Disability as bodymind: the contribution of Antonio Damasio to the understanding of disability and the promotion of inclusive organizations

LORENZO FATTORI

University of Valle d'Aosta, Italy

l.fattori@univda.it

DOMENICO NAPOLITANO

Scuola Superiore Meridionale, Italy

d.napolitano@ssmeridionale.it

SILVIO RIPETTA

Scuola Superiore Meridionale, Italy

silvio.ripetta@unina.it

Abstract

The dualistic concept of the human being is a philosophical stance that poses a separation between the mind and the body. It has been widely criticized and revised by recent trends in social sciences, philosophy, and organization studies. Nevertheless, it still tacitly underpins various elements of social organization and sensemaking. The way disability is considered and treated by organizational and institutional policies and practices provides clear examples of the latent dualistic thinking which still persists in this field. In this paper we engage with the dualism present in mainstream understandings and constructions of disability, and propose an approach to overcome this reductionist attitude. This approach refers to and critically revisits Antonio Damasio's line of argument. We argue that Damasio provides thoughtful insights for a rereading of the medical and social model of disability, and can enrich the debate within disability studies and organization studies, in particular with regards to diversity and inclusion.

> *Every man's world picture is and always remains a construct of his mind and cannot be proved to have any other existence.*
>
> (Erwin Schrodinger, *Mind and Matter*)

1.   Introduction

The dualistic concept of the human being, which poses a separation between the mind and the body, has been widely criticized and revised by recent trends in social sciences, philosophy, and organization studies. Nevertheless, it still tacitly underpins various elements of social organization and sensemaking. The way disability is considered and treated by organizational and institutional policies and practices provides clear examples of the latent dualistic thinking which still persists in this field. A reductionist understanding of the self, which considers the mind and body as independent entities, has an impact on assessments of impairment in policies of compensation (usually economic) or reasonable accommodation in workplaces (Marchisio and Curto, 2019). It is very common, in fact, for impairment to be assessed based on measuring bodily or cognitive abilities as separate from both the social environment and the subject's various interactions. In the workplace, a neat distinction is also often made between those who have physical disabilities and mental disabilities, adopting different kinds of accommodations that try to compensate for specific physical or cognitive impairments without intervening in the wider context. After all, it is very common to hear or read sentences such as "although you are blind your mind works normally" (Michalko, 2002). Similarly, when applied to disability, new technologies tend to consider the mind as a piece of software that can be transferred to different 'hardware' (embodied or electronic) once the original hardware wears out: think of the episode of Black Mirror in which a deceased person is reconstructed in the virtual domain based on social network data – nothing less than a contemporary re-enactment of the Christian idea of the superiority of the immortal soul over the mortal body (Napolitano, 2022; Natale and Pasulka, 2018). These kinds of assumptions reduce the complexity of embodiment, perception and thought, reverting to a dualistic approach which proves to be inadequate the moment that we consider impairment as an experience. As Siebers (2008), recalling Haraway (1991), notes, an impaired body entails ownership of a different perspective to know the world through, and consequently entails a different mind. Knowledge or knowing, in fact, is always situated and embodied – it is not only a matter of mind but also of body, positionality, perception, social context, and emotions – in short (recalling one of the main concepts of phenomenology), a matter of lifeworld experience (Merleau-Ponty, 1962). Neglecting the role of culture, language, social context and emotions in shaping experiences and perceptions, this attitude risks reproducing inequality and marginalization for people with disability.

In this paper we engage with the dualism present in mainstream understandings and constructions of disability, and propose an approach to overcome this reductionist attitude. This approach refers to and critically revisits Antonio Damasio's line of argument. We argue that Damasio provides thoughtful insights for a rereading of the medical and social model of disability, and can enrich the debate within disability studies and organization studies, in particular with regards to diversity and inclusion. This field of studies, in fact, has already put the critique of dualism at its centre (see, for example, Abrams, 2015). Similarly, the bio-psycho-

social model of disability adopted by ICF makes a clear point about the necessity of overcoming dualistic thinking when considering disability.

What Damasio's thought can add to the debate is the missing link between a social perspective – addressed to social justice and transformation of the context in which disability is 'constructed' – and a neuroscientific perspective, too often focused exclusively on disability as an individual medical problem.

The article is structured as follows: in section 2, we recall the roots of the dualistic conception of human being, highlighting what it means and implies. In section 3, we present the critiques to the dualistic conception, starting from Antonio Damasio's thinking and conceptual tools; moreover, we review the debate in disability studies where dualistic perspectives are criticized. In section 4 we discuss why Damasio's contribution can add to the debate and improve the bio-psycho-social model of disability and finally, in the Conclusions, we present the possible implication for organization studies.

