**A transcript of content from *(Critical) Blindness Studies : Current Debates and Future Directions***

June 30 to July 5, 2023: Convened by Marion Chottin, Hannah Thompson, and Vanessa Warne

**Plenary Presentation by Corinne Doria**

**(Re)Defining Blindness: An Invitation to A Critical Understanding of “Visual Impairment”**

Chair: Marion Chottin; Moderator: Hannah Thompson

**Marion Chottin** 00:00

I'm just going to say a few words about Corinne Doria before I hand over to her for her talk, presentation. She is a Lecturer in History and General Education at the Chinese University of Hong Kong in Shenzhen. Between 2019 and 2021, Corinne Doria taught Modern History and History of Medicine at the École des hautes études at Tyumen University. Between 2014 and 2018, she was a guest lecturer at the Sorbonne and Sciences-Po in Paris. In 2019, she worked as a researcher at the Italian High Studies Institution in America at University of Columbia, and then in Munich. She specialized in the history of ophthalmology, and the history of visual impairment. She has published four books and several chapters on the history of sight. And today, Corinne is going to be talking to us about “Defining Blindness: An Invitation to a Critical Understanding of Visual Impairment.” Corinne, over to you.

**Corinne Doria** 01:32

Thank you, again, Marion, for this presentation. Thank you to Vanessa and Hannah for the organization of this conference and to all of you been working on this, during these days, these long days of work that you've been putting in to enable everything to go well, and so that everything can happen without problems. I was very touched when I learned that I was the first opening lecturer for this conference and I would like to ask your forgiveness in advance. I have a small cold. I hope it won’t disturb things too much as we work together and won’t to disturb the interpreters. French is my working language. I won't be presenting pictures during my talk, but I will try to describe things as accurately as possible in terms of objects, and the examples of things that I will be talking about during my lecture. As Marion announced, my lecture today is going to be talking about defining blindness. It's an invitation to think through the way that blindness or visual impairment was defined over history, in the sense that we give the visual impairment today. This is a question that is a core question for anybody interested in Disability Studies, particularly in terms of blindness. My work, as Marion has already said, is mainly in the area of the history of ophthalmology and visual impairment and, during my talk, I will be, and the discussions afterwards, I will be talking about the way that visual impairment has been defined by doctors over the second half of the 20th century. This seems to be the best approach to help us think through defining visual impairment, blindness.

04:10

During my talk, I will be mainly touching on the following points. I will say a few introductory words about where ophthalmology has been the point to which we have arrived and the revolution during the second half of the 19th century. And revolution in terms of the knowledge regarding vision, and the organization of the profession of doctors specializing in the physiology of the eye. And then the question of measuring visual ... the function, visual function, and the question of defining what is a normal eye and normal vision. Then I will go through the details of the problem, issues, and the desire to give a scientific and quantitative definition to sight have led to particularly in terms of the definition and I will conclude with a series of questions, open questions or thoughts regarding the definition of blindness inspired by the difficulties and the current debates that followed the attempts to give accurate definition to non-vision.

06:10

So, I'm going to start with by giving a few ideas a few elements about the revolution in knowledge in ophthalmological knowledge during the 19th century, particularly after the 1850s. And in terms of the organization of the medical profession working on eye diseases. The 19th century, and the second half particularly, represents a turning point in the knowledge, in terms of the knowledge of the eye, and the way it functions. Following a series of inventions or discoveries, that for the first time in history allowed us to access the inside of a living eye. For many centuries, the knowledge of the eye and the way it functions were limited because of the impossibility of accessing, of observing the inside of an eye, that of a living person. So knowledge, anatomical knowledge, the knowledge that doctors had was fairly accurate, but in terms of the way sight worked, knowledge was not very advanced. It is true that the work carried out by, for example, Descartes, Kepler regarding the physiology of vision were published well before that time, the 19th century. They had provided science with elements, absolutely core elements in the understanding of the visual functioning. But those studies were not, had not managed to enter into university studies where medical, medical university studies. During the 19th century, particularly more accurately, in 1851, the Prussian doctor [Hermann von Helmholtz] that she has just mentioned, presented to the community, the scientific community the ophthalmoscope, an instrument that he had invented largely by accident, allowing him to see inside an eye, a living eye, allowing him to see what happened inside, particularly in the rear part of the eye. This was a fundamental discovery, because for the first time doctors could see how a living eye was functioning and could describe in a precise way and they could access the different parts of the eye, particularly with its different functions and describe them. Another invention, also by Helmholtz, that was, that was perfected by Javal, a French doctor, the ophthalmometer, allowed for a measurement of the movement of the crystal in the eye, that allows us to acquire accurate knowledge about the physiology of vision.

