cabinets on the right. However, this is not a place where the reader would spend a lot of time, because it is only a passageway. The aforementioned information desk is the dominant element in this area of the library. It can therefore be said that the librarian is at the centre of gravity of the library.

Image 9. Building of the forestry department library in Tharandt



Source: self-elaboration.

As in the entire SLUB library network, the Internet is available over a wireless network and at computer workstations after logging in. There is no strict supervision over readers. There is only one librarian, who does not see most of the interior. There is also no visible monitoring system. Neither is the freedom of movement of the reader in the library restricted. Essentially, all areas of the library are open – the only visible „no access” sign applies to the upper floor, where the closed stacks are located. Other than that there are few prohibitive signs in the library. There are more information notices, but there are few signs overall.

To sum up, the spatial organization of the library of the forestry department of the University of Dresden in Tharandt indicates rather weak Uncertainty Avoidance, albeit greater than in other German libraries (included in the study) and in the theoretical model. Perhaps this is due to the history of the building, which replaced an earlier one destroyed by a flood. The danger of flooding has dictated the zoning system used in the building.

Having described the analysed libraries in former East Germany in some detail, let us now turn to a comparative analysis, which will also reference results of identical research done on Polish libraries. Figure 1 presents the relative level of Uncertainty Avoidance suggested by the spatial organization of the analysed Polish and German libraries. Similarly, to Individualism [8] a greater diversity is noticeable among libraries in Poland than in

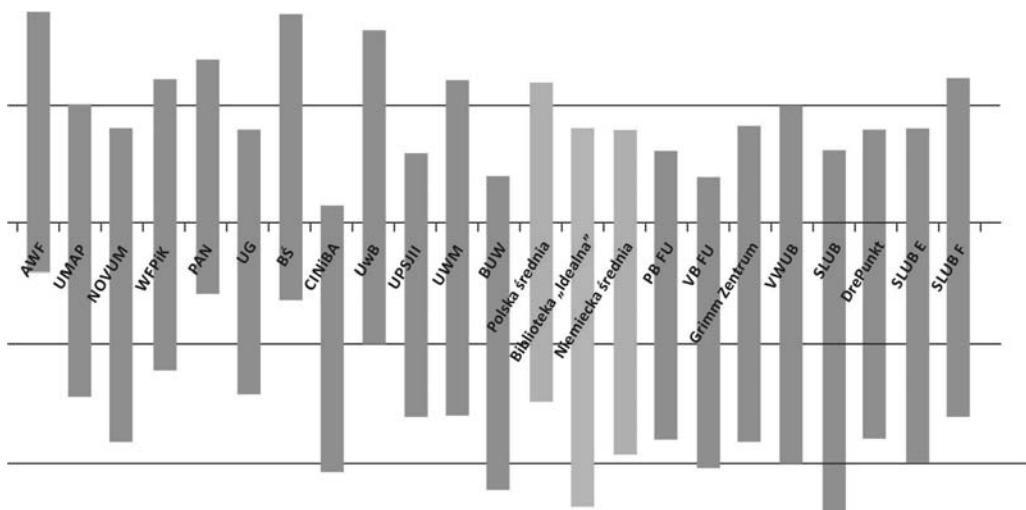
Germany. German libraries are slightly more diverse in this aspect than in relation to Individualism, but they all fall into a relatively narrow range of moderately weak uncertainty avoidance. Only the Zweigbibliothek Forstwesen in Tharandt goes noticeably (albeit slightly) beyond the range determined by the idealised library model. Polish libraries, on the other hand, differ dramatically.

Unlike individualism, however, in this dimension there is a clear difference in the average level of Uncertainty Avoidance in Poland and Germany. The average level of Uncertainty Avoidance, which is indicated by observations of the spatial organization of Polish libraries, is clearly higher than in the case of German libraries. It should also be noted that this result is brought down significantly by just two libraries: the Scientific Information Centre and Academic Library (CINiBA) in Katowice and the Warsaw University Library (BUW), both of which are characterized by extremely low apparent Uncertainty Avoidance (even lower than that of the idealised model). At the same time, observations of six of the twelve analysed library buildings in Poland indicate Uncertainty Avoidance significantly stronger than in the theoretical model and in the analysed German libraries. This result is consistent with Hofstede's observations, as he attributes a much stronger Uncertainty Avoidance to Polish culture (UAI = 93 as opposed to Germany's UAI = 65 [2; p. 192–193]).

