

The Figure of the Continuum: Discussed in Relation to the Quantum Logic and Exemplified for the Categories “Sex/Gender” and “Migration”*

Christel Baltes-Löhr

University of Luxembourg, Esch-sur-Alzette, Luxembourg

This article shows, on the one hand, how the figure of the Continuum can describe pluralities not only in the realm of sex/gender, but also in that of migration, using the four dimensions of the Continuum: physical/body/matter—psychological/feeling/experience—social/behavior—sexual/desire. The figure of the Continuum can resolve binary and bipolar orders by overcoming the virulent power of the poles “male-female” which are still considered to frame the gender order to this days. In the same way, the bipolar, antagonistic, and dichotomous juxtaposition between migrant and non-migrant will be released from a binary constriction using the figure of the Continuum, as well as the diametric opposition within different forms, different trajectories of, and different reasons for migration. On the other hand, the article shows how natural such de-binarizations are or how pluralizations are if one looks to quantum logic and explains how the “as well as”, the end of the exclusionary opposition of “0:1”, superpositions and overlays as well as repetitions are of central significance for quantum physics. Thus, the article can come to the conclusion that, just as in the quantum logic of physics, the figure of the Continuum contains a chance for a new and broader humanism, which considers the human as a human, with all their diversities, potentialities, and the inviolability of human dignity.

Keywords: Continuum, quantum logic, gender, migration, plurality

Everything is Connected to Everything

At the beginning of the 21st century, public discourse is more and more concerned with the pluralization of lifeworlds, increasing choices and possibilities in regards to, for example, individual forms of life regarding partnership and forms of living and co-living (Schneider, 2012). Opportunities for studies and education¹ have multiplied and diversified just as the courses of careers (Bolder, Epping, Klein, Reutter, & Seiverth, 2010) and, not least, individual and collective identities are appearing in ever more diverse shapes and manifestations. In September 2014, Matthias Heine’s headline in the features section of the German newspaper *Die Welt* read “What Facebook’s gender choices reveal about our world” (German: Was Facebooks Gender-Wahl über unsere

* **Acknowledgements:** My thanks go to Svantje Volkens for her support by translating this text and the accompanying discussions. This article is based on a lecture, held as a part of the international conference “The Ends of the Humanities” organized at the University of Luxembourg, 10-13, September 2017.

Christel Baltes-Löhr, Professor of Language and Literature, Humanities, Arts and Education, University of Luxembourg.

¹ According to the prospectus of Germany for the season 2018/19 of 18,267 courses of study offered at 443 universities and colleges; <http://www.studienwahl.de/de/chnews.htm>; see also: <https://studieren.de/berufswelten.0.html>

Welt verrät); in addition to “female” and “male”, he mentions 58 further options for users of Facebook to indicate their gender (Heine, 2014).

The existence of plural lifeworlds is, through a now nearly inconceivable variety of means of communication, supported by rapidly evolving technologies, and being introduced into the knowledge of an increasing number of individuals. Comprehensive information about any given topic seems to be available and retrievable for more and more people, any time.² One topic refers to many others, and the conclusion seems obvious to highlight a prominent feature of diversity by saying: Everything is connected to everything. Book titles indicate the increasing connection of everything to everything (Weilandt, Herold, & Ende, 2013), when the translologist Peter A. Schmitt is honored as a scientist with universal interests in the science of translation and interpreting, linguistics, cultural studies, technical sciences and engineering, terminology, art, photography, and comics, in a commemorative publication on the occasion of his 65th birthday published by Annette Weilandt, Susann Herold, and Anne-Kathrin D. Ende (2013, p. 9), his former doctoral students, and quoted with this aphorism, which deeply influenced his contemporaries: “You see, how everything is connected to everything.” (German: Sehen Sie, wie alles mit allem zusammenhängt.)

In June 2013, the German newspaper *Die Welt* published an interview titled “Everything is connected to everything” (German: Alles hängt mit allem zusammen) with the president of the European Academy of Sciences and Arts, Professor Felix Unger, who wants to break open the “fossilized structures” of science with more interdisciplinarity. In the interest of this, he mainly refers to the need for a stronger connection between science and art, and concludes:

The arts have an exceedingly great, and commonly greatly undervalued, significance to our lives. Everything is, in fact, connected to everything – from the quantum physics of Anton Zeilinger to the art of Joseph Beuys. The central message is: all of us have to learn from each other. (Lossau, 2013)

In May 2017, a German radio station titled a 30-minute instalment in the series SWR2 “Knowledge: Aula” (German: Wissen: Aula) about Alexander von Humboldt’s new understanding of nature thus: “Everything is connected to everything” (German: Alles hängt mit allem zusammen), and it says: “This man (Alexander von Humboldt) was a universal genius and adventurer; he traveled to North and South America, climbed volcanoes, discovered hitherto unknown species of animals and plants; he was a botanist, a geologist, a chemist, a meteorologist, and the first environmental activist. Humboldt realized that nature is to be understood as a living system, in which everything is connected to everything, and which can thus easily fall out of balance” (Wulf, 2017).

REWE, one of the biggest grocery store chains in Germany, has been advertising with the slogan “Good for you. And your region” (German: Gut für dich. Und deine Region) since July 2018. The campaign is about fresh and regional products, which are supposed to be healthy for consumers and support the respective region. The explanation for this slogan reads: “Yes, that is all interconnected” (German: Ja, das hängt alles miteinander zusammen) (REWE TV-Spot, 2018).

In Politics, too, one can find such statements, when the German Federal Minister for Justice and Consumer Protection, Dr. Katarina Barley, remarked at the citizen dialogue “Let us talk about Europe” (German: Sprechen wir über Europa), which is being conducted twice before the European Election in 2019 by every

² The access to information is more and more becoming a boundary between those who have this kind of access, and those who do not.

German Federal Ministry, in August 2018 in Trier: “And everything is connected to everything” (German: Und alles hängt mit allem zusammen). The minister’s sentence referred to the situation in healthcare and elder care, to the increasing social isolation and loneliness concerning not just older citizens, and to the resulting need for active listening.³

The question of how to constructively handle diversity is not limited to politics, because in addition to innovation through diversity and the promotion of creativity through contact and knowledge about diverse forms and expressions of life, terms like chaos and disorganization quickly come up as well when the seemingly infinite connection between everything and everyone is concerned. Boundlessness surfaces and boundaries become blurred and lose their selectivity. Thus, the *Berliner Gazette* said, in January 2010: “If everything is connected to everything, meaning objects as well as people, then the self has no limitations and the world has no boundaries” (Woznicki, 2010). The author of this text deems limitations and boundaries—even if they are, as he emphasizes, effective only temporarily—necessary “in order to develop a sense for norms and measurements. If one can measure, one can recognize proportions, relations, and correlations” (Woznicki, 2010).

The Apple Crumble and Agriculture: Vertical Losses and Horizontal Shifts

Discussion is pertinent regarding two aspects of this sentence: first, categories and categorizations can also be understood as limitations and as instruments used to create boundaries. The problematic nature of these images of demarcations and categorizations will be explained using the model of an apple crumble. If we take a round or a rectangular apple crumble, and cut it into 16 pieces, the individual pieces will probably, although presumably depending on the sharpness of the knife, part clearly, and one will be able to select one and eat it with gusto. However, invariably and unavoidably, the cut will produce crumbs, smaller or bigger remnants which fall apart from the whole, are not clearly assignable to any of the individual pieces of apple crumble, are usually left unnoticed and end up in a napkin or a cloth, and finally, in the trash. This means, in the figurative sense, that the drawing of boundaries and the appointment of borders and categories will always separate that which could possibly be viewed as belonging together, and that the categorial cuts will always produce “waste”. It is inherent to categorial systems to never be able to capture the pluralities of ways of existing; “vertical losses” will almost inevitably result at the points where cuts occur.

A similar image of “horizontal shifts” and the possible losses accompanying them can be identified by taking a look at agriculture. Boundary marks of fields were, and still often are, denoted with so-called boundary stones placed at the four corners of the field; the author personally remembers very well the resentment that arose in the village community in the 60s and 70s when the biggest farmer would use their tractor to plow the stones out of the ground, would more or less plow another furrow, replace the stones, and would, after five or so many years, delight in their ownership of a field steadily increasing in size. Here, the furrow, which constitutes the border between two fields which can technically be considered to belong to a unified area of farmland, cannot actually be clearly drawn, because it is impossible to position the plowshare as accurately as the fine line drawn on the paper mapping the farmland (with pencil in the past and with computer programs today), demands it. Horizontal boundary shifts can be encapsulated with this image, and referring to categorial systems, one may speak of an expansion and contraction of the categorial domain (Baltes-Löhr, 2003). Atlases,

³ <http://www.eu-info.de/dpa-europaticker/288560.html>

for example, are thus to be considered with caution, since the boundary lines that are marked in them, e.g., the borders between nations, may look completely different in reality, are less unambiguous.

In this argument, symbolic abstractions have thus far been accompanied by the loss and/or the shift of realities.

