# Transcript

# Inclusive Spaces: Deafening Architecture

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# Speakers:

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**STYLIANOS (STELIOS) GIAMARELOS:** Hello. Welcome to the Inclusive Spaces seminar series at The Bartlet, the Faculty of the Built Environment here at University College London. I am Stelios Giamarelos, associate professor at The Bartlett School of Architecture here at UCL and among the other things that I do in the school, I run a seminar of histories of disability and neurodiversity and I will be hosting this session. Inclusive Spaces is a monthly online event series. Maybe you have attended some of the other events. It is led by The Bartlett Equality Diversity and Inclusion group where we explore disability, race, gender, LGBTQI+ and many other dimensions of diversity and discover how they intersect with built environments around the world. Today you have joined us for the April edition of the Inclusive Spaces with the title "Deafening Architecture" which is an event in anticipation of Deaf Awareness week here in the UK which is next week.

So today it is my great pleasure to welcome Richard Dougherty who is an RIBA ARB chartered architect and director for Richard Lyndon Design which is a multidisciplinary collective focusing on working with deaf and disabled artists and architects on projects across Europe and America, and during his presentation he will be signing, and Janet will be interpreting. Then we will hear from Professor Ann Heylinghen from the department of architecture from Belgium where she co-chairs the ResearchxDesign group and the work of this group explores how disability experience expands prevailing ways of understanding and designing space. Lastly, the last talk will be by Dr Nina Vollenbroker who is also an associate professor at the Bartlett School of Architecture at UCL. We have worked many years with Nina and her recent work revolves around deafness in architectural histories in some ways. We will be glad - together with these three speakers, we will be glad to explore the voices, experiences and designs of deaf creatives, highlighting critical considerations of deafness within architectural practice, pedagogy and research, and we will talk about the ways that university education can encourage collaboration between architecture students and deaf people and we will also foreground contribution of deaf practitioners in architectural histories in the hope that these will all help us re-think the present and future of design. So, without further ado, I will now hand over to Richard for the first talk in this session.

**RICHARD DOUGHERTY:** Hello, everyone. I hope that you can all see me clearly and hear Janet's voice as well. Firstly, can I express my appreciation to The Bartlett for inviting me along today. It is a really interesting session on a topic that is very close to my own heart.

As you can imagine, my name is Richard Dougherty and I am profoundly deaf myself. I am an architect. I am the way I've been all my life. I was born like this. I remember growing up when my family were watching a film. I was born as a child of the 1980s. In the 80s we didn't have internet or email, we didn't have mobile phones. Also, if I wanted to watch the TV, there weren't a lot of captions, so for me it was a struggle to work out what was going on in programmes. I used to sit with my family, my brothers and sisters watching movies and I would sit right up close to the screen. I didn't know what was being said but I used to follow all the body language and try and work out what the stories were, what people were saying. For me that experience taught me the value of proxemics. Proxemics is all about the space of people, how they do that, whether they're close to each other, whether their body language is closed or open, and so for me even though I didn't know what was being said, I was able to identify who was related to who. I knew that. I could tell by people's body language. I could work out who were friends of the main characters and who were their enemies and the rest of my family never understood how I was able to do that, but I had a very unique perspective on how people occupy space. I've brought that into my work. If you look at this photograph, this is a young girl engaging with this stone wall in a building called the MAC in Belfast. This happens to be my daughter and she is also deaf like her daddy. This time she was only 14 months old. Can you see how already she was engaging with the textures, with the feel of the space around her, how she was engaging with space, and I've always thought that the way that deaf people engage with the space around them is different from those of you who are not deaf.

Another memory of growing up was going in to meet the medical professionals with my mother who would always tell my mother how sorry they were that her poor son had a hearing loss. For me that was bizarre. It was such a negative perspective on me and the reality was I hadn't lost anything. I never understood why they were talking about something that I'd lost. I'm the way I've been all my life. I was born like this. I haven't lost anything. So, if I haven't lost anything to start with, why do people think about me that way?