2.   The context: The dualistic concept of human being

The dualistic concept of the human being sees a rigid separation between body and mind, which also carries within itself a separation between emotion and rationality. The French philosopher Francis Wolff, in his *Notre humanité* (2010), pointed out that such dualism is the legacy of a long-entrenched process present since the dawn of Western culture.

Plato's thought is characterized by the concept of a strong dualism between body and soul. For Plato, the soul is in fact the principle of life and has its own existence; conversely, the body without the soul would just be inanimate matter.

For Aristotle, instead, the human is part of nature but remains distinct from all other beings, and it is firmly placed at the centre of the cosmos because it possesses *logos* (which we can interpret with a vast set of meanings ranging from 'language' to 'reason'): the human is not merely the union of an animal element with a rational element, but a "political animal" (Politics, I; 2013), a compound that only makes sense if taken as a whole. Although Aristotelian thought is fundamental for Christian doctrine (Aquinas, 2007), it is instead Plato's thought that has become, in fact, an archetype.

A similar dualistic conception can be found in the lines of thought of the first thinkers in the Church: see for example Augustine of Hippo, who in *De haeresibus* (1956), written in A.D. 428, attributes the origin of sin not to the free choice of the human being, but to an adverse substance.

The dualistic perspective characterizes much of medieval thought, which strongly condemned physicality, which was seen as the antithesis of the soul and the root of the worst behaviours and temptations. There was a strong religious influence, particularly from monasticism, which saw all the fragility of the human being represented in the flesh (Wolff, 2010).

One of the most important philosophers of modernity, Descartes, also places dualism at the centre of his thought. For the French philosopher, the human being is a soul closely united to a body. In this union a clear scale of values is represented, with the soul located at the top of this scale. The Cartesian concept incorporates the vision of a clear separation between human being and nature: if the process of thinking is what distinguishes the human being,

consciousness is part of the nature of man. However, this consciousness is embedded *within*, and not outside, and therefore (to use Francis Wolff's words) it can "know the rest of nature, since it is not the same nature as the rest of nature" (2010, p. 59, translation by the authors).

This line of thought - the distinction between *res cogitans* and *res extensa* – runs in parallel with the scientific developments of the time: the de-naturalization of the human being is in fact the basis of the desacralization of nature, which in turn constitutes the foundation of a science directed not only at knowing and explaining, but also at changing the world.

According to Elias, this dualistic concept of human being has increasingly shaped the patterns of the self-experience for individuals in almost all Western societies (1987). In human beings, this process has consolidated a representation of ourselves as something that exists as detached and independent from others: in human experience, this means a perception of universal separation of the individual. Moreover, the functions of perceiving, thinking and observing, appeared first of all as 'components 'of man just like the heart, stomach and brain; the act of thinking was thus condensed first into the representation of a "spirit", subsequently as "intellect" and eventually "reason" (Elias, 1987). Even Nietzsche, in his 1887's work *Zur Genealogie der Moral*, takes up the thread of a discourse that places the intellect as an artifice of man aimed at compensating for an imbalance of strength. Not surprisingly, he attributes the birth of the intellect precisely to the priesthood, which needed to compensate for the imbalance of strength within the chivalric class: nature, therefore, was connected to physical strength, while the intellect became something unnatural (1998).

The dualistic conception constitutes the premise for the development of scientific positivism, a model that presupposes 'rationality,' 'objectivity,' and the exclusion from the field of science of everything that cannot be confirmed through observation (Ayer, 1940; Nicholson, 1996).

3.   The critiques: Towards a holistic conception of bodymind

3.1.   Damasio's neuroscientific research: between emotions, reasoning and decisions

The dualistic conception of the human being has been challenged by the developments of neuroscientific research, and by the work of Antonio Damasio, a neuroscientist whose primary field of study is neurobiology. He studied with Norman Geschwind, pioneer of behavioural neurology, an area of study that deals with the effects of brain damage on behaviour (Damasio and Geschwind, 1984).

Damasio's neuroscientific research work was first outlined in *Descartes' Error* (1994), in which he goes beyond the ancient hierarchy between rationality and emotions to provide a more articulated vision of decision-making processes.