Moving Boundaries

The “moving” boundary between land and water cannot be captured by a line. In addition, it will be no coincidence that, on June 15th 1985, the signing of the *Schengen Agreement* (EU-Info, n.y.) for the opening of the inner-European borders in the then so-called Schengen Area took place on a ship on the Moselle, a so-called boundary river between Luxembourg and Germany. The connection that the river facilitates between the two nation states was thus placed into the foreground, and the power of the border was limited not only by the signing of the treaty, but also by its presentation. In the systems of symbols of different languages, one can also find the implied connection between abstractions and realities. The sentence “I travel around the world”, spoken in three seconds, does not reflect the time, the duration, the effort, and the joy of that which is described by the five words of this sentence.

Big and complex correlations, processes, and cohesions are—to return to the author of the *Berliner Gazette*—only to be outlined by limitations, and following his argument, are only manageable through categorizations and categorial systems of order. The question remains, however, if this is actually so, or if it has to be.

Measurements Recognize the World—Do They Also Construct it?

A second aspect of the sentence by the author of the *Berliner Gazette* has to be discussed: the assumption that limitations, boundaries, and categories help to develop a sense for norms and measurements. If one can measure and recognize proportions, relations, and correlations.

Is it, however, not more appropriate to assume that the world, with all its proportions, relations, and correlations, is being constructed and defined by measurements and measurement instruments in the first place, and that the conclusion suggests itself that, depending on one’s way of observing and viewpoint, the viewed object becomes constructed and recognizable to us humans. In other words, the object does not need its denotation, its designation, limitation, in order to be an object. Rain, volcanic eruptions, love, affection, and togetherness happen before any practices of denomination turn the object into rain, sunshine, love, and pain for us humans.

In the humanities and social sciences, the connection between the constructions, the making of the object through measurement, or better said through denominations, has been discussed since the 1990’s on the basis of performance theory and notions of (de-)constructivism, for example in the works of Judith Butler. This discussion has centered around the idea that the denomination evokes that which it denotes through this self-same denomination; repetitions technically can never depict the exact same because they happen, they must happen, in time and space where today’s now is already the yesterday of tomorrow, almost invariably lead to subversive shifts, changes in the repeating denominations and thus in the object itself; a movement that can only be halted by a power whose aim is conservation. A movement which can only be counteracted by employing dirigistic measures to curb and contain it.

Categorially Conditioned in and Exclusions Within the Framework of Binary Logic

Denominations, designations, limitations, boundaries, and categories can thus only ever contain more or less comprehensive snippets of real diversities (you can cut an apple crumble into 16, but also into 32, or into only two pieces; in every case, abject pieces will be left over in the course of constructing the bigger pieces). The pieces which are, so to say, not accounted for (the abject in Butler's works, the crumbs of the apple crumble) are excluded through the practice of denominations, designations, limitations, boundaries, and categories. Oftentimes categorial systems, for example, operate within a binary logic: An element that is A cannot be B. A and B are juxtaposed in this binary logic, are essentially constructed into an antagonistic relationship, and frequently an antagonistic relationship, such as this is connected to dichotomous powers, which denote the power relations between A and B. In the still virulent gender order, "female" is contrasted against "male"; according to a binary and antagonistic logic, "female" cannot be "male" and vice versa. Within the binary, dichotomous logic of, for example, patriarchal systems the "male" is additionally regarded as being above, superior to the "female"; in matriarchal orders, this system appears in the opposite way. In systems with "fluctuating" orders, meaning with patriarchal and matriarchal realms of meaning, "femininity" will be considered superior to "masculinity" in certain contexts, and vice versa in others (Baltes-Löhr, 2018b, p. 29).

First Partial Synopsis: Overstepping Binarity

We can conclude that binary, antagonistic, and dichotomous systems of logic create, stabilize and are bound to a powerful bipolarity.

An "I" conceived within a binary logic cannot become a "you"; similarly, the "we" stays amongst itself and oftentimes feels superior to the "you"; a fact which has been demonstrated with alarming, and for many people life-threatening, clarity by the refugee and migration debate that has been increasing in unwelcoming severity since 2015. Images of submissiveness of the "you" as related to the "we" can also be traced. Take the European Union as an example, the "we" was extended to 28 members in 1957 by the six founding states, Belgium, Germany, France, Italy, Luxembourg, and the Netherlands (Bundesregierung, 2005), and it will, after a possible Brexit (the planned exit of Great Britain from the European Union), be reduced to 27 members. Successful membership negotiations lead the way from "you" to "we". Ongoing membership negotiations are characterized by a behavior that can, in the author's opinion, be called submissive: Yes, we will subject ourselves to the terms of the EU in order to be accepted as a member and thus to become part of the "we". The "interior" in a binary, antagonistic, and dichotomous logic cannot be the "exterior", the "center" cannot be the "periphery", "here" cannot be "there", "beautiful" cannot be "ugly", "up" cannot be "down", "old" cannot be "young", and "strange" cannot be "familiar"; "today" precludes "tomorrow" and frequently also "yesterday", and the inevitable question presents itself of what could replace this binary thinking in order to, for example, be able to capture possible connections or similarities between seemingly opposed concepts, and thus to do justice to the diversities of human existences. Connected to this, it would be the need for the opening of severe categorial separations. The emphasis would be on the permeability and porosity of dividing lines, boundaries and borders, the fluidities of any object could no longer be considered a deviant exception, but a possible normality.

The Logic of Quantum Physics and the Figure of the Continuum: Four Points of Contact

Before the author explores the question of how insights from quantum physics accompany and supports the figure of the Continuum to capture plural life realities later in this paper, the author will at this juncture

illustrate four points which catch the eye as possible parallels, or better: points of contact between sciences, social sciences, and humanities.

Without, at this point, entering more deeply into the conception (Busche, 2016) and current debates of quantum physics (Spektrum der Wissenschaft, 2017), a few aspects will be highlighted here:

As Well As

The occasion marked as the birth of quantum theory by Anton Zeilinger, one of the leading quantum physicists, already speaks volumes—for physicists as well as laypersons: Zeilinger calls Planck's law, conceived in 1900, the birth of quantum theory. Max Planck described how atoms do not absorb and emit radiation energy constantly and in any conceivable size, but only bit by bit, portioned, in quanta (Zeilinger, 1999). If since the 1970's, these thought experiments have been proven in laboratory environments due to technological developments, then quanta are characterized by an "as well as": An example is the oft-described double-slit experiment (Zeilinger, 2017), which proves the "double properties" of photons, that means that photons can be waves as well as particles, which is shown by respective measurements. A review of the work of Jörg Starkmuth, who discussed questions of the conception of reality, in InKulturA read:

The double properties of matter and light (wave-particle) make it impossible to predict both, location as well as the speed of a particle, in experiments. Only with a measurement, which is the intervention of an observer, both will be decided. Before this, the particle remained in a state in which all possibilities existed. (InKulturA Online, n.y.)

Similarly, Anton Zeilinger wrote in relation to the double-slit experiment that "the means of measurement decide, whether the photon will pass through one of the slits as a particle, or will create interference as a wave" (Zeilinger, 2017, p. 34).

This "as well as" of quantum theory can be found in discourses of social sciences and the humanities, if it is assumed that the object is constructed through empirical research and/or the observation of the self-same object, that the result of the observation is, in essence, still being configured. This thought can be pursued to the notions rooted in performance theory that the object is being evoked through its own denomination (Butler, 1993, as cited in Baltes-Löhr, 2018b; Althusser, 1997, p. 26).

The End of a Binary 0-1

As discussed later in the paragraph titled "Superposition/Overlay", computers which are based on the binary 0-1 system, the black and white of the either-or can, according to Richard Feynman, one of the founders of quantum physics, "never depict the complete complexity of the world" (Schulz, 2015) (Spiegel 2015) and Hartmut Neven, the leader of the Quantum Artificial Intelligence Laboratory by Google, said: "Nature is not satisfied when an object exists only in one singular state" (Schulz, 2015). And, even further, that it is observable through both chemistry and biology that the world can only exist because it allows many overlaying forms (Neven; report Schulz). The dissolution of binary models is thus to be regarded as an integral element, as an integral building block of quantum physics. Quantum-Bit, the quantum chip of future computers, can assume states which correspond to a mixture of "on" and "off", which consequently means that "in certain laboratory conditions [...] the quantum computer could [compute] 100 million times faster than a conventional binary one" (Schulz, 2015).

Superposition/Overlay

A notion which is closely connected to the "as well as" of quantum theory is the supposition that a something, a photon, an electron, "[is] allowed two opposing states at the same time: on and off, yes and no".

This idea is considered, as Thomas Schulz argues in December 2015, as one of the fundamental suppositions and insights of quantum theory and quantum physics, and has wide-reaching consequences for such concepts as the “computer revolution”, the quantum computer (Schulz, 2015). These superpositions or overlays can be found as early as 1935 in a thought experiment by physicist Erwin Schrödinger with his now-famous “Schrödinger’s cat”, which is located inside a box, and can be considered both living and dead until the box is open or a measurement takes place (IFL Science, n.y.).