10:04

The use of these tools, of this equipment, helped us doctors acquire precise knowledge about the way the eye works in a scientific way, defining it in a scientific way. That this is a phenomenon of refraction. And during the second half of the 19th century, eye surgery underwent some significant advances. Firstly, due to the new knowledge with these new instruments, but also thanks to the introduction, and the systematic use of, protocols of aseptic protocols and anesthetics. Then, during the second half of the 19th century, ophthalmology became a medical specialty in its own right, where ophthalmology professorships were being created in the universities of Europe and North America. And specialized clinics were founded regarding, dealing with eye disease. They were created. A specialized press started being published, where doctors working on ocular pathologies could publish their findings, and professional organizations specializing in the treatment of eye pathologies were set up in order to and conferences were regularly organized at national and international levels. One of the points of interest, one of the questions that interested, that was a pressing interest for the specialists in this area of eye pathologies, specialists of the eye and its functioning, is the question of how to measure the visual acuity, capacity. At the time, it was something that was considered indispensable in order to define the features of the eye and of vision. And among the instruments that were created in order to do this, in order to measure this visual acuity, were the tables of visual acuity. After the 1850s, different visual acuity tables were published and were being began to be used by doctors who could test, thanks to their instruments, the vision of patients. Among the most famous is the one that was designed by Herman Snellen in 1862. And that quickly became the international method for measuring the view, the vision of patients. It is a table on which letters of the alphabet, Latin alphabet, are in capital letters, capital font, in decreasing size: from the largest letter to the smallest letter, letters that could be used, that should be looked at by a patient at a certain distance of five meters. Another table that was used widely by doctors at that time was designed by the French doctor Ferdinand Monoyer, who published two different versions of his chart or table, chart to be used at a distance of three meters for the one and at a distance of five meters for the other.

15:05

These charts contain the Latin alphabet letters, but their disposition is reversed compared to the earlier one, because the biggest letters were at the bottom of the charts, and the smaller ones were in the upper part of the chart. But many other charts were designed by doctors using typical objects, different typical objects- figures in different sizes or geometrical shapes in order to test the vision of patients. Also, charts to measure the capacity to read were set up, were designed, and started to become increasingly used for medical examinations of vision. These charts were considered as the modern methods of measuring visual acuity. But this was an operation that was carried out well before the 19th century; attempts were made, we have read testimonies of that offer proof that during the ancient times, people tried to test visual acuity by referring to the stars. So, if someone could distinguish two different stars, [she's just quoted two different stars in the constellation in a certain constellation], these, that would be considered as a very good sight, visual acuity. But methods, these were defining empirical methods of defining visual acuity that lacked the scientific character of modern visual charts, which, in their intention and the intention of their designers, these were scientific concepts that were created to quantify human vision in order to express it in the universal language of mathematics. They allow for quantification of a human vision to the 20th or 10th. These are instruments that provide results for studies and experimentation or material aspects of objects chosen following rigorous procedures.

18:06

The type of object that could be represented - letters instead of figures or geometric objects or shapes, their size, their thickness, the distance between the objects, the progression between the different objects, the type of paper used to represent them, the intensity and type of light that's, that needs to be used during these examinations, and the time required for the test, for the sight test: these are instruments that were created to be reliable and able to provide results and provide quantitative results. At the same time, eye doctors started to define the characteristics of the eye and the abnormal eye and normal vision. A definition that quickly became adopted by the textbooks that students, medical students would choose to study and this was carried out by Donders, a Dutch doctor.