As a British architect called Aaron Williamson who started to talk about changing the language around this to instead of deaf loss to deaf gain, and conceptualising deaf people as people who have a gain because our cognitive approach to culture and the world and to being as deaf people, as you saw from that last photograph, and from this photograph, is different. Can you see how the people who aren't deaf are in small clusters. The deaf people are standing in a very clear circle. They're spaced out so that they have clear sight lines. Can you see that in the picture?

And interestingly, typically, you probably see them about 2 metres apart looking at each other which happen to be very useful during the pandemic where we could communicate easily when social distancing came into play. Now, in my house today I have builders. They are working away. There is banging going on and lots of noises, but it isn't affecting our communication because we're going through an interpreter. You're not hearing my noise in the background, and it is not affecting us. So that is an example of deaf gain.

Now, there is an American university called Gallaudet University which is the only university in the world that is uniquely for deaf people. It is a beautiful university, very beautiful, and it was set up in the 1850s designed by Fredrick Law Olmsted who himself designed Central Park in New York. The 1850s was a time when America was flirting with the idea of eugenics and there was this idea of deaf people needing to be sterilised so that this deafness, horrible thing, could be eradicated.

**INTERPRETER:** I know people can’t see Richard, I have no way of communicating with Richard. Apologies.

**RICHARD DOUGHERTY:** That was what was happening in society in those days. In 2016 there was a new Bible brought out by Gallaudet university with 250 design principles for a new concept known as DeafSpace. So DeafSpace came from Gallaudet university. Within DeafSpace principles we don’t design seating to be in this kind of design that you would have in auditoriums. We typically use U-shaped seating so people can see each other. The underlying values are around having environments to support the wellbeing of not only deaf people but everyone because when we have clear sight lines, it really does help. I'm just noticing these messages. Let me just check.

So, you can see a picture here of some dormitories that were built about ten years ago within the university. Can you see the way the sight lines have been included within the construction there, so people using sign language can see each other and communicate across different levels and across different spaces. You can also see examples of the wall colouring, which is typically blue or green because research indicated that those colours support visibility because you're always going to get skin contrast with green or blue backgrounds, but their muted tones can enable people to be seen clearly. So, I could say a lot more about it, but those are a just a few pointers as to DeafSpace principles.

I'm currently working with Gallaudet university on their campus master plan. It is a ten-year plan and I don't have much time to talk about that today, but it is a huge campus and what we're doing is working on developing a master plan and what we're using is a bilingual framework for that. What that means is that anybody coming into the campus, even if they're not deaf, is made aware of some of the values that sign language is the primary language being used in these spaces and because sign language is being used, then everyone needs to adhere to the way that's done. So, there is a clear expectation that nobody walks in chatting on their phone, mobile phone, as people often do nowadays, because actually that is quite rude when you're coming into an environment where everyone is using sign language. So these bilingual zones are promoting the value of sign language and using space to do that, and American sign language vibrancy is being promoted and it is really trying to encourage the values behind that by uses designed.

This is a piece that I was invited to be involved in a few years ago, collaborating with Oxford University, School of Architecture, and a company called Theatre Mundy. I was invited to go and worked alongside a range of people in the music sphere and artists, architects, looking at how music and architecture can be brought together to create a new urban design framework. It was extremely abstract and I was, obviously, coming into a zone I was very uncomfortable with, I have no background in music, I wouldn't relate to that, but actually it was a fascinating challenge for me as a deaf architect. The slide that you're seeing now is a musical score and it was based on my experience of being asked to work on the regeneration project for an area in Belfas called Sailors Town. As I worked on this I was using DeafSpace principles in the project and I thought about my own experiences growing up, the value for me of windows, door, lights coming in, being crucial to have a sense of connection, sight lines, using those DeafSpace principles in relation to music score, but this is what I would call body righting the environment. So sign language has a form, it can be notated here, and I was using some of the symbols there and really designing a space based on what we were wanting to see, but I was using some of the theories around proxemics to look at that, and developing a new grammatical framework for design and looking at architecture from that perspective. I could talk so much more about that, but I don't have time today.