Thus, answers to Vera Lehmann’s question to what extent information is a fundamental variable (Odenwald, 2008) include, besides the “as well as”, also the “yes and no”; the correlation between “ja, nein, und jein” (yes, no, and yes/no) is also being discussed. It is interesting that, in the German language, this overlay of letters as well as positions is seldomly described by the phrase “ja, nein, und na⁴”. If classical bits as information carriers can only ever assume the value of either 0 or 1, then the quantum bit, also called qubit, exists in a superposition, in an overlay of 0 or 1, which means that a quantum bit assumes the value, or the state, of 0 and 1 simultaneously. Thus, the “interior” does not need to oppose the “exterior”, “center”, and “periphery” can fall into one another, just as the “here” and the “there”, “beautiful” and “ugly” are not strictly separated, and neither are “up” and “down”. “Old” and “young” are not contradictions anymore, and one can find the “familiar” within the “strange” and the more or less “strange” within the “familiar”, without either of them being considered an aberration. In the same vein, “today” can encapsulate “tomorrow” and thus also the past and the future. Time gains new dimensions, just as the present. Time can, in the sense of Greek mythology, be regarded as Chronos and Kairos.

While Chronos represents the quantity of time and the experiences of the past, Kairos is the now, the dimensionless point of the present. Kairos reveals a new dimension of time, which for the most part we disregard, the quality of time, the right point in time. (Weinelt, 2005)

Iterations of the present can be considered anew. The treatise of Hans Ulrich Gumbrecht “Our Broad Present” (German: *Unsere breite Gegenwart*) is announced by the publisher as “a present of simultaneities, which is situated locked between a threatening future that cannot be planned and a past that is flooding us” (Suhrkamp, 2010). A broad present leaves room for the enhanced experience of a widened simultaneity (Macho, 2011), which at the same time evokes new forms of the present.

But back to quantum physics: Anton Zeilinger (2007, p. 39) wrote about the superposition: “Just as it cannot be determined which slit a particle will pass through when it moves through a double slit, a quantum bit will essentially assume both states of 0 and 1 simultaneously.” Here, a barrier has been broken with which philosopher and physicist Carl Friedrich von Weizsäcker collided with his “quantum theory of primeval alternatives” (German: *Ur-Theorie*) in the 1950’s. Weizsäcker wanted to prove that every object had to be dismantled into its smallest conceivable components, until only binary statements, like “0” or “1”, “being” or “not-being”, and “yes” or “no” were possible. Thus, according to Weizsäcker, the structure of all complex objects and states could be traced. However, this theoretical, binary approach could not explain the conjunction of elementary particles (Odenwald, 2008).

Repetition

If Judith Butler has, in her reflections upon performance theory, repeatedly suggested that an object is evoked through denomination, then this has always been connected to the notion that the stabilization, the

⁴ A conglomerate of the “n” from “nein” (no) and the “a” from “ja” (yes).

recognition of such denominations become manifest through repetition, but can just as easily be subversively shifted and rearranged through these repetitions.

In this concept, as well, one can identify distinct similarities to the insights of quantum physics. In March 2017, Mike Beckers (2017) wrote in the publication “Spektrum der Wissenschaft Online” about two groups of researchers who create time crystals as bizarre matter in infinite frequencies and exotic structures in their laboratories, which can then show patterns in quantum systems which repeat over time, meaning the same pattern emerges over and over again. This could be of great importance for the quantum computers currently in development, if time crystals gain validity as a “general phenomenon” and are able to be applied as “special interior metronomes”, “in order to stabilize quantum systems against disruptions or to further improve precision measurements” (Beckers, 2017).

Second Partial Synopsis: The Relation Between Quantum Physics, Social Sciences and the Humanities

If, as shown, binary approaches in physics cannot accurately depict the complexity of particles and waves, then binary approaches in social sciences and the humanities cannot do justice to the plurality of lived realities. Binary approaches inevitably lead to a reduction of complexity, which is then frequently regarded as “natural” or “inherent in nature” and is enforced through all available means.

Thus, Robert Matthews, guest lecturer at Aston University in Birmingham, pushes the “scientific truth” off its pedestal when his treatise about scientific theory in the editorial section of “Spektrum Highlights” is announced by Thilo Körkel (2017) with the following words: “Yes, no, black, white? It is not all that easy.” “Some swans,” writes Matthews, “are gray,” or, the author would like to add at this point, interchangeably white and black and gray. Matthews (2017) concluded, following Andrew Liddle of the University of Sussex in Brighton, the consequence of a possibly precedent-setting replacement of the black and white of the falsification theory according to Popper “by the grayscale of the real world.”

Conceiving of Human Variety/Diversity—The Figure of the Continuum

When the connection between everything and everyone becomes manifest, the question arises how these diversities, or lived and existing pluralities, are to be comprehended. Binary, antagonistic, dichotomous, and bipolar approaches cannot completely do justice to these physical and human varieties/diversities. The figure of the Continuum (Baltes-Löhr, 2018b; 2018d), first proposed in 2014, constitutes an instrument with which the diversities and pluralities can be viewed not only in their existence, but also in all their mutabilities. Polypolarities and variabilities move into the foreground. The exclusionary adherence to binary constellations and the promotion of binarity as norm, were on a physical or human, or here on an individual or a social level, and as related to gender or to migration can, based on the figure of the continuum, be questioned sustainably and precisely, as well as analyzed on a social level as oftentimes motivated by political power.

More concretely: Why should, for example, intersex people be viewed as an intermediate form between “female” and “male”? Instead, should not the assumed homogeneity of the genders “female” and “male” be questioned, so that speaking of the woman, the man would be just as reductionist and limiting as speaking of the transgender, the intersex person, situated between the supposedly female and the supposedly male. And if, referring to the ruling of the German Federal Constitutional Court in 2017, the gender marker in Germany can contain the option “diverse” in addition to those of “female” and “male”, and then the question is unavoidable

if “female”, just as “male”, can, or better said, must also be considered diverse?

Gender as a Continuum

If the existence of more than the two genders “female” and “male” with all the heterogeneities inherent in the respective gender configurations, as well as their similarities and differences increasingly become a part of our social everyday lives that cannot be denied any longer, then the question arises how the gender order is to be conceived of so that all genders are regarded as equal in relation to each other.

With the figure of the Continuum, transity and interity (Baltes-Löhr, 2018a, p. 3) are no longer solely tolerated intermediate forms, or even third or fourth genders between the two still powerful main poles of “femininity” and “masculinity”. Bipolarities containing an “in-between” can be dissolved in favor of polypolarities. This means that with the figure of the Continuum, genders are no longer to be regarded as situated between “female” and “male”, since such an “in-between” is virtually always a derivative, a mixture, and a third, fourth, or fifth iteration of “female” and “male”. A Continuum, which is conceived of as merely being situated between two virulent poles will lead to the strengthening of those poles as boundaries and frameworks, and thus to a stabilization of binary, bipolar, antagonistic, and frequently dichotomous orders. New forms are also necessary concerning the denomination practices of interity and transity, intersex, and transgender, if intersex is not to be reduced to a corporal/biological dimension and transgender to the psychological/experienced and/or social level of gender. In addition, it seems necessary for both forms of gender to break apart the still virulent connection to sexuality; according to common rhetoric, so-called trans women or so-called trans men are generally oriented towards homoeroticism, and the penis or vaginal structures of so-called intersex persons constitute the respective sexual orientation (Baltes-Löhr, 2018b).⁵ To overcome connotations, such as “transgender—psychological feeling/related to social behavior” and “intersex—related to the body” on a linguistic level, the article “What we are speaking about when we are speaking about gender” proposed the two terms “transity” and “interity” as equal to femininity and masculinity (Baltes-Löhr, 2018a). This could newly incite this polarizing debate, with the consequence that the emphasis of “life in the wrong body” for trans persons, frequently connected to a desire to no longer belong to the “male” but to the “female” gender and to implement corresponding physical changes, will no longer be diametrically opposed to the other side of the debate, where intersex persons are concerned with the recognition of their life in and with a body which cannot be conceived of within the binary order. In this case, denominations, like trans, inter, man/male, and woman/female would be applied to persons regarding their belonging to a gender. Although—and this has to be emphasized again and again—every one of these gender configurations is representative of diverse manifestations, forms, and life practices, the concepts of “female” and “male”, as well, are increasingly robbed of their supposed homogeneity as a clearly defined and distinct gender as it becomes clearer that, for example, stereotyping assignments in the behavior of so-called girls and boys or women and men lead to limitations of the actually possible spectrum of behavior of children, adolescents, and adults. It is thus pertinent to find a figure of thought also for the two traditional configurations of gender, “female” and “male”, which leaves room for the actual diversity within the so-called female and male gender.

In addition, if we follow this train of thought on which everything is increasingly ambiguous and categories only create alleged unambiguities, eventually the question may arise of whether the category of

⁵ This connotation of inter and trans persons is reinforced through the assimilation of the concepts of inter and trans to those of lesbian and gay, as is the case with the IDAHO Day.

“gender” does not seem increasingly obsolete in its meaning. Now, however, the power of the category of “gender” cannot be denied, and thus it is vital to conceive of gender/genders in a way that pluralities that are connected to these concepts, depending on political constellations, cultural, individual, and social settings, are not discarded, do not become crumbs.

With the figure of the Continuum, which creates room for pluralities and polypolarities, all previously known and named as well as not yet known or named genders can, depending on their biographical, diachronical, cultural, political, and social contexts, assert themselves as efficacious poles; they can be regarded in their variable relationships to one another, and thus actually existing diversities and pluralities can increasingly be considered as an innovative social normality.