Damasio conducted his research on patients affected by damage to the prefrontal area of the brain, causing their condition of "acquired impairment" (p. 83). His starting point is the famous case of Phineas Gage, a patient who reported a drastic change in personality after suffering a serious lesion of this type. Gage and other patients with similar or comparable lesions, later studied by Damasio, all showed personality changes leading to an inability to make decisions for themselves, stolid detachment from their own state, or unusual resistance to pain.

Further research on brain damage showed that, contrary to what was previously believed, lesions in areas conventionally considered to be responsible for emotions also had an impact

on patients' ability to reason and vice versa, hence the personality changes seen in Gage and other individuals who had suffered similar non-lethal injuries.

Starting from this point, Damasio conceptualized the mind-brain complex as an indissoluble organism that interacts with the environment generating external and internal responses: the former constitute the behaviour, the latter the representations that guide decisions.

Furthermore, in *Descartes' Error* Damasio explained his somatic marker hypothesis and its implications. In this theory, emotion is no longer considered as an obstacle to the reasoning process, but is recognized as an indispensable part of it, with a mechanism of rapid cognition in which the necessary elements of knowledge are involved in a non-explicit way. Damasio explains:

> When the bad outcome connected with a given response option comes into mind, however fleetingly, you experience an unpleasant gut feeling. Because the feeling is about the body, I gave the phenomenon the technical term *somatic* state ("soma" is Greek for body); and because its "marks" an image, I called it a *marker*. Note again that I use *somatic* in the most general sense (that which pertains to the body) and I include both visceral and non-visceral sensation when I refer to somatic markers (p. 173).

The author identifies emotions as changes in body state corresponding to a specific brain system activated by mental representations; so, the marker is somatic because the emotion is expressed through a bodily sensation and acts as an alarm signal that highlights the danger associated with the choice of a specific course of action.

The reference to *soma* in somatic marker hypothesis is a key concept: generally, human beings have handled the contrast between reason and emotion with a constant call to the body, identifying its referents respectively in the head and heart, with the two concepts connected to an *above* (rationality) and a *below* (emotion), incorporating a clear connotation of values (Cian, Krishna and Schwarz, 2015). Damasio's work, instead, challenges this hierarchical view - while it questions emotion-reason dualism, at the same time it also opposes mind-body dualism.

Indeed, as Damasio points out, his work allows us to adopt a new viewpoint, through which it emerges that the concept of mind indicates the structural and functional whole of the organism formed of body and brain, which relates as one with the surrounding environment. Damasio highlights that this same environment, at least in part, is a product of the activity of that organism, demonstrating a theoretical position compatible with constructivism (p. 225).

Therefore, the 'Descartes' error' referred to in the title is the idea that thought and reason are what make us human as opposed to bodily elements like emotions and instincts, or "the abyssal separation between body and mind" (p. 249).

Damasio criticizes this view, also recognizing that the understanding of culture and civilization, far from reducing social phenomena to biological phenomena, "demands not just general biology and neurobiology but the methodologies of the social sciences as well" (p. 124).

Also in his second essay, *The Feeling of What Happens* (2000), Damasio continues the reflections begun in *Descartes' Error*, arguing that emotion and consciousness are strictly interdependent phenomena, to the point that one cannot study one without coming across the other. In this work, Damasio again remarks that the mind and the body are inextricably linked aspects of a

single evolutionary physiological process. The separation of mind and body appears as the legacy of Cartesian philosophy.

Moving from Damasio's work, we can consider the dualistic concept of the human being is a reductionist understanding of the self as it neglects the role of culture, language, and social context in shaping our experiences and perceptions. Mind and body, instead, are not independent entities, but they are interconnected and constructed through social interactions.

Additionally, if knowledge is not simply discovered, but rather actively constructed through social interactions, the idea of a solitary, independent mind able to gain knowledge through reason alone, as Descartes proposed, is also highly questionable.

3.2.   The critique of disability studies

The dualistic concept has been widely critiqued in contemporary philosophy, especially phenomenology (Merleau-Ponty, 1962; Merleau-Ponty, 1963), post-structuralism (Deleuze, 1968) and feminist thought (Haraway, 1991). Phenomenology studies has outlined that embodiment is the condition of lived experience and that, accordingly, intentionality and rationality belong to an embodied subjectivity. Post-structuralism has underlined the social and material forces that produce the subject, both in its bodily and cognitive structures, thus denaturalizing rationality. Feminist thought has pointed out that knowledge is always situated, and is therefore not a pure cognitive act, but something related to the local perspective of the embodied subject and its specific way of perceiving, navigating and acting in the world, also in light of the socio-historical conditions of oppression or marginalization that characterize certain groups.