Last year I was approached by a German group called Theatre for men, a group in Germany, a small company, and then Disordinary Architecture led by Jos Boyce who used to work at UCL before were leading on this. I was thrilled to be asked to design a small public pavilion for a summer festival that was being held last year in the summer. Fascinating project. An important part of that project, a crucial part of that project, was meeting with local people in the community in Germany hearing what their experience was from different disability backgrounds, listening to their experience, listening to them talking about the barriers that they previously experienced and talking to them before we went through the design process, so that we could incorporate their ideas.

Similarly, to what I have mentioned in America, we know that in Germany in the 1930s they flirted with the idea of eugenics and eradicating these horrible deaf genes that they wanted to get rid of in the world. That was around cleansing. We wanted to move to celebrating diversity, celebrating the whole point of society is better when we include more people. So, this became the element of including all the concept to talk about having circular designs, places where people could come be together, create a form of architecture which would incorporate all those principles and feedback. So, moving from cleansing to clearing. I love the concept of a clearing. I love going through a forest and you come to a clearing in the wood. It was that sense of moving to clearings.

So different circles were incorporated in the design, structures that would enable people to come together and see each other. What we started with was a blank grey canvas, lots of stone, very grey. Then we incorporated ideas of a German architect in terms of taking a polychromatic approach. We started to incorporate colour and this is what the result was.

There are a pavilion, bicycle stands that were repurposed into becoming seating. The pavilion itseld is what you can see is the bit on the right. We brought in a kind of curtain effect which created privacy but was also transparent, so the people from outside could see but when you were sitting in there, you still felt you had some privacy. These old bicycle racks were metal, they were grey, but people wanted somewhere to sit. They wanted somewhere that wasn't stone, they wanted somewhere to put their drinks down, so we incorporated this design feature which went over the top of the bicycle racks, created seating and table effects to put cups or whatever.

We also had stone benches, grey stone benches, and we created very simple orange devices which went over the top which created a warmer textile environment for people to sit down and also that has a slight footrest. For some people is appropriate. Putting your feet on the ground, especially if a concrete surface, is uncomfortable. We designed this for people with disabilities in mind. At the end of the day everybody loved using them and you can see some young people sitting and enjoying the space.

On the left you can see us using this idea of pedestals. The pedestals were incorporated. It was an idea that I'd seen in America whereby everybody nowadays wants somewhere to put their phone and we attached these pedestals. People had somewhere to put their phone. I'm using sign language on my phone to initiate a video call. Simple concepts which transformed the environment. But this is about supporting social interaction. I was able to make the call because I had somewhere to put my phone, about creating a welcome environment that is also inclusive and open to everyone.

My last slide. I like to finish on this one. The first slide I showed you was my daughter touching a wall and I think what is really interesting is that when my daughter got to five years old, she is in a school classroom where she is the only deaf child. One day the teacher gave them an activity which was about every child making a picture where they had to create this picture from shapes, so you can see there are triangles of circles and squares and you can see what the other children did. They made objects, flowers, buses, houses, trains. My daughter was the only child in that classroom who created people. Do you see the pink one?

That's the one my daughter made. That left such an impression on me. My daughter is a deaf child. I don't want to read too much into it in terms of what it means, but everybody in my family is deaf, my wife, my two children are all deaf, sign language is the language of our home environment and I think what this speaks to is a concept that there is research in Sweden that many children nowadays, not deaf children, many deaf children at the age of five and upwards starting to lose the ability to identify facial expression because they're always looking at texts, they're on their phone and they're not having as much human interaction. That's terrifying. It's terrifying. Children need to know if their parents are happy or sad. That's so important in life. So, this idea of ensuring that our environment is accessible and friendly and welcoming for humans to be in and humans to be comfortable this is crucial. So, I don't have any more time. I better bring that presentation to an end. I hope I haven't gone on too long and I hope that that is been helpful for everyone. Thank you very much for watching.