19:59

I will read the translation in French of the definition that is found in his text ‘Anomalies of Refraction of the Eye’, published in London in 1860: as for refraction, we call the structure of the normal eye when the rays emitted by faraway objects are brought to a point on the inside layer of the eye. When in parallel rays meet – a much more accurate definition in the contents, this is the exact definition that was used by, that is still used by eye doctors today: when the rays actually reach the retina, we consider that we have a normal vision whereas, when that is not the case, and the light rays meet before or after the retina, behind the retina, this is considered as a visual problem. As Donders defined, eyes that did not correspond to his definition are abnormal. According to the same logic that helped us define the characteristics of a normal eye, the characteristics of an abnormal eye have also had its scientific definition. So, the conditions that we knew from ancient times like short sightedness or long sightedness become scientific, acquired scientific definitions that were that were accepted, adopted by the scientific medical community. Furthermore, the issues linked to refraction became the object of specialist doctors’ interests, was led to a medicalization, we could say, of glasses, of sight correction glasses, objects that were invented during the Middle Ages, but existed for many centuries outside of the medical field, but then doctors, doctors were very suspicious of eyeglasses, suspicious of crafted objects made by people who had no formal education and who could not really solve the vision, visual problem because they work more or less like a crutch that can help someone walk who has a broken leg, but they do not do anything to repair the leg.

23:49

So, eyeglasses can help people see better, someone who has, whose eyes are defective, but the understanding, scientific understanding of the physiology of the eye required scientific discourse based on the understanding, the scientific understanding of the mechanisms of refraction and the, and the irregularities of refraction started to be part of a medical discourse that, and became the object of medical problem, which is quite immediate, now we can say private doctors is the fact that the definition of the normal eye, impaired eye from the physiological point of view does not relate to what the doctors can observe with their patients. Because the normal eye as it is being defined by the doctors on the basis of the observation, the eye physiology does not correspond to the actual reality. The doctors observed that most people have an eye which does not relate to the definition of what the actual eye is, should be. The same dynamism exists in the definition of the visual acuity. In 1863, a definition was given for normal visual acuity. So as to define acuity, it has a relationship between the distance of an object to that angle of five minutes. According to the computation, the objects can be recognized by a normal eye and Snell defined visual acuity such as the ability to distinguish these objects at a given distance. The problem is that most people who are tested with visual tables have a vision that does not relate to what should be the normal visual acuity. For instance, most young people are able to read at a greater distance than what is expected, whereas, most adults especially those who live in cities cannot read at that distance. So, what doctors have realized pretty quickly is that a definition given for a normal eye of, of this normal acuity does not correspond to the reality, which is a problem because our technology is not something to be dealt with only at the academic level.

27:50

But it has concrete practical examples for most people. In the meantime, the quantification and the measurements are being done so as to devise the characteristics of the eye and that is instrumental for ophthalmologists, for eye specialists. And that is important for social recognition; for centuries, eye specialists had a bad reputation. And for centuries, the so-called eye specialists were operating on eye cataracts, the type of operation with a success rate which was a disaster. And most of the time and for centuries a doctor, doctors, especially eye specialists were being considered as not being, how could I say that, reliable or not deemed to be reliable. Doctors was supposed to be able to treat all types of medical problems at the time but with regards to that gap that exists between science and reality, and the importance that the ophthalmologists give to the research, to a precise definition- debates took place amongst specialists, these debates were very intense during the second part of the 19th century and beyond. For example, the issue of what, what is a visual act? What does that mean? Debate took place; there is a debate that exists. Some doctors think it is relevant to use tables, charts with letters, but some of us think it is more relevant to being able to recognize shapes, geometrics. They think, the latter, recognizing a shape has to do with cognition, rather than reading a letter or being able to count a number of figures is considered as a visual act or visual action. But generally speaking, the fact that people use charts to test a patient’s sight, even if this is done very carefully, it was a default solution. A default solution used by doctors would have preferred to use instruments or machines, specialized machines, so as to have objective measures, measurement of the visual abilities of a patient without the need of questioning the patient. For centuries, hundreds of ophthalmoscope eye devices were devised, patented, to measure the visual acuity in a very precise manner. So many instruments were devised, manufactured, and that can be explained for several reasons. It was difficult to come up and to use a dedicated and useful precise tool so as to test visual acuity. Secondly, doctors were obsessed by the fact they had to have such a tool. Another issue is the matter of standards, international standards, especially so as to measure visual acuity. And having standardized charts, tables that are being recognized widely to a global level; type of units being used are important as well. Dozens of conferences have been held and are now being organized on a regular basis to discuss these issues.