Taking inspiration from these perspectives, disability studies has developed several critiques of the dualistic concept of the human being. This critique is, for disability activists, more than a conceptual exercise, as dualism is one of the main ways through which an ideology of ability perpetuates and reproduces itself in contemporary societies (Siebers, 2008). Therefore, fighting dualism is an emancipatory practice for disability studies activists (Mercer, 2004) and a way to overcome marginalization and oppression.

Following this line, phenomenological disability studies have used the work of Maurice Merleau-Ponty (1962, 1963) to emphasize the centrality of the lived body in human life and to denounce a latent dualism also present in the so-called "social model of disability". The social model proposed by Oliver (1996) considers disability not as an individual defect but as a condition of oppression deriving from a social organization which doesn't consider the needs of people with impairments. Since the early part of twentieth century, scholars have made several attempts to establish a theoretical model of disability. In order of appearance in the debate, the main theoretical models of disability have been: the individual medical model, the social model, and the bio-psycho-social model. It also should be underlined that there have not been successive substitutions between these three major models, but rather a complex cohabitation, both in scientific debate and in the design of national social policies. As Siebers (2008, p. 54) summarizes:

> The medical model situates disability exclusively in individual bodies and strives to cure
> them by treatment, isolating the patient as diseased or defective, while social

> constructionism makes it possible to see disability as the effect of an environment hostile
> to some bodies and not to others, requiring advances in social justice rather than medicine.

The medical model has been criticized within disability studies, especially because it assimilates disability with impairment, or even considers it as a disease. In this way, the medical model is focused only on the individual condition, while overlooking the societal elements of discrimination that turn individual impairments into disabling conditions (Shakespeare, 2006; Siebers, 2008). Whilst being a crucial element in recognizing disability as not merely an individual medical matter, the social model maintains a neat separation between 'impairment' and 'disability', where the first term indicates a physical condition and the second a social condition. Hughes and Paterson (1997) argue that, in doing so, the social model underestimates the importance of the embodied existence, giving prominence to social organization. From their perspective, this way of reasoning is still ascribable to a kind of dualism in which physical and mental/spiritual/social aspects are separated, with the latter receiving greater consideration than the former. In their view, the social model, while denouncing the oppression of people with disability, cannot account for the lived and embodied experience of prejudice, oppression, and discrimination, reducing these to abstract categories. To challenge this approach, they propose a "carnal politics of impairment" (Paterson and Hughes, 1999), which considers the disabled body in everyday routine practice, including the ways in which that body is made to 'disappear' because of regimes of concealment in institutions, representations, and discourses.

In a similar way, Turner (2001) undertakes a critique of the Cartesian dualism of mind and body to situate the sociology of the body at the centre of disability debates. Turner's critique of Cartesian dualism does not simply concern the absence of the body, but the absence of embodiment: too often, in fact, discourses aimed at overcoming dualism affirm the importance of the body; but nevertheless, consider it only in biological and organic terms and not as lived experience.

More radically, Abrams (2015) tries to overcome Cartesian dualism by getting rid of the very concepts of mind and body as descriptors of embodied human existence. He underlines how the emancipatory potential of the social model relies on a dualistic principle: even if our bodies are excluded from the everyday life-world, our souls are not. In this argument, the body of physical disability is an ideal type, rather than a lived condition. Similarly, also the mind, in this kind of reasoning, is an abstract idea. Basing discourses about disability on such ideal types assumes a 'substance ontology' which considers both body and mind as static, objective, and normative categories. Abrams counteracts this approach, adopting the perspective of a relational ontology in which body and mind are not assumed as such but are themselves the result of being-in-the-world (Heidegger, 1996), the result of social and historical processes. This idea also has an impact on discourses about the rights of people with disability: personhood, whether disabled or otherwise, is a product of the interaction order (Goffman, 1983) - a socio-material outcome rather than a naturalized, ahistorical and pre-social state of affairs as realized in rational subjectivity (Abrams, 2015).

Following a line of argument inspired by political phenomenology and media studies, Sterne (2021) has noted that the classic concept of impairment risks falling into the metaphysical idea of the "able" subject, that is a subject which is not intrinsically connected and defined by the body, its mechanisms, and its prosthesis. At this regard, Sterne notes that most of the discourses about the rights of people with disabilities, also shared by the social

model, assume the individual as a whole, as an abstract subjectivity rather than as a relational entity which is defined by the body and its malfunctioning, as well as by the prosthesis and technical devices adopted to compensate for impairments. From this perspective, he proposes a political phenomenology of impairment which goes beyond abstract ideas of ability and disability and considers the technosocial and human-machine assemblages which characterize the embodied condition of people with disability.