The Four Dimensions of Gender as a Continuum

The figure of the Continuum encompasses the four dimensions physical/corporality, psychological/feeling, social/behavior, and sexual/desire, and the author wants to emphasize at this point that such a continuum is not to be understood as a simple linear string of different plural forms, but as a figure whose four dimensions continually interact and communicate within themselves and with each other.

The physical dimension signifies the corporal and biological gender (frequently labeled “sex”), the psychological dimension signifies the felt gender (frequently labeled “gender identity”), the social dimension signifies the social gender (frequently labeled “gender”/behavior according to gender), and the sexual dimension signifies the sexual gender (frequently labeled “sexual desire/sexual orientation”). All of these dimensions, within themselves and in their relation to one another, are regarded as not definitively separable.

The physical dimension related to corporality. Insights from biological research have made it obvious since the 1980s that the so-called biological “sex” cannot be unambiguously defined, as was assumed for a long time (Streckeisen, 1991; Henke & Rothe, 1998). According to Streckeisen (1991), the following identification features can be distinguished from a somatic-physical viewpoint: chromosomes, gonads, morphology, and hormones. Not all persons with a vagina are fitting related to their chromosomes, gonads, and hormones to the so-called female shape of projecting breasts, narrow shoulders, wide pelvis/hips, no facial hair, XX-chromosomes, ovaries and high estrogen level. The same ambiguity can be demonstrated for so-called men. On a horizontal level, manifold variations can be observed: Thus, physical traits cannot be clearly determined for the four gender formations “female”, “male”, “trans”, and “inter” (Baltes-Löhr, 2018a). Facial hair can accompany a vagina and breasts just as a high voice can occur in persons with a penis and a flat chest. So-called transmen can have and retain breasts and/or a vagina or ovaries, can become pregnant and bear a child (Hosie, 2017).

The psychological dimension related to feeling. In a similar vein, femininity, masculinity, transity, and interity can feel very different to persons who identify themselves or are identified with any of these genders. Here, one can perceive situational variabilities, so that, for example, a 25-year-old woman may in a certain situation, let us say at the bus stop or in the practice of a gynecologist, feel differently about the psychological dimension of her femininity than it was the case when she was five years old and accompanied by her mother, and this, in turn, might differ completely from her feelings in old age.

So-called transgender persons, as well, can experience their trans-femininity differently depending on the situation, their age, or the cultural and political context. So-called trans-women may, in the experienced dimension of the Continuum, feel closer and more similar to trans-men, men, or intersex persons than to so-called women—or they may not. The psychological/experienced dimension of the Continuum can also, for

example, allow trans persons an easier memory, with all the connected feelings, of their person and the gender that was assigned to them at birth and not chosen by themselves, if the variability of gender-related feelings is regarded as a normality for all possible genders.

All of this does not mean, however, and this should be emphasized again and again, that there are not also persons who during their whole life, independent of any given situation, continually in more or less the same way and the same manifestation, have identified as female, as a girl and as a woman. Here, further research is necessary in order to—as with the physical double-slit experiment—determine why a person, over the course of their life, identifies with the gender assigned to them at birth—or not; how the biographical processes are shaped and how, connected to this, certain gender orders were or are manifest on the cultural and social level at a certain time, how homogenizing or allowing of diversities these gender orders are to be seen on a diachronical axis. These unambiguous feelings, being about a gender, an ethnic group, or a nation state, are part of the diversity as well, since diversity includes ambiguous and unambiguous forms in all their different manifestations, just as heterogeneity can leave room for homogeneity as a manifestation of diversity. Homogeneity, on the other hand, only allows other homogeneities. Thus, genders are regarded in a bipolar, binary setting as respectively homogenous, so that genders that are regarded as homogenous within are solely restricting excerpts of diversities, although they can carry a naturalizing sheen, and can be put in a box of self-same genders that are only different to each other. At this juncture, the author would like to refer to an evident parallel to cultural discourses: If multiculturalism means the more or less contact-free coexistence of supposedly homogenous cultures, and interculturalism of the togetherness of cultures in which supposedly homogenous cultures meet and enrich one another, and if transculturalism means the reciprocal permeation of cultures, which can result in the construction of innovative cultural forms (Sinner, 2011; Welsch, 1992), then there exists here as well, for example in the assumption of transcultural encounters, room for homogenous cultural forms and manifestations, which cannot be the case in multicultural notions/approaches, and only partially in intercultural notions/approaches. At this juncture, the hint remains that cultural contexts can also be examined using the figure of the Continuum, which is mainly used to further develop debates around transculturality (Baltes-Löhr, 2018c; 2016). As referring to the gender discourse, notions of homogenous genders effect exclusions and naturalizations, if, for example, the notion is adopted that a human body part, as the penis or the vagina, determine a person's gender identity comprehensively and for their whole life; but let us return to the dimensions of the figure of the Continuum.

The social and sexual dimension of the continuum related to behavior and desire. On the level of the gender-related behavior, numerous variations can become manifest, so that the spectrum ranges from emotional, passive, active, empathetic, hard, soft, strong, connected to nature and culture, related to the body, intellectual, dependent, autonomous, capable of relationships, incapable of relationships, etc. for all known and until the very moment unknown genders (Baltes-Löhr, 2018a). The horizontal shape is also displayed on the level of the sexual dimension of the Continuum: sexuality, sexual desire, and sexual orientation. The well-trodden matrix of binary heterosexuality that locates sexual desire between men and women has been overtaken or overridden by existing pluralities. In addition to heterosexual orientations and structures of desire, monosexual, asexual, bisexual, homosexual, and pansexual desire manifests itself (Baltes-Löhr, 2018a).

For all four dimensions, we can note that, for those persons who have been assigned to a certain gender group or assign themselves to a certain gender group, there are no unambiguities that are true for everyone. As shown in “What we are speaking about when we are speaking about gender”, all four dimensions

(corporal/biological, psychological/experienced, social/behavioral, and the sexual dimension) can no longer be depicted by a binary, antagonistic, dichotomous, and heteronormative matrix.

Horizontal and Vertical Shapes of the Continuum

With the horizontal shape of the continuum, the variations within one of the four dimensions can be analyzed. Distinct from this is the vertical shape of the Continuum, which signifies the interwovenness and the interactions between the dimensions, with all the resulting variations. Transitions between the physical, psychological, social, and sexual dimensions are to be understood as porous and permeable.

Every gender “female”, “male”, “trans”, and “inter” as well as hitherto unknown and unnamed genders consists of the four dimensions—physical, psychological, social, and sexual or: body, feeling, behavior, and desire. The transitions within each of the four dimensions are fluid, which is to be understood as the horizontal shape of the continuum, or as intradimensional variability. The relation of the four dimensions of gender to one another is likewise not clearly definable, which is to be regarded as the vertical shape of the continuum, or as interdimensional variability.

Table 1

Tabular Overview of “Gender as a Continuum”

Figure of the Continuum			
Sex/Gender			
Transity	Interity	Masculinity	Femininity
Dimensions		Examples	
Physical/corporeality/matter	Biological gender; sex Examples: Ambiguous attribution of physical traits to ONE gender		
Psychological/feeling/experience	Experienced gender; gender identity Examples: Self-assignment ≠ assignment by others; Situationaly variant: assignment of a gender at birth ≠ self-assignment		
Social/behavior	Social gender; gender; gender-appropriate behavior Examples: Girls/women and boys/men do not behave according to the stereotypes ascribed to these to genders; Trans and inter persons likewise do not behave according to binary stereotypes		
Sexual/desire	Sexuality; sexual desire; sexual orientation Examples: Sexual orientations and sexual practices, as well as social relationships based on them, cannot be described within the patterns of a heterosexual structure of desire		
Boundaries and unambiguities shift within the respective dimensions (horizontal, intradimensional variability) between the respective dimensions (vertical, interdimensional variability)			
Polypolarities Positionings of genders can exist beyond the two poles of “femininity” and “masculinity” Within one gender category, one or another dimension, at a specific point in time, in a specific situation and/or in a specific cultural context, may become more or less relevant			
Diachronic, biographical and cultural variabilities and polypolarities The complexity of gender as a continuum may vary depending on personal age and contemporary history, as well as on cultural settings			
Gender as a continuum is always embedded in an intersectional perspective of importance are age, cultural/ethnic origin, socio-economic status, social environment, religious and political convictions			
Gender as a continuum conduces the depiction and analysis of lived and experienced pluralities of gender			

Lasting and Powerful Stereotyping in the Field of Gender and Migration

If there are still powerful stereotypings to be described regarding “femininity”, “masculinity”, “transity”, and “interity” (Baltes-Löhr, 2018a), then the gender world often seems very binary in everyday life, but also in greater social contexts, in economy and the workplace, science and research, education and learning, as well as concerning political participation.

On summer vacation in 2018 on the island of Rhodes, Greece, the 73-year-old landlady told one of her so-called female guests (both are smokers), that the guest should also start smoking slim cigarettes, as other cigarettes from Marlboro, Lucky Strike, Camel, etc. were men’s cigarettes, after all. Slim cigarettes, she said, were made for the hands of women, of ladies. The landlady’s reaction to the guest’s answer that she, the guest, who kept smoking her “men’s cigarettes” with undeterred gusto, was not really a lady, was mild confusion and irritation; however, this did not prevent either of them from the continued enjoyment of their smoking.