10:04

One of the most important ones took place in Lucerne, Switzerland, in 1904, and later in Naples in Italy. The participants to these colloquiums were able to establish trade-offs, compromises at that time. But the standards defined by this congress are not being used in the real world actually. They remain academic tools and measurements. Eye specialists are not the only one to have the need to test patients’ sight, for instance. In the different states, have that need; the armies have this need as well. Armies need to test the sight of the soldiers and the standards decided and used by individual states are not necessarily those used in other states. The same principle applies for trades, such as people working in the railways, for which it was necessary to benefit from a certain degree of visual acuity, of course.

35:38

Practical measures were being used by the people in that trade and the people in those trades ignore the international standards defined by these eye specialists. This history of the definition of the normal eye definition of the visual sight or visual acuity and the quantification of sight tells us that it was the will, the wish, of a number of professionals to set up a framework for certain standards, a framework of norms that remained very subjective and that was not widely used. So, lots of people rejected that system.

That history also represents an example of the investigation of the senses which took place in the 19th century so as to improve the confidences of people who were faced with new demands, demands created by the Industrial Revolution. I talked about the rail services, but also I could think about compulsory and free primary education for pupils, which was introduced in many states and, and, of course, for that purpose, young school children had their eyes and sight tested so that they could read. And that is the same in the different armies, forces. Since there is no internationally recognized standards that proves that the debates remain very important nowadays, that leads us to a reflection about the definition of blindness, the visual impairment and the definition of visual impairment and blindness as it was defined by doctors in the 19th century continues to be a matter of discussion and can still be challenged.

38:53

And this remains an issue because the question, the issue of, if we look at the definition of the Association of the World Health Organization’s definition of blindness, a distinction is being made between full blindness and legal blindness. Blindness is defined as a state described very precisely and there is according to that definition, not only one type of blindness but several blindness states. But some people can keep given visual acuity but then they can suffer from other impairments or disorders. People can suffer from other conditions which have nothing to do with visual acuity and all these definitions have not taken into consideration this subjectivity of blindness which makes that the people – well, if we consider two people have a similar sight characteristics can live in very different ways because of a series of elements, a series of criteria, which are different ie. their environment, for instance; their lifestyle, just the people living with them, the friends, the work, the habits, psychology and so on. So, vision, such as blindness, are matters for which the, the role of the doctors the experts, medical experts, is instrumental. And within the framework of Disability Studies, and especially those pertaining to blindness, I think it is necessary to, to, to do some benchmarking work really to create a basis so, to speak to, to, to define blindness, to define blindness by how could I say that - what is shared, shared by scholars, researchers, academics who have an interest in this part of disability studies. So, to agree on a definition of these conditions. Thank you very much for your attention. I am now ready to answer any question you may have.

Marion Chottin 42:45

Thank you. Thank you very much Corinne; it was very interesting indeed. So, that is fine with you if for a few minutes, we shall talk, just between us, and then I shall leave the floor to Hannah and we shall have a Q&A session, a question and answer session. I think that your conference introduces very well this, to the colloquium, because you talked about the beginning, the historicization, writing the history of this matter what seems obvious to us right now, ie the definition of blindness and visual impairment and the- it is, of course, necessary to define this. So, you do show that this definition in terms of visual acuity that can be quantified is recent, that it originates from the second part of the European 19th century.