**ANN HEYLIGHEN:** Good afternoon, everyone, also from my side a big thank you for this opportunity to share and hopefully also discuss with you today some of our work and in my case I would like to share how in Leuven, we are trying to mobilise student diversity as a way to inform architectural education and practice, and since this seminar is about space, I thought why don't I start with a picture of the building that houses part of our department and from which I'm giving this presentation. It is a 16th century castle and like many buildings over almost 600 years old University, it is a textbook example of an educational environment that is rife with non-inclusive settings. More than 20 years ago Welch and Jones already observed that, "this offers picturesque examples for universal design instructors and powerful experiences of exclusion, but it also subtly indicates to students that these characteristics are tolerable aspects of the built environment". Young people are educated as much by example as through teaching and environments that segregate, teach acceptance of segregation. When I was appointed as a faculty member in 2006 I wondered how to start teaching inclusive design in such environments and then what follows, I will share the approach that we have been trying to develop since then in the context of an elective on inclusive design. In doing so, I will refer to “we” since it is a collaborative endavour of several colleagues in our ResearchxDesign group, a group I'm co-chairing with Andrew Vande Moere and bringing together researchers from across the world with various cultural and disciplinary backgrounds. Some of us work part time in professional design and care practice and we are fortunate to have in-house experience in, for example, being blind, using a wheelchair, raising an autistic child or having been raised across multiple cultures.

For today's presentation I would like to acknowledge in particular the contributions of Peter Wilham and [indistinct] and I hope that I'm not forgetting anybody. Central to our approach is the notion of user/expert as introduced by Elaine Ostroff. She describes a user experience as “anyone who has developed natural experience in dealing with the challenges of our built environment”. In our work, or the elective I will talk about today. User/experts are students, staff and visitors at different ages with different bodies having difficulty walking using a wheelchair, having different sensory abilities and with different minds being on the autism spectrum, for instance. We remunerate them by offering them a contract as job student or if they're not a student, with gift vouchers.

The way we engage them in the elective is two-fold. On the one hand we're conduct ag field experiment on how user expertise can inform campus design and the idea for this arose at a point when our university in its role as building owner decided to obtain expert advice from an official accessibility office, all the inclusivity of its buildings and by way of trial, one building would be subjected to a professional accessibility audit whereby an accessibility adviser, a specialised architect, assessed the building based on the standardised checklist and then delivered a phased plan to address the problem identified. We offered the university to complement this audit with an analysis of that same building in collaboration with user/experts. Each user/expert is teamed up with two architecture students that take the elective and together they identify the building's qualities and weaknesses from that user expert's perspective, based not on a checklist but on embodied dialogue that takes place in situ in the actual building, and then the architecture students deliver a written report that is not normative, it is narrative, and it is illustrated with graphical material.

This slide shows an attempt of two students to convey on a building plan how hay blind student navigates the courtyard of the castle and then gets lost between the bikes that are parked there. After finalising the reports, the teams discuss their findings in class together with people of the technical services of the university.

That is the first part of our approach. In the second part, the architecture students engage into a dialogue with the same user/expert but this time about a building or a space they have designed themselves, to identify qualities and weaknesses in their work. This shows a photo of a tactile model that two architecture students made to discuss their design with a vision impaired user/expert.

This was in a nutshell the approach we have been developing in the past 15 years, so let's now have a look at how it's received by the different people and actors involved.

Starting with the architecture students, we noticed it raised their awareness, fosters insights, triggers a change in attitude. I could honestly spend the entire day explaining to you this in more detail, but I just give a few examples. For an architecture student who collaborates with a deaf student, the dialogue about their own design uncovered previously covered premises and assumptions. She wrote "I might appreciate the same visual characteristics as our user/expert but it might be for another reason. I like glass in the façade of a building because it brings in a lot of light, but she likes it because she can see what is going on behind the facade and it makes it possible to communicate with someone on the inside", an example of deaf gain. From the site visit she learned that, and I quote again, "One of the most important things that our user/expert encounters as an obstacle while visiting buildings is the inability of being independent. For a person like her it is difficult to ask for help because very few people know Flemish Sign Language".

A final example that I’d like to share is that collaborating with a user/expert raises the architecture student's awareness that there are limits to empathy. As an architecture student writes, “you can never know how another person experiences the space. You can think that you know it but go completely wrong. Often surprising elements come to the fore that you’ve never seen yourself.” This makes the architecture students recognise that user/experts have a crucial role to play in design and that they as future architects depend on these user/experts for drawing correct conclusions. I realised that these are all short-term effects of an approach and in terms of long-term effects we have some anecdotal evidence that architecture students who took the elective end up in architecture firms that are specialised in inclusive design or are involved in accessibility task forces in the company where they're working, but it would surely be interesting to study these affects more systemically. What about the user/experts themselves?