Toy stores and catalogues are still separated into girls’ and boys’ sections; however, girls’ access to so-called boys’ toys has become more of a normality than a boy picking up a doll from the so-called girls’ section. A tendency which can also be found in the order of clothes in the western European and Anglo-Saxon area, where pants for women have been advanced as a normal piece of clothing, whereas skirts and dresses for men have remained a rarity, if one discounts the Scottish kilt as well as the robes of catholic priests and monks, such as the Franciscans. In the aspect of color, the worlds of babies and children are also still, or even increasingly, ordered in a strict binary fashion: Boys wear blue, while girls wear pink. And still, a gender policy is necessary in order to increase the percentage of women in councils and committees, leading positions in economics, science, and politics. If gender policies are still mainly concerned with the equal presence of women and men, then questions of the representation of trans and intersex persons frequently remain unanswered.

Stereotyping notions have also again become increasingly virulent in the area of migration and refuge, as the debates especially in 2015 in Europe, but also in the US with the election of DT as the president of the United States, have shown. People become, on the grounds of their—arbitrary—place of birth and the need to leave it, migrants, refugees, people in exile, who are allowed access to other living environments—or not. A stark and sharp “you” and “we” is employed; causes of flight are recognized, or not; people who arrive in a member state of the European Union after fleeing from, for example, war, persecution, hunger, or poverty, are granted the right of residence or not; people who, for example, are not granted asylum in Germany are deported to their countries of origin, if the safety of the deported is not considered threatened in the country of origin. Currently, there has been some discussion in Germany whether Afghanistan, for example, can be considered as a safe destination for those deported there (Pro Asyl, 2018).

The location of their birth, national affiliation, and administrative proceedings determine whether a person can live in a place they choose or not. *The Human Rights Act* establishes in Article 13 the right of every person to leave their so-called native country or country of origin;⁶ however, the right to admission to a country of one’s choosing is missing. According to the *Geneva Refugee Convention* (UNHCR, n.y.), refugees fleeing from war or persecution have a right to asylum in the country of their arrival. With the so-called Dublin II Treaty, the European Union (Cieschinger, 2015) has found an arrangement in which persons who arrive in a safe country can/must apply for asylum. The freedom of the Schengen area is not granted to persons whose application for asylum has not yet been decided on. In addition, persons who have applied for asylum do not have the right to

⁶ Universal Declaration of Human Rights, <http://www.un.org/en/universal-declaration-human-rights/>

work as long as the decision progress on their application continues. As so-called “strangers” they are often rejected, ostracized, and experienced as a threat by parts of the population. In the European Union, a debate around the admission of refugees has arisen, which has led to equally heated debates in the individual member states of the EU about integration, ostracism and democratic basic, and human rights. In Germany, the number of negative decisions on application for asylum, as well as the number of deportations also to supposedly safe countries of origin, have changed from 10,844 persons in 2014 to 23,966 persons in 2017 (Pro Asyl, 2018b).

According to United Nations High Commissioner for Refugees (UNHCR), there were 68.5 million refugees in the world in 2017; 85% of refugees were living in third-world countries;⁷ in 2016, according to the International Organization of Migration (IOM), 5,079 men, women, and children died while fleeing to Europe across the Mediterranean Sea (Frankfurter Allgemeine Zeitung, 2017). According to Pro Asyl, only 3% of refugees worldwide arrived in Europe. In 2016, Germany registered 321,371 newly arrived refugees, 65% of which were from Syria (89,161), Afghanistan (48,622), Iraq (45,091), and Eritrea (12,291) (Klößner, 2018). If in 2016, the total population of Germany was, according to the Federal Agency for Statistics, 82.52 million,⁸ then the number of newly registered refugees constitutes a percentage of 0.39% as compared to the total population. Thus, it becomes clear that the heated debates in countries, such as Germany about the topics of asylum, migration, right of residence, and integration are being used by persons and political groups that are oriented towards nationalism in order to deepen the binarities of the “us—you”, the “we/our own—the others”, the “being recognized—being denied”, the “domestic—foreign”, the “familiar—strange”, the “integrated—marginalized”, the “native —migrant”, and to incite them not only with attacks on a verbal level.

The question arises how migration can be conceived of in a way that allows thinking differently about binarities and polarities. To this end, the figure of the Continuum will be discussed as a possible framework.

Migration as a Continuum

Until the beginning of the 21st century, the following dualistic perspective was prevalent in migration theory and research (Baltes-Löhr, 2006): Settledness was connoted with the country of arrival, center, within, a relaxed societal situation, recognition, belonging, integration, non-migrant, we, and immigration. On the opposing side, migration was connected with the country of origin, periphery, outside, a tense societal situation, strangeness, exclusion, segregation, migrant, the others, and emigration. The so-called natives and the so-called migrants were assigned certain belongings, behaviors, and identities.

This article considers migration as forms of continuous movement, contacts, and encounters. All of these forms respectively have an effect on the experience, thoughts, and actions of migrating as well as non-migrating persons, on the respective systems of representation of social orders, on political decision-makers as well as political entities, which attempt to regulate migratory movements on a national and an international level.⁹

However, migration as a Continuum (Baltes-Löhr, 2016a; 2018c) did not only apply to the different forms of migratory movement, as discussed at a later point, but also places migration into a new, non-binary relation to so-called settledness.

The Four Dimensions of Migration as a Continuum

⁷ Uno-Flüchtlingshilfe, <https://www.uno-fluechtlingshilfe.de/fluechtlinge/zahlen-fakten/>

⁸ https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/Bevoelkerungsstand/Tabellen/_lrbev01.html

⁹ A.a.O., S. 81f.

The four dimensions of the Continuum, as applied to migration, mean in the physical dimension the question of forms of migration, in the psychological dimension the question of migratory identities, the social dimension is concerned with social significances of migration processes, as well as with self-attribution and attribution by others, as well as the behavior of migrants, and the sexual dimension, which is in this context more relevant as the dimension of desire, focuses on the aims of migration as well as reasons and decisions for migratory movements.

The physical dimension and polypolarity. In the physical dimension, migrations can be distinguished by distance covered, into intercontinental, international, domestic, regional, and urban migrations. Migration movements can commence from A to B to C, etc., as movements of, for example, commuters or circulation, temporary migrants, and not least, as movements of travel and exploration as well as those of flight. Immigration, emigration, and re-migration can be described as one-way, two-way, and three-way, as multiple migrations. Multilocal star-migrations, plurilocal migrations with or without a center of multiple returns, or with multiple centers, can be considered polypolar migrations.

Regarding the polypolarity of migration as a Continuum, one might suggest that the migrants themselves and/or the societal and social environment stylize different forms of migration into powerful poles. Thus, the current debate about refuge in Europe, which, as hinted above, comprises only a very small percentage of all refugees worldwide, can be considered a dramatization. Necessary labor migration, however, in connection with the increasingly urgent questions for the solution to the shortage of skilled labor, e.g., in the medical field and especially in German hospitals and senior care facilities, are more and more neglected.

If many migration theories still take a person's residence as the basis for the question of their belonging to migration or settledness, then considering ever-increasing mobility, we can speak of a polyhome-practice for an increasing number of people at some point in their lives. This means that they, for whatever reasons, possess more than one residence and commute between the residences with more or less frequency. Thus, an increasing number of people can and/or want to remain at the location of their birth for their whole life, spend their lives as border crossers or commuters, or have two or more places of residence simultaneously.

Additionally, migration and non-migration cannot always be clearly distinguished. The question of when migration processes can be considered completed cannot be answered conclusively, which is apparent in models, such as circular migration. When does a migrant stop being a migrant? If they turn from an emigrant into an immigrant upon crossing the border, then the question arises when a person who remains in their country and society of arrival cannot be called a migrant any longer.

The psychological dimension and the belonging in heterogeneity cultures and networks. The psychological dimension of migration as a Continuum contains the practice of denomination of which persons are considered migrants, who considers or calls themselves a migrant. Referring to Glick Schiller, "migrants more and more tend to create networks, activities and patterns of life which comprise the guest society as well as those of their home countries" (Kimmich & Schahadat, 2012, p. 14). However, migrants can also belong to more than two cultures. The formation of networks for and by migrants connected to this is more frequently being viewed as an advantage, for example, in comparison to so-called settled persons whose limited mobility, for the most part, has not taken them out of the boundaries of their own town or city, and who often do not have contact with persons in their social circles who migrate throughout the world, or who are connected to migrants around the world. Glick Schiller writes of circulating networks of migrants, who continuously move between the countries of origin and arrival; however, it should be added that more than two countries can be involved

here and that these circulating networks can span, for example, the island of Rhodes in Greece, Australia, Canada, and Germany. Meaning can also be attributed to those persons who live in border regions as so-called transmigrants and who, according to Glick Schiller, can develop multiple, diverse relationships between so-called transmigrants and so-called residents, wherever the latter might be from themselves. Menzel and Engel, facing the increasingly complexity of migratory trajectories, speak of transnational forms of existence, (Schönhuth & Kaiser, 2015), which can be captured by using the figure of the Continuum and by including the large variety of the different forms.