And it is closely related to the invention of measurement tools, such as the ophthalmoscope, and you- it depends also on this definition of a so-called normal sight, normal eye. You also show that the determination of normal, of a normal vision, if I understood, rightly led to the fact that anything that did not comply with that definition was considered as a pathology or a disorder which was not necessarily the case previously. So, therefore, that led to a pathologization of these types of sight, leading to the phrase or expression ‘visual impairment.’ And if I'm not mistaken, blindness today is considered as a disease and then, what could I say? Yes this fact that this pathologization leads to the idea of correction, of norms and standards, of healing thanks to surgery, or glasses, by means of glasses, but I mean, the normal eye defined in the second part of the 19th century, is not a real eye. The real eye wasn’t built by those laws of refractions of physics and the ophthalmologists, just on that basis, then used the standard of the average eye, not the ideal eye, so that the youngest people had not a normal eye towards the higher part of the eye. You also highlighted difficulties experienced by people who want to quantify the vision, the fact that seeing is not only a matter of sensing, it's also about the creation, the creation of what you talked about tables, visual tables, and you use terms close to those used by Michel Foucault, the resistance of the vision, which can be corrected. So, this is how I could summarize your speech. I would like now to give some time to the audience to raise any questions.

We have three questions now for the colloquium, three main questions, of course. So I will ask one question and then I will give the floor to Hannah. So, the question will be so, to comment to the end of your speech and the idea, according to which definition of blindness is not limited but we need a rich definition, going beyond the current framework, which could be the basis of the blindness studies. Amongst the three key questions, we do have this colloquium, there is what one: what definition of blindness does your research lead you to adopt? And to be precise, my question: according to you, do you think there are as many definitions of blindness in history or do you think that history that allows us to precise the definition and that scientists will be able to define a common definition or do you think that the gap that exists between the real world and the standards only expresses the inability of science of sight and blindness? Which of the definitions of blindness do you think are relevant. That's it.

**Corinne Doria** 49:39

Thank you for having summarized my talk so accurately and for your question. One of the comments that you've made on the fact that blindness is considered as a pathological condition, that's very interesting because, for instance, while I was preparing for this talk, I was reading 19th-century medical dictionaries, after 1812 until 1918. I found that the definitions were not at all – that there were a lot of doctors who were really saying that blindness is not a disease, it is the consequence of a disease, but it is not a disease in and of itself. And others were saying no, it is a pathology; it is a pathological condition of the eye that is abnormal, etc. This was a question that's as far as I am concerned, we- it is interesting to continue to discuss and it is not limited to blindness, is it? We could ask the same question about other situations that are defined as situations of disability. As for the definition of blindness, two things to be said. The reason why I propose this topic or this lecture is that, in my view, in the context of what has been published regarding blindness, we do not often find writers who can define the terms, the usable terms, the terms that they use. And we continue to talk about blindness as if it were commonly agreed knowledge, as if everybody had the same idea of it. That is not at all the case. The second question is, as a researcher interested in the, in disability studies, do we need an accurate and universal definition? This is the difficulty of giving a definition. Why? Because we, it's obvious in the context of health protocols, the quantative definition of a deficiency of one or another, of one kind or another, is functional. This results in a certain number of people in society are not adapted to society can then enjoy the same rights as most people. The question is, as a researcher in the context of blindness studies, how do we want to define blindness? And do we need a definition, a universal definition of this condition? It is a debate that I'm not sure we've reached the end of; this has not yet been carried out in an exhaustive fashion. And I believe that it is a question that I would like very much so to discuss this with the other colleagues and hear what, what they have to say about this.

**Marion Chottin**

We are going to be able to do this straightaway. And we're going to be able to examine whether blindness studies can actually adopt, take the pattern that, that's that sort of model of Deaf studies that have agreed on the definition of deafness in order to reach a comprehension, a more global comprehension and understanding culturally, and that would include the different dimensions of people's experience. Thank you, again. I'm going to hand over to Hannah.