First of all, we shouldn't under estimate the effort it takes for some of them to participate in our approach. As a student with autism wrote to me "It's probably not easy to find someone with autism since I've waited several years to participate". She continues that for her it was an enrichment to go outside of her comfort zone. For some user/experts these enrichments seem to relate to becoming more aware of their own user expertise. For example, a deaf student who participated this year mentions that it helped him to think about himself and his deafness and I quote "It was very interesting to look at my condition in the light of architecture. This is something I don't think about very much, so I definitely found added value in this project. It also forced me to think very intensively about my auditory impairment, which I would never do otherwise". Other user/experts seem to realise how little they know about architectural design and that they have never thought about the level of complexity and amount of creativity involved. The day after her meeting with two architecture students, the user/expert emails them, "Your design was impressive. I hope my feedback did not discourage you or upset you. That was absolutely not my intention. I certainly noticed the amount of creative thinking in your design. My comments were simply as a positive user. I’m just one humble voice, who knows little about design". In terms of long term effects for the user/experts, I hope it is that offering them a student job will strengthen their CV, but also here it would be interesting to look into these effects more systemically.

As far as education at our university can be concerned, I can be brief. I didn't even prepare a slide about it because after 15 years this course is still an elective in our programme, which is a programme in architecture engineering. However, other programmes do show interest in our course and upon request of the programme director of the master in bio-engineering we're now offering it also to their students. As far as the built environment of our university is concerned, we see changes in the attitude of the people at the technical services of the way - in the way they are working and in the buildings on our campus. After the first building we analysed, an architect of the technical services wrote to us that he found that our analysis in many respects actually told him more than the one of the accessibility office. He thought the value was high and it was surely worth repeating our approach in other buildings. An important aspect for him is the broadening of the term accessibility by including very diverse conditions, although and above all those whereby the person is not entirely blind or not chained to a wheelchair. The experience of the person with autism surprised him in the most positive sense and I quote again, he, the user/expert “uncovered in a very direct way problems (especially with regard to all kinds of thresholds) we all do sense but never can point to that well”.

In terms of the way of working in technical services, we have analysed a dozen buildings for which works are planned in the future. Our analyses have become part of the official documentation for the projects of these buildings. For three buildings that works have been completed already in the big auditorium of this college, half round auditorium with a characteristic cupola. The improvements related mainly to the acoustic comfort and the analysis we made played an important role in negotiating with the conservation authorities. In buildings with lots of cobblestones, there were several improvements made but especially improvements of the pavement by introducing comfort strips and very interestingly beyond the buildings that we have analysed, we see a spillover effect to other projects, for example, the technical services have themselves initiated an experiment to explore how they can make cobblestones more comfortable and involve themselves user/experts to try out different options.

Moreover, our approach has now also been picked up beyond the university premises by the city of Leuven. In the context of the elective, we have analysed two buildings and asked to give advice for the renovation of two quite prestigious projects, I think, the Stuk art centre and the renovation and the extension of the town hall. Here for this advice, we're also involving a deaf student as one of the user/experts.

If you want to take home something from this presentation, then, perhaps, that rather than approaching inclusivity of the built environment as a matter of fact, as something taking care of by professional experts, that our approach allows for a broader group of people to become concerned with this issue. Architecture students, user/experts, staff from the technical services. So, inclusivity becomes for them a matter of concern and in this process, those involved learn to be affected by that same matter in no ways. Another point you may want to take home is that working in the margin of an elective course offers opportunities to initiate change at multiple levels, and in the future we hope to assess the long-term effects at these different levels but also to keep looking for ways to involve user/experts more actively without forcing them to leave their comfort zone. Thank you for your attention and I will pass over to the next presenter.