The question about the relation between center and periphery can be explored anew, as well. If great thinkers, such as Immanuel Kant and literates like Diderot (Zitelmann, 2009)¹⁰ can, over the course of their lives, be considered spatially “immobile”, then the question of the connection between urbanity, mobility, and creativity needs to be re-examined. Is it not exactly the seclusion of the so-called provinces from the hectic of the metropolis, from the mobility and the networks, which configure and shift faster and faster, that can lead to a potentially improving scientific perception? Gumbrecht (2017, p. 19), University of Stanford, wrote:

That is exactly what they need, the young students say, who are advancing the efficiency of Artificial Intelligence with their program-writing: that quiet, that trust and that serenity, which allow their intuitions to always be one creative step ahead of learned methods and their own rational control.

Cultures of, for example, the countries of origin and arrival are no longer to be considered homogenous entities. In the countries of origin as well as those of arrival, one has to assume heterogenous and multidimensional cultural settings, which can be bundled according to factors, such as economic status, age, physical constitution, gender, social environment, political and religious beliefs, and educational status (Crenshaw, 1991; Knapp, 2005).¹¹ Thus, thought on a vertical axis, cultural settings can vary drastically depending on educational status within a nation state; and on a horizontal axis, there might be more similarities than differences, for example, between the educational elite of a nation state and that of a different nation state. Thus, we can say that, for one, the attribution of the status of “migrant” can vary depending on the socio-political and cultural setting, and can be perceived in a myriad different ways within the population. If, for example, the Grand Duchess of Luxembourg, Son Altesse Royale la Grande-Duchesse Maria Teresa, of Cuban heritage, then Luxembourgian students will, in seminars about the topic of “Heterogeneity”, in 99% of cases not remember the answer to the question “Which Luxembourgian person of migratory heritage that all of you know can you think of?” When afterwards the name of the Grand-Duchess is mentioned, the students quickly realize that the connotation of “Grand Duchess Maria Theresa” and “migrant” is uncommon, even though everyone knows that she is of Cuban heritage. The question arises why, in royal families, the men and women from abroad who marry into the family are under no circumstances called “migrants”. So far, we know of no treatise with the imagined title “Princess Elizabeth Charlotte, Migrant at the Court of Louis XIV in France”, even though, in her 3,000 surviving letters, she also writes of experiences of estrangement at the French court (Kiesel, 1995).

The psychological dimension of migration can thus also describe the accord and discord between self-attribution and external attribution of migrating persons.

One may also observe how, through the perpetuation of the term of migration of the first, second, third,

¹⁰ In his lecture on Diderot’s “Rameau’s Nephew”, held at the University of Luxembourg on June 6, 2017, Hans Ulrich Gumbrecht pointed out Diderot’s short range of personal mobility.

¹¹ Gudrun-Axeli Knapp referring to Kimberlé Crenshaw, who shows the interconnection between the sections gender, race and class evaluating US court decisions.

and further generation, the exact opposite of an abolition of the attribution of “migrant” seems to take place. Even in the fourth generation, people are still referred back to their so-called migratory background. Here, a diversity of belonging can be observed, if, for example, a child with four grandparents of Polish, German, Spanish, and Luxembourgian origin grows up with their parents in Luxembourg and identifies themselves as a Luxembourgian; in this case, the answer to the question of the child’s belonging to a certain migrant generation will be difficult to parse. Is this child then a child with a migratory background? And who does such a denomination serve?

The social dimension and the dimension of desire. The social dimension of migration as a Continuum is concerned with the supposedly specific behavior of migrants. What qualities, what configurations of behavior are attributed to migrants, and which do they attribute to themselves? Which societal and social aspects are connected to migration, to migratory forms of existence? Is migration perceived as enrichment, or as a threat? In what way is migration being connected to strangeness and otherness? Which significance do integration, social cohesion, exclusion, and stigmatization have when it comes to migratory movements? Is migration being viewed as an exceptional necessity, as an exceptional phenomenon or, just as settledness, as a normality of human existence?

In the fourth dimension of the Continuum, the dimension of desire, migration as a Continuum is not concerned with sexual desire, but with the choice of migratory aims and reasons. Phrased differently, it is concerned with the question of how and from where the desire to migrate is sustained. What roles do one’s desire for adventure, the wish for an improvement of one’s economic situation, the intention to study and receive education in another country, love and partnership, flight from war, persecution, and natural events that are perceived as dangerous, and are increasingly caused by humans, play here?

All of these four dimensions have in common that they cannot be clearly distinguished from one another. On the horizontal level of the Continuum, manifold forms of migration, diverse, and interconnected manifestations of migratory identities, social forms of behavior and reasons for as well as aims of migratory movements can be analyzed.

Here, as well, the sentence applies: Everything is connected to everything.

Horizontal and Vertical Shifts: Superpositions/Overlays

On a horizontal level, intracategorical shifts can be perceived: Various differences can be observed in so-called migrants from, for example, Portugal to Luxembourg. The migrant form does not exist, and nor does the Portuguese or the Luxembourger. Migration is to be conceived of as variable on a biographical as well as a diachronic axis. Migratory situations are constructed completely differently for children and young person that for adults or old persons, which can be understood as variability of migration within the span of a biographical life. Migration is variable on a time-historical axis as well, since different notions of what constitutes migration are virulent in different historical epochs. And not least, different forms of movement are considered migration, or not, depending on different cultural contexts.

On a vertical level of the Continuum, between the separate dimensions, there are countless possible forms and manifestations of connections between forms of migration, migratory identities, social behaviors, reasons for, and aims of migration that were attributed to the migrants by themselves or someone else. Thus, a migrant who, for example, has been traveling from Spain to the German vineyards at the Rhine or the Mosel for 15 years as a seasonal agricultural worker during the summer months, might not feel like a migrant at all, feel

integrated, recognized, and welcomed in the familiar work environment, might aim the desire to move at the always same target, and cite the economic improvement of their personal situation as the reason for their seasonal work.

In summary, we can observe a variety of forms of migration, migratory movements and reasons for migration, as well as a variety of forms of belonging and attributions to, for example, an ethnic group, oftentimes independently of whether one is living in the place in which a certain ethnic group is indigenous and strongly represented, which is described with the term diaspora (Mayer, 2005). The notion of plurality as a pattern of existence is increasingly significant both for the category of gender and the category of migration. Just as we cannot speak of the woman, the man, the intersex or the trans person, we also cannot speak of the migrant, the feeling of belonging, the reason for migration, or the migratory behavior.

Table 2

Tabular Overview of “Migration as a Continuum”

Figure of the Continuum: Migration	
Dimensions	Examples
Physical/matter	Forms of movements Examples: Movement between places with longer or shorter periods of settlement and longer or shorter distances between the places, Emigration, Immigration, Re-migration, circular star-migration with or without a center, temporary, seasonal migration, voluntary migration, forced migration, exile, displacement, flight. The differentiation between human beings on the move and settled human beings is ambiguous.
Psychological/feeling/experience	Experienced migration; migratory identity Examples: Self-assignment ≠ assignment by others; feeling of being integrated does not necessarily depend on being a migrant or a native in a given national state/society; feeling of being considered as migrant by others can depending on situations and biographical periods
Social/behavior	Migration-related and/or appropriate behavior Examples: Migrants do not behave according to the stereotypes ascribed to these related to their status as migrants; they do not behave according to binary stereotypes.
Desire	Reasons for migration Examples: Variation of reasons for migration: Flying dangerous situations, looking for a better life in peace and dignity, following a family member, love, education, work, adventurousness.
Boundaries and unambiguities shift within the respective dimensions (horizontal, intradimensional variability) between the respective dimensions (vertical, interdimensional variability)	
Polypolarities Positionings of human beings on the move can exist beyond the two poles of “migration” and “settledness”. Within different forms of movement, one or another dimension, at a specific point in time, in a specific situation and/or in a specific cultural context, may become more or less relevant	
Diachronic, biographical and cultural variabilities and polypolarities The complexity of migration as a continuum may vary depending on personal age and contemporary history, as well as on cultural settings	
Migration as a continuum is always embedded in an intersectional perspective Of importance are age, cultural/ethnic origin, socio-economic status, social environment, religious and political convictions	
Migration as a continuum conduces the depiction and analysis of lived and experienced pluralities of forms, feelings, behavior and desire to migrate	

Conclusion/Outlook: The Figure of the Continuum as One Starting point for a New, a Broader Humanism

Can humans not simply be viewed as humans? If stateless persons are those who are denied a documented right of (permanent) residence due to their non-existent belonging to a nation-state, and who thus depend even more on supranational agreements like declarations of human rights, then one might view persons who do not attribute themselves to any of the existing genders and are to be protected in their existence as analogous to this, as well as all persons with different migratory biographies and genders.

The question of the power of definition remains to be considered in societal orders. Who can decide, with which legitimacy, what constitutes migration, what is recognized as a reason for flight, or as a gender? Who, at what time, is considered a migrant or as belonging to a gender? From when is someone considered settled? What about those who commute between different places of residence, or different genders, or those who want to live as stateless persons or without any attribution of gender? Which behaviors are considered migratory, which as gender-adequate, or not, and by whom? Which reasons for migration are recognized? Which aims for migration and flight remain open, or are closed? Which structures of sexual desire, erotic forms of relationships, are regarded as desirable and open—on the open field of the Continuum?