**Hannah Thompson** 54:50

Thank you, Corinne and Marion. And I believe that this idea of a definition of, this question of knowing whether we need to define blindness, is going to be a key issue of this conference. I would like now to invite anybody who wants to speak to raise your hand virtually if you have questions, or you can put it in the Google document. I see Vanessa has already raised her hand. So Vanessa, I'm going to hand over to you.

**Vanessa Warne** 55:27

Thank you very much, Hannah. And thank you Corinne, very much. This is Vanessa Warne speaking. And Corinne, I will ask my question in English and allow our translators to offer support as needed. I am struck Corinne by how we are speaking about a history of gatherings of people coming together to do the work of definition internationally. And, of course, we do that now, together, a century later. And partly I am very engaged by the way in which you offer for us a kind of map of the way in which concerns that shape a culture shaped definitions of blindness. So as you reference the rise of industrialization, values, different kinds of sights and shapes, the definition of blindness, and also I particularly value your references to public education and state-funded education. And I wonder if I could ask you, Corinne, to speak more on the subject of how literacy, the ability to read, versus perhaps numeracy or other cultural measures, such as one's ability to identify visually a duck or a chicken- but how literacy has had such a it seems to me dominant role in definitions of blindness for more than a century. And as your discussion of eye charts, for example, and their prevalence indicates there have been ranges, different varieties but, but it seems that the ability to read inked letters in print has dominated so much of the conversation around this effort in, in medical communities to, to measure, to define blindness. Could I ask you to talk more about the ability to read and how integral that seems and whether that is something that we will now see, see challenged, given our different access to, for example, audio, and other kind of ranges of cultural support? And thank you again Coriine for your excellent talk.

57:39

Thank you. Thank you. Thank you. Should I speak in English or in French for my answer?

**Vanessa Warne** 57:44

It is whatever you prefer Corinne because I am I am using the translation function and I will benefit from that. Thank you.

**Corinne Doria** 57:52

Okay, so thank you for, for your excellent question. And indeed, it is, it is a fascinating question and fascinating part of this of the story. And indeed, well, it's, it's funny, because if, well, the very first chart ever designed to measure visual acuity was designed in 1842 by a German, a German physician, called Heinrich Kiichler, and it was like a chart with the three ranges of not letters but words written in [unclear audio] Which, if you can read, if you don't have any kind of visual issues, and you know how to read, it's a challenge by itself to read it and well, it didn't, it didn't work out. And indeed, well, the, the number of sort off the charts that was published in the course of the second half of the nineteenth century, it's, it's staggering, because basically, every physician wanted to have his own charter, and to sell it. So there was a really, really a market for these devices that were printed under like, for being like pocket size, or to be like a very nice object to display and so on and so forth. And, back to the question, if to use letters to test the vision of the people. Well, this also was an object of, of dozens of articles, because, on the one hand, physicians was arguing that well, you need to test, you need to have devices that can test the eyesight of those who cannot read. So it makes no sense to use letters it makes more sense to use for example, I don't know geometrical figures, or dots, or whatever. And there was physicians that were arguing that no, - letters are the appropriate devices, especially because what, during the 19th century in a lot of countries, the governments started making, making primary education, mandatory and free. So the capacity of reading and writing started becoming not like a capacity of a marginal, small percentage of society but but a capacity absolutely wide, widespread. The question of the relationship between literacy and the definition of blindness- for workers who have the capacity of, who have the visual capacity, I would say that it's well - physicians didn't define, didn't consider the literacy as essential for anything but to use it to define, to define blindness. The literacy capacity, it's central to the study of visual impairment, of course, because well, when the question, for example, of school myopia started becoming of interest for physicians the question of well is it good for kids to spend six to eight hours in a small, dark classroom working at a short distance? The answer was, well, for some physicians was no- so we should let the kids do some activities outside or during the springtime in the summertime study I don’t know, in a garden, or having a certain kind of illumination or a certain kind of desks and chairs to be sure that the kid maintains physiological distance between the book and the eye. We should bring into schools, books, textbooks that are using a certain kind of font, a certain type of paper. They try to really micromanage these, these, these aspects. And once again, there is a huge gap between the medical discourse and what really happened in, in, in class. Otherwise, for the question of blindness, I would say that, it was more the question of using your capacity, the capacity of using your vision for working. That became a key parameter for, to be used for, for defining the difference, perception the difference between vision and, and normal vision, low vision, and blindness. If you can't use your, your vision, your eyes, for working or for your daily life activities, then the low end, the medicine, says that there is, that this is a condition. And yeah, I hope I answered to your question. Thank you once again, for, for, for asking me about this point.