**NINA VOLLENBRÖKER:** Thank you. It was fantastic to hear your talks Richard and Ann. I'm pleased to be here with you today. I wanted to start by saying that I think that most people who work around deafness and architecture or the slightly wider field that you've just highlighted Ann have personal reasons for doing this and mine is that I have been living with a profoundly deaf person for ten years and that's made me realise that while my life with my family member's deafness, constantly and very naturally rubs up against the built environment, my daily engagement with architecture in education and research sort of almost never seems to make any natural connections with architecture - sorry, with deafness. Architecture doesn't seem to make that connection with deafness. I thought that was strange. I thought it was strange in particular that architectural history has produced almost no insight into the impact that space has had on the perception and the experience of deafness and has also established very few insights into the influence that deafness has had on the [indistinct] and to me it seems important to bring deafness to architecture now at a moment when crucial work is being done to call out other absences or to call out other attempts to press the variety of human beings and experiences into a single form, so work on gender, on race, ethnicity, sexuality, class, et cetera, and leaving deafness persistently underconsidered in this important project seems to risk undermining these larger efforts.

So, it's great to hear from Ann and Richard today and to see how they are noting architecture in the discourse. In my ten-minute contribution today, I'm going to hopefully add to these really insightful talks by sketching out two archival projects that I'm working on, and what I aim to establish is in the first instance that architecture has very much been a central player at key moments in the history of deafness and for this I will go to mid-19th century Scotland and then secondly I will highlight that kind of in the way the other way around deaf spatial authorship is also very much located at the centre of some of the most defining moments of architectural history, so this then highlights the role of deaf authorship in architecture, and for this I will go to early 20th century Austria. A small disclaimer which is that this is ongoing research and also that I will be using the wording as I founded in my archival research, so I haven't edited any language.

I hope that my screen is visible now. Let me know if it isn't or if you can't see the interpreter. I'm starting in Edinburgh in 1847 where a substantial amount of money has been bequeathed by a newspaper tycoon for a school to educate destitute Scottish children. The building is large, it can accommodate 300 boarders. In the late planning stages, an idea is being floated to the governors: could the school accommodate deaf pupils? This was a somewhat unexpected proposition, but they engaged with it and from this point on the archive becomes a flurry of documents, and the governors established the committee appointed to consider and report what extent of accommodation should be set apart for deaf and dumb children, and this committee is very much at the centre of this lively exchange, which I traced in the archive, and two things this elaborately named committee did, I think, were quite telling. Firstly, the first action they take is they seek an expert on this question of accommodating deaf pupils in the school and the expert they go to is William Henry Playfair, who happens to be the architect, with decades of experience but not really with deaf children. He very confidently nonetheless advises that what is to be done is dedicate the southern half of the school to the deaf children's accommodation and education and to then have common areas and circulation which are to be used by all children. The governors had thought of having in the region of about 50 deaf children but Playfair probably perceives and shows about 150 deaf children in his plans. Interestingly, the questions that arise are not about the total numbers but the shared spaces. This is an example of the kinds of questions that the governors raised, which is: “is there any objection to the hearing girls and the deaf and dumb girls passing and intermixing in going along passages and staircases when going to dormitories and playgrounds?” The special committee answers in three words, which is “we think not”.

These are the kind of spaces that are being debated where the deaf and the hearing children met. So, in the end the architect's plan for a shared building with equal numbers of students is approved, but the committee's work continues and their attention turns to the first intake of the first 40 deaf children and time is very much of the essence, of course the project is running late, but at the last minute the committee cancels an important meeting. They are very apologetic. You don’t need to read all of thesem but hese are all of the reasons they cite. What emerges is that what they're trying to work out where in Scotland there were deaf children and how many. The process, it’s clear from the archive, was very complex because after working with census information and parish records, the committee realised that there is plenty of information on deaf adults but there are no records on deaf children. They are essentially missing from all of the official counts. Certainly children at sort of entry level school age or below, they're absent. So, the committee writes to every parish in Scotland and eventually they work with their own return letters to allocate the first intake of children in 1849 and these are their names.

These are the first 39 children, I think, one of the boys couldn't attend in the end who came to the school. This is where they were from. If you can't read it, I think the cities and towns that they came from, I think two or three are duplicates, but they really came from all over Scotland. So I think it's fair to say that they had probably never met each other and they obviously had never been counted together in any census or survey, or thought or spoken about together, but in 1849 in October they were all there together in one space and that was a space which had thought about them together as a group and which would keep thinking about them together.