Moving beyond body/mind dualism, authors in disability studies have highlighted that the disabled body and mind produces a different epistemology to the established one – the historic expression of able-bodiedness. Rosemarie Garland-Thomson (2017: 56) has talked of disability as an epistemic resource, because "our bodily form, function, comportment, perceptual apprehension, and way of mind shape how we understand the world". Recalling Haraway's (1988) concept of situated knowledge, Siebers (2008) has highlighted that those different dispositions of the body determine different perspectives and different ways of knowing the world, as those of disabled people do. In what he calls "complex embodiment", he theorizes the body and its representations as mutually transformative: while social representations affect the experience of the body, usually in forms of stigma and subjugation, experiences such as pain, constraint and diminished faculties can challenge social representations and create new cultural identities. For Siebers, disability is a minority identity precisely because, starting from the consideration of diversity and oppression, it creates an epistemology different from the established one.

Drawing on feminist thought, authors such as McRuer (2006) and Kafer (2013), have also highlighted the dualism inherent in the very term "disability", as opposed to ability. This contested word, in fact, recalls the idea of a loss of ability and reproduces an "ideology of ability" (Siebers, 2008: 8): the assumption of an original, untouched condition of ability and perfection, subsequently corrupted by disability. To escape such a trap, McRuer (2006) suggests adopting the term "crip" which, although provocative to many, better expresses the dimension of struggle specific to disability identity, including its contradictions. Along this line, Kafer (2013) recognizes the intersectionality between disability and other minority groups related to gender, race and class, and proposes a political-relational model which is not focused on the bodily aspects but rather on the entanglement of personal, social, economic, aesthetic and discursive factors which determine marginalization. Adopting a post-humanist perspective, Goodley (2014) has proposed the term "dis/ability" to emphasize the co-dependence of ableism and disablism within neoliberal capitalism, thus inviting a wider socio-political rethinking to overcome the many forms of dualism inherent in discourses about disability.

All these positions critically engage with Cartesian dualism, especially as they challenge its conception of the body. Rather than considering the body as purely organic and material, these criticisms invite to recognizing it as the source of lived experience, as well as the product of historically constructed meanings and attitudes. This perspective is thus critical towards both the medical and the social model of disability, as they share the same organicist vision of the body. This range of arguments has brought authors in critical studies to theorize the concept of *bodymind* to indicate the interdependence and inseparability of the body and mind and the interrelatedness of mental and physical processes (Price, 2014; Schalk, 2018). Schalk (2018) explicitly connects this concept to a need of overcoming Cartesian dualism. The concept of bodymind, in fact, reflects a holistic understanding of the human experience, emphasizing the interconnectedness of the physical body and the mind. Rather than treating the body and mind

as separate entities, the bodymind paradigm suggests that they function as an integrated whole. As Price (2014: 269) argues: "mental and physical processes not only affect each other but also give rise to each other […] because they tend to act as one, even though they are conventionally understood as two". Price (2014) outlines how this concept may contribute to changing the status of diagnoses, which still frame people with disabilities as 'broken' or in need of fixing. Schalk (2018) also emphasizes the utility of the term bodymind to investigate phenomena related to the psychic stress of oppression, which affects marginalized groups due to disability, race, and gender factors. For Schalk, then, the term bodymind can help highlight the relationship of nonphysical experiences of oppression — psychic stress — and overall well-being. Nevertheless, as Price (2014: 271) points out, the use of this term can be simply "tokenistic", if not accompanied by a reconsideration of the dualistic conceptual scheme.

The dualistic conception has faced challenges from various research areas. Building on the above-mentioned critiques, and sharing the spirit of emancipatory research (Mercer, 2004), we now attempt to reshape a vision of disability integrating various approaches.

4.   Discussion: The contribution of Damasio to the study of disability

In the last lines of *Descartes' error*, Damasio writes:

> The idea of a disembodied mind also seems to have shaped the peculiar way in which Western medicine approaches the study and treatment of diseases. The Cartesian split pervades both research and practice. As a result, the psychological consequences of diseases of the body proper, the so-called real diseases, are usually disregarded and only considered on second thought. Even more neglected are the reverse, the body-proper effects of psychological conflict (1994, p. 251).