**Hannah Thompson** 1:03:47

Thank you so much, Corinne. Sorry, Vanessa. I can see we've got, we've got some more questions. So I'm going to first of all, ask Susan to unmute and ask your question.

**Audience Member** 1:03:59

I've done it. How could you possibly tell me Corinne because I'm a braillist and given that Louis Braille invited the Braille system, why would the medics so slow to recognize that braille was existing in the late 19th century, early 20th century, do you think?

**Corinne Doria** 1:04:25

Thank you, thank you for this question, for this question, Susan. I would say because well physicians started debating, kept on debating, at least I've seen well, I know French literature more than, than English literature on this point, but French ophthalmologists kept on debating well into the 20th century, whether or not the blind was a question of their competence because they thought that, okay, we work, with our work and when a person is no longer able to see. Whatever happens between the normal vision and before, after the normal vision and before blindness, okay, we can work on it. But the blind is not a patient for a physician because we cannot do anything for this person. And I think that this is, can explain the, the lack of, of interest for from the medical community towards, towards the braille, the braille alphabet.

**Hannah Thompson** 1:05:51

Thank you, Corinne. That's, that's really interesting. Marion Ink. Would you like to ask your question? I can’t hear Marion. So we're going to David Johnson next. David, can you unmute? You've switched your camera on, but you're still muted, David. There you go. Perfect. Yes

**Audience Member** 1:06:16

Hi there. Thank you for that talk. That was wonderful. And my question is about the question of whether a definite, defining blindness – the more complex my realization of what blindness is dawns on me, the more I think that a definition of blindness is harder to pin down because um a) there's a huge difference between partial blindness and total blindness. And also, within partial blindness, there is a huge, massive range of types of partial blindness based on the different types of diseases and the rate at which it happens. So a definition of blindness, if it's going to have any use at all, it's got to reflect that complexity of those two, I think key, key states, total blindness and partial blindness. So my point is yeah, is it going to be of any use in reflecting that complexity?

**Corinne Doria** 1:07:44

Thank you. Thank you for this for this. This question. Yeah, I, I'm not sure I can have a straightforward answer for it because I agree with the fact that this is definitely something that, in the field of blindness studies, that should, studies, should be an object of study, of an extensive, extensive discussion, because, on the one hand, because well, the definition of several different kinds of blindness, it's very recent in, in history, and it's, it has been linked to the more extensive and detailed knowledge about the eye conditions and eyes’ function. And well, also the definition of what is low vision and visual impairment; there is no such thing like a universal definition, or sets of definition, on which everybody agree. The point in my opinion is what do we expect from this definition, what kind of use are we- why, why do we need this kind of definitions?

**Audience Member** 1:09:22

Yeah and I guess it's not just about the quantity. It's not about it's, it's the quality of the vision that's also or the lack of vision that's important to capture. And how can you, how can you define that? That's really hard to define.

**Corinne Doria** 1:09:49

Yeah, absolutely. But it is also depends. Well, the definition of it's one point and what are the consequences of it? For example, if well, I, I assume that if I were a farmer in Italy in the 15th century, besides I probably would not, I will be dead by now because life expectancy was very low at the time and I've had like 15 kids, that I would not be blind by had not having the capacity of 20/20 vision, because for my daily life, this kind of visual performance was not required. This is not the case nowadays, where we are we live in an environment in which not just our visual capacity, it's overstimulated, but in which, visual proficiency is, is almost, almost mandatory or taken for granted. And so, it's, it's also a situation which is quite fluid, because it depends on so much from, from the environment besides depending on from the, the, the individual. And it's, it changes at a pace, which is – it’s evolving at a pace, which is which is like, very, very, very rapid.