What I propose at this point is that architecture here played a key role as establishing deaf children as a coherent group and architecture said something about them. For example, about their relationship to children who were not deaf, and that part of my research aims to trace the complexity of these spatial narratives in Edinburgh and other schools across Britain which were being built in considerable numbers within about two or three decades, and this actually is an important moment in deaf history. Richard has already hinted at it as well, but it is a moment where there was a ruthless drive against signed languages across Europe and the US and I'm foregrounding architecture actively proposed certain understandings of what it meant to be deaf, but also how larger and continually shifting cultural understandings often deafness themselves became spatial determinants, so how architecture was positioned more as a reactory receptor of these already existing perceptions. This work begins to consider the influence of architecture on understanding and experiences of deafness and this is supported by the Paul Millen centre and Bartlett Architectural Research Fund, so thank you to them at this point.

I want to briefly move on to the second part of my talk because in parallel as I mentioned before, I've also been thinking about the contributory importance of deaf authorship to space and here I have been considering the work of Adolf Loos whose work has been really widely considered in scholarship, and whom Beatrice Colomina sees as "the only architect of his generation whose thinking is still influential today", and his impact and importance were certainly reiterated when Loos’s archive became part of Unesco's world register about five years ago now. However, the reading of this archive, I think, remains somewhat incomplete. The archive itself is quite fragmented, lots of material was lost in the 1920s, but the items that do make up the archive leave very little doubt that by the time this was produced by Loos, he was severely deaf, and his deafness is recorded on military records in the archive there are notes from acquaintances suggesting that he consulted doctors on his progressive hearing loss, there are notes that he used to communicate when he had no longer had access to sound and there were photos of him using gestures and accounts from his wife saying that he read lips. Still, to this day I would say that deafness has not principally guided any scholarship work. Maybe because his work was considered to be at the foundation of Modernism, a movement which firmly grounded in a message of bodily interchangeability [indistinct] and ability and Le Corbusier underlined in 1925 he, Le Corbusier, designed for what he called "a typical standardised normal man, two legs two arms, a head, a man who perceives red or blue or yellow or green". A man who one might add, no doubt, also perceived sound and, therefore, a man who was not quite like Adolf Loos.

Looking at Loos’s work through his deafness, I argue about his sensing body partly underpinned his drive for visually clutter-free space and that it must have been a key driver for his building's visual inter connectedness so for his acclaimed plan and that his often choice of material must have had some connection with his particular experience of space. In this research, I propose his deafness interconnects with key moments in his writings and buildings and it was at the core of many of exactly those words, materials and spaces which distinguished him and which have themselves come to take a central place at the core of modernism.

This is where I'm saying as much as space has been at the centre of histories of deafness of understandings of deafness, deaf authorship has, more oftern than we think, been at the centre of architecture and its history. This part of my research is funded by the RIBA. Who I also want to thank for their support. I hand back to Stelios and Linda who will interpret the Q and A session.

**STELIOS:** Great. Thank you for the inspiring talks. We have many questions piled up in the Q and A mailbox and I think I would not waste more time. It is nice if people can hear the questions answered. I start with the question addressed to all speakers and might cover a lot of ground. The question is: “are there examples of when there are conflicts between the needs of deaf community and the needs of other minority groups? If yes, how can we reconcile such differences or avoid overlooking them?”

Richard and Ann, who have worked with diversity of different communities and people and their projects.

**RICHARD:** Can I just ask you to repeat the question, please?

**STELIOS:** Yes, of course: are there examples of when there are conflicts between the needs of deaf community and the needs of other minority groups? If yes, how ... how could we not overlook them?