Criticism of this way of conceiving the mind-body relationship can be useful to reflect on the concept of disability and, in this regard, it is suitable to take into account the bio-psycho-social model of disability.

This theoretical model originally emerged in the late 1970s, proposed by psychiatrist Engel (1977, 1980), initially to explain mental distress. This model has subsequently been adapted to disability in general and has established itself as a reference point on an institutional level (see the United Nations Convention on the Rights of Persons with Disabilities, dated 2006); the bio-psycho-social model of disability is also recognized by World Health Organization (Penney, 2013).

This model links some elements of the two main models that first appeared in scientific debate: the individual medical model and the social model, that we mentioned in the previous section. In fact, the bio-psycho-social model takes into consideration both the individual experience of people with disabilities, and their relationship with a specific cultural context that can disable the same person to a greater or lesser extent.

The bio-psycho-social model of disability aims to form a comprehensive interpretation of disability, in which disability is recognizable as the interaction of three major factors: the physical (such as age, an impairment), the psychological (such as behaviour) and the social, such as social and cultural environments (Petasis, 2019).

The human being in this model is thus seen as an inseparable whole, which is in turn inseparable from the environment in which it exists (Di Santo, 2013).

Even if is possible that not all people with disability can fully participate in society because of the varying severity of their impairments (Shakespeare et al., 2017), this model points to the necessity for society to prevent stigmatization of these people and to support them in all means (Petasis, 2019).

It should be noted that Engel, in proposing the bio-psycho-social model, criticized the dualistic nature of the biomedical model (Carrió et al., 2004), clearly presenting these constructs as alternatives. It has been stated that Engel embraced Systems Theory, what now may be called a complexity view (Id.).

The bio-psycho-social model of disability is today the most accredited approach. It has been adopted by WHO's International Classification of Functioning, Disability and Health (ICF) and has inspired the UN Convention of the Rights of People with Disabilities, stated in 2007. Nevertheless, this model has a series of limits, as outlined by authors in disability studies. Damasio's work is therefore also significant when addressing the study of disability, as it allows for the grounding of the bio-psycho-social model on precise neuroscientific foundations. Relying on the entanglement of mind and body, these foundations allow for reintegrating the medical model in the framework of a wider understanding of disability as a complex phenomenon. While the medical model has been rejected and stigmatized, rehabilitation and cure are still legitimately desired (Shakespeare, 2006). Therefore, it is crucial to rethink rehabilitation and medical care on a different basis that overcomes the limits of the widely critiqued medical model. In the framework of renewed attention paid to impairment, rehabilitation, and care, and without disavowing the achievements deriving from the bio-psico-social model, Damasio's thought allows us to understand impairment as not a purely physical or mental issue but always as an entanglement of the body-brain-environment. This consideration reinforces phenomenological approaches to disability with neuroscientific knowledge, thus paving the way for a fruitful meeting of the medical and the social.

Damasio's research on impairments induced by injuries to the prefrontal cortex gives us the image of a human being in which it is not possible to separate body and mind due to the deeply intertwined interaction between the body and the brain:

> the representations your brain constructs to describe a situation, and the movements formulated as response to a situation, depend on mutual brain-body interactions. The brain constructs evolving representations of the body as it changes under chemical and neural influences. Some of those representations remain nonconscious, while others reach consciousness. At the same time, signals from the brain continue to flow to the body, some deliberately and some automatically, from brain quarters whose activities are never represented directly in consciousness. As a result, the body changes yet again, and the image you get of it changes accordingly. While mental events are the result of activity in the brain's neurons, an early and indispensable story which brain neurons have to tell is the story of the body's schema and operation (p. 228).

The network of body-brain-environment relationships as reconstructed by Damasio gives an empirical foundation to the idea, promoted by phenomenological disability studies, implied in the concept of bodymind: the interrelatedness of mental, physical, and social processes.

From this perspective, impairment is not only a malfunctioning but part of the uniqueness of lived experience.

In this way Damasio's thinking can contribute to reconstructing the link between a social perspective, addressed to social justice and transformation of the context in which disability is 'constructed', and a neuroscientific perspective, too often focused exclusively on disability as an individual medical problem.