**Hannah Thompson** 1:11:37

Thank you. Thank you, Corinne. Thank you, David. I should say that David is speaking tomorrow. And, and he's definitely, in fact, the whole of the Round Table tomorrow about blindness and art it has in common a kind of a return to these questions. Let's, let's see if Marion Ink?

**Audience Member** 1:12:03

You hear me? Yes. It does work. Thank you. Thank you very much for the presentation. I have a question. How can we, when we compute the sight, people are focused on the central vision. I suffer from retinopathy, which affects central vision. So I'm legally recognized and registered blind. Having said that, I can, you know, do lots of things in my daily life, I can walk, move round. But in the history of ophthalmology, would you say that people have been focusing mainly on central vision?

**Corinne Doria**

Thank you for that question. Indeed, the notion, the concept of peripheral vision was introduced more recently in the 20th century, actually, because the assessment of central vision- was the sole type of assessment being made for many years, except for a few cases. The, in the forces in the army, peripheral vision was assessed tested for pilots, plane pilots. That was and peripheral vision was studied for armed forces officers, even at the end of the 19th century, whereas that was not the case for most people. This concept of peripheral vision was introduced really, for most people in second part of the 20th century as an important a point to consider.

**Hannah Thompson**

Thank you very much, Corinne, I think we have five minutes to go. So I shall leave the floor to Anaïs Choulet now. Anais the floor is yours. If Anaïs is not here... this whole discussion of, of medical definitions makes me quite uneasy. Because I believe in a de-medicalized model of disability. You know, I'm against the medical model of disability and in favor of kind of cultural creative definition? How do you reconcile your study of medical issues with critical disability studies? And an anti-medical model?

**Corinne Doria** 1:15:13

Thank you. Thank you Hannah. This is, this is an excellent question. And yeah, you mention a very problematic point. Because I do believe, I am on the same page with, with you. And sometimes I'm quite like frustrated by reading about this kind of obsessional way in which physicians are ever approaching and keep on approaching the question of visual of visual acuity, visual impairment, and blindness. I do believe that human vision is, well, I do believe that visual capacity, that the eye, it's an optical device, and our brain plays a major role in our capacity of vision that varies do during the day, varies depending on our emotional status, that is depending on how our general status of health and so on and so forth. And the, so, I do not agree with people that some of the people that I study. At the same time, I would consider them like-- it is it is a way of framing the question about the vision that we cannot ignore, because it keeps on being a framework on which a huge part of the society rely on and that is accepted by a huge part of society, basically, uncritically. So in my opinion, studying the this, the question of medicalization and medical definitions from an historical viewpoint, and explaining how and why this kind of way of understanding human vision is, is the way that, the, is the way we have to deal with. Well, it's, it is a means to bring a certain awareness on among the well, the scientific community, in the, in the first place, and, and hopefully a broader, a broader public. But otherwise, I completely, I completely agree with your points. Absolutely.

**Hannah Thompson** 1:18:03

Thank you. I think we're going come back to this again and again, throughout the conference. It is one of the main issues. We've just got time for one very quick comment from David Anderson, if you're quick, David.

**Audience Member** 1:18:18

Thank you so much. I just wanted to say thank you for the talk and I was so interested. I was just curious if it is something we can talk about during the conference, but I was so interested in how you talked a lot about pathology. But it made me think, what is the difference between blindness that comes through violence? And also what is the difference between different kinds of blindnesses when there is no original loss? Like it's not progressive, you are born with it, that sort of thing? I realize we don't have time maybe to answer that question, but just wanted to say thank you, and I hope to continue conversations with you. I learned a lot from your talk.

**Hannah Thompson** 1:18:53

Thank you. Thank you, David. I'm going Corinne, I'm going to not let you answer just because we have to be very strict with time because we need to give the interpreters and the, the people who are doing the transcription a break; everyone needs a break. Please join us in 15 minutes, when we will be discussing the very, very relevant topic of different languages of blindness with Kish Alam and Selina Mills. Thank you very much, everybody, and thank you, especially Corinne.