There does not seem to be a trend for Uncertainty Avoidance to change over time – the lowest results can be attributed to one of the oldest and newest of the libraries in the study: Warsaw University of Library (BUW 1999) and the Scientific Information Centre and Academic Library (CINiBA 2012). The same trend (or lack thereof) can be observed in German libraries. Similarly, there are no visible regional (as opposed to national) trends – although the libraries of Dresden and Berlin indicate similar levels of Uncertainty Avoidance, as do three of the four analysed libraries in Poznań, the two libraries in Katowice have quite the opposite results.

One of the key factors determining apparent Uncertainty Avoidance seems to be the presence of open stacks. The strongest Uncertainty Avoidance seems to be associated with the spatial organization of libraries using the closed stacks system. In the sample of German libraries, the highest level of Uncertainty Avoidance is suggested by the spatial organization of Zweigbibliothek Forstwesen in Tharandt, which is the only German library included in the study that uses a closed stacks system. Although in this case the history of the creation of the library is probably an important factor. However, this trend is repeated even more clearly in the Polish sample, which contains more libraries with closed stacks: the Library of the University of Physical Education in Poznań, the Gdańsk Library of the Polish Academy of Sciences, the Silesian Library, and the University Library in Białystok all display significantly higher apparent Uncertainty Avoidance.

Figure 1. Relative levels of Uncertainty Avoidance determined by the spatial organization of the analysed Polish and German libraries. The number of elements suggesting greater Uncertainty Avoidance is marked above the main axis, and below the number of elements that suggest lower Uncertainty Avoidance⁵



Source: self-elaboration.

The connection between open stacks and weaker Uncertainty Avoidance seems quite obvious, as this system increases the unpredictability of reader behaviour and hinders the protection of collections. However, it should be emphasized that this is only one of several points related to this dimension. It can be concluded that the use of open (or closed) stacks leads to other spatial arrangements lowering (or increasing) the perceived level of Uncertainty Avoidance. Furthermore, the spatial organization of some Polish libraries which have open stacks nevertheless indicates a relatively strong level of Uncertainty Avoidance (greater than in the theoretical model). Thus, the use of open stacks alone is not sufficient, or it can be countered by other arrangements. The question remains whether the opposite effect can be achieved – can an acceptable level of Uncertainty Avoidance be achieved despite

⁵ Key: AWF – Library of the University of Physical Education in Poznań, UMP – Main Library of the Medical University of Poznań, Novum – Novum Library in Poznań, WFPiK – Library of the Faculty of Polish and Classical Philology of the Adam Mickiewicz University, PAS – Gdańsk Library of the Polish Academy of Sciences, UG – Main Library of the University of Gdańsk, BŚ – Silesian Library, CINIBA – Scientific Information Center and Academic Library in Katowice, UwB – University Library in Białystok, UPJPII – Library of the Pontifical University of John Paul II in Kraków, UWM – Library of the University of Warmia and Mazury in Olsztyn, BUW – Warsaw University Library, Polska średnia – average result of all analysed libraries in Poland, Biblioteka „Idealna” – idealised model described in literature, Niemiecka średnia – average result of all analyzed libraries in Germany, PB FU – Philologische Bibliothek der Freien Universität, VB FU – Veterinärmedizinische Bibliothek der Freien Universität, Grimm-Zentrum – Jacob-und-Wilhelm-Grimm-Zentrum, VWUB Volkswagen Universitätsbibliothek, SLUB – Sächsische Landesbibliothek – Staats- und Universitätsbibliothek Dresden, DrePunct – Bereichsbibliothek DrePunct, SLUB E – Zweigbibliothek Erziehungswissenschaften, SLUB F – Zweigbibliothek Forstwesen.

the use of a closed stacks storage system? None of the analysed libraries in Poland, which have closed stacks, have succeeded in this, although Zweigbibliothek Forstwesen in Tharandt comes close.

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