4.1. Disability and social constructionism

The social model of disability has its foundations in the epistemological tradition of social constructionism (Siebers, 2008). Although apparently distant, we believe there is a connection between this tradition and Damasio's thought:

> Much of each brain's circuitry, at any given moment of adult life, is individual and unique, truly reflective of that organism's history and circumstances. […] each human organism operates in collectives of like beings; the mind and the behaviour of individuals belonging to such collectives and operating in specific cultural and physical environments are not shaped merely by the activity-driven circuitries mentioned above, and even less are they shaped by genes alone. To understand in a satisfactory manner the brain that fabricates human mind and human behaviour, it is necessary to consider its social and cultural context (1994, p. 260).

We believe that, in studying the bio-psycho-social model, is it possible to find interesting connections between it and the epistemological tradition of social constructionism - one of the major (albeit relatively young) traditions of Western scientific thought.

Social constructionism, as proposed by Berger and Luckmann in *The social construction of reality* (1966), is a systematic presentation of a particular investigative perspective. The analysis undergoes a shift and expansion from the genesis of ideas and representations to the mechanisms of formation and the conservation of common sense. It is an attempt at a theoretical synthesis between the Weberian paradigm, where actions are endowed with meaning, and the Durkheimian one, where social facts are things. This perspective investigates the *processes* through which certain elements of knowledge are established as reality.

Czarniawska invites us to understand social constructionism as an interpretative gaze, capable of privileging processes rather than *structures* (Czarniawska, 2014). This line of thought converges with the one proposed by Berger and Luckmann, as both proposals arise from the idea that the constructivist gaze can observe the implicit assumptions without which the construction of common sense could not be understood.

In this way, constructionism challenges the existence of universal structures given *a priori*, increasing the possibility of deconstructing what is arbitrarily constructed. Observing reality as the result of processes and interactions between human beings and other beings, therefore, points to the *paradigmatic change* that moves human beings from their position of *constructors of meaning* to the position of taking part in the *processes of meaning construction*.

This point of view may act as a premise to the bio-psycho-social model of disability, since it places people with disability inside a web of connections between them, other human beings, and the environment in which we all exist.

Social constructionism can then be considered as a framework in which the bio-psycho-social model can be used at its full potential to reconstruct the concept of disability within a more holistic conceptualization of human being.

Thus, revisiting the debate within disability studies in light of Damasio's work in a social constructionist perspective permits for advancing towards a holistic view of disability. Furthermore, the concept of bodymind is coherent with this perspective, as it allows the interpolation of insights from various scientific disciplines and incorporates the wholeness and indivisibility of human sensory experience.

5. Conclusions: Implications for organizational studies

Overcoming a dualistic concept of disability to move towards a holistic and bio-psycho-social conceptualization has important implications for the study of organizational inclusion. Organizational studies has been paying attention to this in recent years, for example in studies on disability in the workplace (Collins et al., 2022) which point out how inclusion is not only a matter of accessibility. The anti-dualist perspective, proposed by Damasio and harnessed within the bio-psycho-social model of disability, avoids the mistake of considering disability as a mere epistemic object (Hamraie, 2017) with a clear ontological statute and well-defined borders, and to consider it relationally (Abrams, 2015), as linked to people, environments and objects. This consideration is particularly important when thinking about inclusion: considering disability holistically and relationally, in fact, entails considering that inclusion cannot be a one-directional process, directed from the organizations to the persons with disabilities. Inclusion should rather be multi-directional and multi-stakeholder, taking into account the co-constitution between individuals and organizing at cultural, material and bio-psycho-social levels (Sicca, 2016).

In line with this, Damasio's work encourages a rethinking of the concept of inclusion in at least two ways. Firstly, by overcoming mind-body dualism, it challenges us to value inclusion as something more complex than mere accessibility, as this concept struggles to extend beyond mere physicality and fails to consider the cognitive dimension. Secondly, by rehabilitating the role of emotions, it has an impact on decision-making and can help overcome the rationalistic logic that has excluded people with disabilities.

The role of emotions in organizations has attracted growing interest from scholars in organization studies. This applies not only to disability but to everything related to individuals' lives within organizations, including belonging and organizational culture: the importance of creating a welcoming environment in organizations has been neglected in the past due to an approach focused solely on the rationalistic calculation of individual gain.

Damasio's thinking is a useful tool for articulating a holistic understanding of individuals' decision-making processes and for building organizations that take greater account of the emotional well-being of their members.

It is worth emphasizing once again that barriers, in addition to being physical impediments, are all those obstacles that arise from the lack of alignment between body, mind, and social practices, both when dealing with disability management or other managerial areas.

For organizational studies, studying this intersection is a step towards building increasingly inclusive and sustainable environments.

Keywords

body, mind, disability, dualism, behaviour, inclusion.