When persons with or without national affiliations migrate between regions, countries, states, and continents, then the forms of this movement, the attributions of migratory identity, the behavior as migrants, and the reasons for the migration and flight are just as diverse as forms of gender, behavior related to or neutral to gender as well as structures of sexual desire and sexual orientations can be conceived of in all their diversity through the figure of the Continuum, which like quantum logic in physics, leaves room for unforeseen connotations, pluralities, and pluralizations. Thus, quantum logic can describe possibly infinite variations of physical forms, just as the figure of the Continuum can describe human ways of existing in their seemingly endless diversity, and both in physics and in gender theory; binary constructs are being deprived of their limiting power.

The figure of the Continuum can extricate genders from the bipolar order of “femininity—masculinity”. The Continuum no longer moves between these two poles, but goes beyond them. Apparent homogeneities of singular gender groups can, with consideration of the four dimensions of the Continuum, be deconstructed or can find their place as one of many possible manifestations in the diverse canon of genders. In relation to migration, the power of the bipolar, antagonistic, and dichotomous order of migration and settledness is dissolving, just as the two poles “migrant and non-migrant”, or the poles of “integrated—non-integrated migrant” or “strange migrant—familiar native”. In all four dimensions of migration as a Continuum, diverse forms of movement can be considered as transitioning into each other and not clearly defined, just as migratory identities can be observed in their fluidity. Bipolar patterns of integration and segregation, and feelings of belonging or estrangement can no longer be attributed to one specific migratory progress, just as behavior seemingly typical for or specific to migration cannot be attributed to every person who migrates, whatever reasons or compulsions might sustain the desire to leave one place and seek another, to return, to go on.

This contribution was meant to illustrate how the figure of the Continuum can create space for diversity, and how thus seemingly naturally occurring homogenous orders related to gender, but also to migration can be read as an expression of power-political decisions and the passing on of frequently unreflected traditions. The

figure of the Continuum may harbor the chance to open the door for a new, wide, and profound humanism that leaves room for human diversity, the chance to view humans simply as humans who, independent of the coincidental place of their birth, independent of the gender attributed to them by themselves or by others, deserve the unequivocal right to human dignity. Thus, being born a human should be enough to be able to live and also die in humane conditions—all of this in a diverse togetherness in orders that are democratic and constituted in solidarity, on the basis of the actual implementation of the sentence “Human dignity is inviolable” (German: *Die Würde des Menschen ist unantastbar*”).

Thus, plurality could be understood not as a threat but as a potential enrichment and expansion of one’s own individual and social horizon.

In this way, the seemingly infinite creative and innovative possibilities inherent in diversity, in physics as well as in human existences, could be exhausted and human re-become human. Such a new, broader humanism, inter alia based on the figure of the Continuum, would consider the older, still virulent categories of “sex/gender” as well as “migration/migrant” no longer as non-discrete and non-distinctive—a perspective which is also applicable to the concepts of space, culture, time, health, and others by using the figure of the Continuum.

References

- Althusser, L. (1977). *Ideologie und ideologische Staatsapparate (Ideology and ideological apparatuses of state)*. Hamburg/Berlin: VSA.
- Baltes-Löhr, C. (2003). Grenzverschiebungen: Theoriekonzepte zum Begriff “Grenze” (Shifting of borders: concepts of theory for the term “border”). In T. Geisen, & A. Karcher (Eds.), *Grenze: Sozial-politisch-kulturell (Border: social-political-cultural)* (pp. 83-99). Frankfurt/Main, London: IKO-Verlag.
- Baltes-Löhr, C. (2006). *Migration und Identität: Portugiesische Frauen in Luxemburg (Migration and identity: Portuguese women in Luxembourg)*. Frankfurt/Main, London: IKO-Verlag.
- Baltes-Löhr, C. (2016a). Geschlecht als Kontinuum—Pluralität als Existenzmuster (Gender as a continuum—Plurality as pattern of existence). *Studia Universitatis Babeş-Bolyai: Philologia*, 61(4), 21-36.
- Baltes-Löhr, C. (2016b). Die Figur des Kontinuums am Beispiel von Geschlecht und Migration: Ein Erklärungsansatz für Pluralitäten als Existenzmuster (The figure of the continuum exemplified by gender and migration: An approach of explanation to plurality as a pattern of existence). In R. Rădulescu, & C. Baltes-Löhr (Eds.), *Pluralität als Existenzmuster: Interdisziplinäre Perspektiven auf die deutschsprachige Migrationsliteratur (Plurality as a pattern of existence: Interdisciplinary perspectives on German migration literature)* (pp. 9-29). Bielefeld: Transcript.
- Baltes-Löhr, C. (2016c). Geschlecht, Migration und Raum als Kontinuum: Versuch einer Begriffsbestimmung (Gender, migration and space as a continuum: Attempt at a definition). In Departament of Anglo-American and German Studies at “Lucian Blaga” University in Sibiu, Romania (Ed), *Germanistische Beiträge (Contributions to German Studies)*, 39/2016 (pp. 74-98). Sibiu/Hermannstadt: Universitätsverlag.
- Baltes-Löhr, C. (2018a). What are we speaking about when we speak about gender? Gender as a Continuum. *Journal for Cultural and Religious Studies*, 6(1), 1-32.
- Baltes-Löhr, C. (2018b). Immer wieder Geschlecht—immer wieder anders: Versuch einer Begriffserklärung (Always gender—Always different: An attempt at a definition). In E. Schneider, & C. Baltes-Löhr (Eds.), *Normierte Kinder: Effekte der Geschlechternormativität auf Kindheit und Adoleszenz (Normed children: Effects of gender and sex related normativity on childhood and adolescence)* (pp. 17-40). Bielefeld: Transcript.
- Baltes-Löhr, C. (2018c). Geschlecht, Migration, Raum und Kultur—Ausgeleuchtet mit der Figur des Kontinuums (Gender, migration, space and culture – illuminated using the figure of the Continuum). In R. Rădulescu, L. P. Capano, N. Gagliardi, & B. Wilke (Eds.), *Interkulturelle Blicke auf Migrationsbewegungen in alten und neuen Texten (Intercultural perspectives on migratory movements in old and new texts)* (pp. 39-66). Berlin: Frank & Timme.
- Baltes-Löhr, C. (2018d). *Geschlecht als Kontinuum: Zur Pluralität gelebter Realitäten (Gender as a continuum: About the pluralities of experienced realities)*. Bielefeld: Transcript.

- Beckers, M. (2017). *Quantenphysik: Zeitkristalle – bizarre Materie in endloser Schwingung (Quantum Physics: Time Crystals – bizarre matter in infinite vibration)*. Retrieved from <http://www.spektrum.de/news/wie-erzeugt-man-einen-zeitkristall/1440322>
- Bolder, A., Epping, R., Klein, R., Reutter, G., & Seiverth A. (2010). *Neue Lebenslaufregimes—Neue Konzepte der Bildung Erwachsener? (New regimes for resumes – new concepts of adult education?)*. Retrieved from <https://www.springer.com/de/book/9783531173405>
- Bundesregierung, D. (2005). *Themen: Europa, EU-Mitgliedstaaten, EU-Erweiterung, Erweiterung der Europäischen Union (Topics: Europe, EU member states, expansion of the European Union)*. Retrieved from <https://www.bundesregierung.de/Content/DE/StatistischeSeiten/Breg/Europa/Artikel/2005-12-20-europa-dossier-erweiterung-der-europaeischen-union.html>
- Busche, J. (2016). *Werner Heisenberg: Quantentheorie und Philosophie (Werner Heisenberg: Quantum theory and philosophy)*. Stuttgart: Reclam.
- Butler, J. (1993). Für ein sorgfältiges Lesen (For a careful reading). In S. Benhabib et al. (Eds.), *Der Streit um Differenz (Feminist contentions: A philosophical exchange)* (pp. 123-132). Frankfurt/Main: Suhrkamp.
- Cieschinger, A. (2015). *Flüchtlingsbürokratie in Europa. Angekommen—und dann? (Refugee bureaucracy in Europe. Arrived – and then?)*. Retrieved from <http://www.spiegel.de/politik/ausland/fluechtlinge-so-funktioniert-die-dublin-verordnung-a-1029803.html>
- Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43(6), 1241-1299.
- EU-Info. (n.y.). *Deutschland: Schengener Abkommen (Germany: Schengen treaty)*. Retrieved from <http://www.eu-info.de/europa/schengener-abkommen/>
- Frankfurter Allgemeine Zeitung. (2017). *Opferbilanz der UN: Mehr als 5000 Flüchtlinge starben 2016 im Mittelmeer (UN takes stock of victims: more than 5,000 refugees died in the Mediterranean in 2016)*. Retrieved from <http://www.faz.net/aktuell/politik/opferbilanz-der-un-mehr-als-5000-fluechtlinge-starben-2016-im-mittelmeer-14607266.htm> l.
- Gumbrecht, H. U. (2017). *Suburbia! Die Metropolen versprechen Freiheit—Aber die Kreativzonen liegen heute am Stadtrand (Suburbia! Metropolises promise freedom – but the creative zones are in the suburbs now)*. In *Neue Züricher Zeitung*, 6 of July 2017, p. 19.
- Heine, M. (2014). *Was Facebooks Gender-Wahl über unsere Welt verrät (What Facebook's gender choices reveal about our world)*. Retrieved from <https://www.welt.de/kultur/article131905819/Was-Facebooks-Gender-Wahl-ueber-unsere-Welt-verraet.html>
- Henke, W., & Rothe, H. (1998). Biologische Grundlagen der Geschlechtsdifferenzierung (Biological foundations of gender differentiations). In B. Auffermann, & G. C. Weniger (Eds.), *Frauen—Zeiten—Spuren (Women – Times – Traces)* (pp. 43-64). Mettmann: Neanderthal-Museum.
- Hosie, R. (2017). *Transgender man gives birth to healthy baby five years after having first child as a woman*. Retrieved from <https://www.independent.co.uk/life-style/health-and-families/transgender-man-gives-birth-baby-first-child-woman-kaci-sullivan-wisconsin-a8107481.html>
- IFL Science. (n.y.). *Schrödinger's cat: Explained*. Retrieved from <https://www.iflscience.com/physics/schr%C3%B6dinger%E2%80%99s-cat-explained/>
- InKultura Online. (n.y.). *Buchkritik im Internet: Buchkritik-Jörg Starkmuth—Die Entstehung der Realität (Book reviews on the internet: book review – Jörg Starkmuth – The Origins of Reality)*. Retrieved from <http://www.inkultura-online.de/realit.html>
- Kiesel, H. (1995). *Briefe der Liselotte von der Pfalz (Letters of Princess Elizabeth Charlotte)*. Frankfurt/Main: Langewiesche-Brandt Kg.
- Kimmich, D., & Schahadat, S. (2012). *Kulturen in Bewegung: Beiträge zur Theorie und Praxis der Transkulturalität (Cultures in movement: Contributions for the theory and practice of transculturality)*. Bielefeld: Transcript.
- Klößner, M. (2018). *Asyl in Zahlen 2016 (Asylum in numbers 2016)*. Retrieved from <https://www.proasyl.de/hintergrund/asyl-in-zahlen-2016/>
- Knapp, G. A. (2005). Intersectionality—Ein neues Paradigma feministischer Theorie? Zur transatlantischen Reise von “Race, class, gender” (Intersectionality – a new paradigm of feminist theory? About the transatlantic journey of “Race, class, gender”). *Feministische Studien (Feminist studies)*, 1, 68-81.
- Körkel, T. (2017). Wie die Welt tatsächlich ist: Editorial (How the world actually is: Editorial). In *Spektrum der Wissenschaft*