**RICHARD:** Yes, indeed. Interesting question. I would say that one example I would have is that I have always struggled to communicate with people who have visual whatever, you know, people who are blind is the way we talk about that world, but I think that is where it is different. In Gallaudet university, which is based in America, 10% of the students there are both deaf and blind, and in Gallaudet they have learnt how to integrate that within the student population there, and we have to think about designing space to fit the needs of everyone, people who are deaf and deafblind and those needs can be different. I think what is difficult is to think that the view of the world is different from different sets of people and how do we bring that together, so when you are a deafblind student and deaf student, there are not necessarily the same requirements, but I think what I want to see happening is that one of the things that we talk about this deaf space is way finding needs to be clarified and that there should be a tactile approach to that. For example, tactile surfaces, ensuring that corridors are about 10 feet. It is getting the space involved so that people are not too tight, use of surfaces underfoot that are suitable, that will support everyone, people who are deaf, deafblind and blind. I think it is possible to do that. I think we can respond to different needs. They don't need to be conflicting, but certainly my learning from Gallaudet is that we need to know what those are in the first place.

**NINA:** That's an insightful answer. I have been tracing attempts to achieve what Richard is outlining throughout the files as well, so attempts or considerations of where these conflicts occur and how to address them.

**ANN:** I could add not so much about the conflicts themselves but how to deal with them. Here in this city, we have, I think, a very interesting advisory council. It is composed only of user/experts and they are excellent at discussing these kind of problems in very specific projects and contexts so they can discuss amongst themselves if we have conflicting needs here, how to advise these designers about how to deal with this, not in general, but in this specific projects and this specific context and that seems to work quite well.

**STELIOS:** Okay. Thank you very much. I follow with a forward-looking question. There is a question from ... sorry if I said it wrong, but the question is about the role of artificial intelligence technologies in deaf-person friendly architecture: do you think there is potential there?

**RICHARD:** I think maybe I will attempt an answer on that one. I'm assuming somebody is asking me that one. What is very interesting again some of the work in Gallaudet is looking at holograms and I have seen some fantastic representation of a hologram, but I think what we are looking at is during the pandemic, for example, when information had to be put out across media such as Zoom and suddenly we went to 2D and not 3D, that 2D approach was always problematic for us because we were used to signing in space and not doing that but the idea of a hologram rather than a 2D image fascinating. I saw that working and I thought it was incredible. One of the projects that they have always focused on has been about avoiding being insular and sometimes deaf community is seeing as very secluded, very insular and I think that is responding to a fear of being taken over and absorbed by wider powers that be. So I think on the threshold of the campus that we are working on, we are looking at, perhaps, using holograms within that liminal space there, so we can have a demonstration of sign language going out so we can bridge the divide of what’s going on inside a deaf-based university and the wider community, quite exciting potential coming through that. I think AI will be very interesting for all of us in the future.

**STELIOS:** Thank you Richard. I think you are both are a user and design expert here today, to use Ann’s terms. There are quite a few questions about sight and vision, so there is a question from an anonymous user about green space in urban environments and if they're creating problems or benefits for the deaf community, for example, adding trees for shade, does that interfere with disability?

There is a question that also asks about what happens, how do you test sight lines in buildings with multiple floors, so not just the ground floor but different heights.

**RICHARD:** Yeah. Me again? I will respond to that one. Yeah, again, I love these questions.

The concept that we work around is that we have been used to looking in buildings that are impervious to sight lines. You can't see across floors. So, the image I showed you showed that and we have had Nina talking about Adolf Loos houses where you see his designs you can see across circular staircases, the openings that let you do that. There are these lateral connections between different floors, and very difficult when you've sky scrapers limited in that space. The concepts around that are being open to spaces where, for example, outdoors, ensuring that there is a public square by an architect in the 1970s, Leon Cryer proposing that the ideal public square is 25 metres by 25. 25 by 25. When I say that, I think about being able to see someone's facial expression and how far away I can see that. 25 metres I can still see that. Much more than that it becomes difficult. So, I think some of these proposals, you know, we can go back, we can look at them, but when we're looking at lateral differences, it is about managing the distances as well involved between the different levels.

**STELIOS:** Thank you very much, Richard. I’m afraid we're running out of time so we have to wrap up the session. A big thank you for joining us today. A big thank you for the panel for their time and contributions to the discussion.

Inclusive Spaces is back next month on Wednesday the 17th May with a discussion on the architecture of psychiatric buildings and the importance of involving end users in the design and planning of mental health care environments. The details are in the chat and we hope to see you there. That's all from us today. Goodbye and we will probably see you next time.

**END OF SESSION**