- Highlights: Reise durch das Quantenuniversum (Spectrum of Science highlights: Journey through the quantum universe)* (p. 3). Heidelberg: Spektrum der Wissenschaft Verlagsgesellschaft.
- Lossau, N. (2013). *Alles hängt mit allem zusammen (Everything is connected to everything)*. Retrieved from <https://www.welt.de/print/wams/wissen/article116950871/Alles-haengt-mit-allem-zusammen.html>
- Macho, T. (2011). *Der Wille zur Präsenz (The willingness for presence)*. Retrieved from https://www.nzz.ch/der_wille_zur_praesenz-1.12806762
- Matthew, R. (2017). Manche Schwäne sind grau (Some swans are gray). In *Spektrum der Wissenschaft Highlights: Reise durch das Quantenuniversum (Spectrum of Science highlights: Journey through the quantum universe)* (pp. 78-82). Heidelberg: Spektrum der Wissenschaft Verlagsgesellschaft.
- Mayer, R. (2005). *Diaspora: Eine kritische Begriffserklärung (Diaspora: a critical explanation of the term)*. Bielefeld: Transcript.
- Odenwald, M. (2008). *Frage von Vera Lehmann: Ist Information eine fundamentale Größe? (Question of Vera Lehmann: is information a fundamental item?)*. Retrieved from http://www.focus.de/wissen/weltraum/odenwalds_universum/frage-von-vera-lehmann-ist-information-eine-fundamentale-groesse_aid_332667.html
- Pro Asyl. (2018a). *Fakten, Zahlen, Argumente (Facts, numbers, arguments)*. Retrieved from <https://www.proasyl.de/wp-content/uploads/2016/01/2018-06-Abschiebungen-und-Ausreisen.pdf>
- Pro Asyl. (2018b). *Hinweise für afghanische Flüchtlinge und ihre Berater*innen (Advice for Afghan refugees and their advisors)*. Retrieved from <https://www.proasyl.de/hintergrund/hinweise-fuer-afghanische-fluechtlinge-und-ihre-beraterinnen/>
- REWE TV-Spot. (2018). *Gut für dich: Und deine Region (Good for you: and your region)*. Retrieved from <https://www.youtube.com/watch?v=wuHKpzflRpo>
- Schneider, N. F. (2012). *Pluralisierung der Lebensformen: Mehr Vielfalt und kleinere Haushalte (Pluralization of ways of life: more diversity and smaller households)*. Retrieved from <http://www.bpb.de/politik/grundfragen/deutsche-verhaeltnisse-eine-sozialkunde/138033/pluralisierung-der-lebensformen>
- Schönhuth, M., & Kaiser, M. (2015). Zuhause? Fremd? Eine Bestandsaufnahme (At home? Stranger? A stocktaking). In *Diess.: (Eds.), Zuhause? Fremd? Migrations- und Beheimatungsstrategien zwischen Deutschland und Eurasien (At home? Stranger? Strategies of migration and movement between Europe and Eurasia)* (pp. 9-24). Bielefeld: Transcript.
- Schulz, T. (2015). *Google und NASA präsentieren Quantencomputer (Google and NASA present quantum computers)*. Retrieved from <http://www.spiegel.de/netzwelt/web/google-und-nasa-praesentieren-ihren-quantencomputer-a-1066838.html>
- Sinner, K. (2011). *Transkulturalität versus Multi- und Interkulturalität (Transculturality versus multi- and interculturality)*. Retrieved from <https://www.stadtkulturmagazin.de/2011/03/transkulturalitat-versus-multi-und-interkulturalitat/>
- Spektrum der Wissenschaft Highlights. (2017). *Reise durch das Quantenuniversum (Journey through the quantum universe)*. Heidelberg: Spektrum der Wissenschaft Verlagsgesellschaft.
- Streckeisen, U. (1991). *Statusübergänge im weiblichen Lebenslauf (Transitions of status in the course of the female life)*. Frankfurt/Main and New York: Campus.
- Suhrkamp. (2010). *Announcement of the publication of Hans Ulrich Gumbrecht: Unsere breite Gegenwart (Announcement of the publication of Hans Ulrich Gumbrecht: Our broad present)*. Retrieved from https://www.suhrkamp.de/buecher/unsere_breite_gegenwart-hans_ulrich_gumbrecht_12627.html
- UNHCR. (n.y.). *Die Genfer Flüchtlingskonvention vom 28 Juli 1951 (The Geneva Refugee Commission from July 28 1951)*. Retrieved from <http://www.unhcr.org/dach/de/ueber-uns/unser-mandat/die-genfer-fluechtlingskonvention>
- Weilandt, A., Herold, S., & Ende, A. K. (2013). *Alles hängt mit allem zusammen: Translatologische Interdependenzen (Everything is connected to everything: Translatological interdependences)*. Festschrift für Peter A. Schmitt. Frank & Timme: Berlin.
- Weinelt, H. (2005). *Chronos und Kairos: Die zwei Gesichter der Zeit (Chronos and Kairos: The two faces of time)*. Retrieved from http://www.abenteuer-philosophie.com/artikel/102_artikel1_zeit.pdf
- Welsch, W. (1992). Transkulturalität—Lebensformen nach der Auflösung der Kulturen (Transculturality – Ways of life after the dissolution of cultures). *Information Philosophie (Information philosophy)*, 20, 5-20.
- Woznicki, K. (2010). *Alles hängt mit allem zusammen (Everything is connected to everything)*. Retrieved from <http://berlinergazette.de/alles-haengt-mit-allem-zusammen/>
- Wulf, A. (2017). *Alles hängt mit allem zusammen: Alexander von Humboldts neues Naturverständnis (Everything is connected to everything: Alexander von Humboldt's new understanding of nature)*. Retrieved from <https://www.swr.de/swr2/programm/sendungen/wissen/alexander-von-humboldts-neues-naturverstaendnis/-/id=660374/did=19347790/nid=660374/12qmdo7/index.html>

- Zeilinger, A. (1999). *Physik der Quanteninformation (The physics of quantum information)*. Retrieved from <http://www.sepktrum.de/magazin/physik-der-quanteninformation/825221>
- Zeilinger, A. (2017). Die Wirklichkeit der Quanten (The reality of quanta). In *Spektrum der Wissenschaft Highlights: Reise durch das Quantenuniversum (Spectrum of science highlights: Journey through the quantum universe)* (pp. 30-39). Heidelberg: Spektrum der Wissenschaft Verlagsgesellschaft.
- Zitelmann, A. (2009). *Nur dass ich ein Mensch sei: Die Lebensgeschichte des Immanuel Kant (Only that I am human: The biography of Immanuel Kant)*. Weinheim/ Basel: Beltz & Gelberg.