References

Abrams, T. (2015), "Cartesian dualism and disabled phenomenology" *Scandinavian Journal of Disability Research*, 18 (2): 118-128.

Augustine of Hippo (1956), *De haeresibus*, Washington D.C.: The Catholic University of America Press.

Aquinas, T. (2007), *Commentary on Aristotle's Politics*, Indianapolis: Hackett Publishing.

Aristotle (2013), *Politics*, Oxford: Oxford University Press.

Ayer, A. J. (1940), *The Foundations of Empirical Knowledge*, London: Macmillan.

Berger, P., and Luckmann, T. (1966), *The Social Construction of Reality*, Garden City, N.Y.: Anchor Books.

Carrió, F.B., Suchman, A.L., Epstein, R.M. (2004), "The Biopsychosocial Model 25 Years Later: Principles, Practice, and Scientific Inquiry", *Annals of Family Medicine*, 2 (6): 576-582.

Cian, L., Krishna, A., Schwarz, N. (2015), "Positioning Rationality and Emotion: Rationality Is Up and Emotion Is Down", *Journal of Consumer Research*, 42 (4): 632-651.

Collins, A., Rentschler, R., Williams, K., Azmat, F. (2022), Exploring barriers to social inclusion for disabled people: perspectives from the performing arts, *Journal of Management & Organization*, 28, 308-328.

Czarniawska, B. (2014), *A Theory of Organizing*, Cheltenham: Edward Elgar Publishing.

Damasio, A. (1994), *Descartes' Error. Emotion, Reason, and the Human Brain*, New York: Putnam.

Damasio, A. (2000), *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*, Boston: Mariner Books.

Damasio A., Geschwind, N. (1984), "The Neural Basis of Language", *Annual Review of Neurosciences*, 7: 127-47.

Deleuze, G. (1968), *Difference et repetition*, Paris: Epiméthée.

Di Santo, R. (2013), *Sociologia della disabilità. Teorie, modelli, attori e istituzioni*, Milano: FrancoAngeli.

Elias, N. (1987), *Involvement and Detachment*, Dublin: University College Dublin Press.

Engel, G.L. (1977), "The need for a new medical model: a challenge for biomedicine" *Science*, 196: 129 -136.

Engel, G.L. (1980), "The clinical application of the biopsychosocial model", *The American journal of psychiatry*, 137 (5): 535-544.

Goodley, D. (2014), *Dis/ability Studies: Theorising disableism and ableism*, New York: Routledge.

Goffman, E. (1983), "The interaction order: American Sociological Association, 1982 presidential address" *American sociological review*, 48(1): 1-17.

Hamraie, A. (2017), Building Access. Universal Design and the Politics of Disability. Minneapolis: University of Minnesota Press.

Haraway, D. (1988), "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective", *Feminist Studies*, 14 (3): 575-599.

Haraway, D. (1991), *Simians, Cyborgs and Women*, London: Routledge.

Heidegger, M. (1996), *Being and Time*, New York: State University of New York Press.

Hughes, B., Paterson, K. (1997), "The Social Model of Disability and the Disappearing Body: Towards a Sociology of Impairment", *Disability & Society*, 12: 325–340.

Kafer, A. (2013), *Feminist, Queer, Creep,* Bloomington and Indianapolis: Indiana University Press.

McRuer, R. (2006), *Crip Theory: Cultural Signs of Queerness and Disability*, New York: New York University Press.

Marchisio, C., Curto, N. (2019), "Intermediate results of the application of an evidence-based method: the Work Intellectual Disability Environment", *Italian Journal of Special Education for Inclusion*, 7(1): 137-154.

Mercer, G. (2004), "From critique to practice: Emancipatory disability research", *Implementing the social model of disability: Theory and research*, 118-137.

Merleau-Ponty, M. (1962), *Phenomenology of Perception*, New York: Routledge.

Merleau-Ponty, M. (1963), *The Structure of Behaviour*, Pittsburgh: Duquesne University Press.

Michalko, R. (2002), *The difference that disability makes*, Pennsylvania: Temple University Press.

Napolitano, D. (2022), *La voce artificiale. Un'indagine media-archeologica sul computer* parlante, Napoli: Editoriale scientifica.

Natale, S., Pasulka, D. (2019), *Believing in bits: Digital media and the supernatural*, Oxford: Oxford University Press.

Nicholson, M., (1996), "The continued significance of positivism?", In *International Theory: Positivism and Beyond*, Smith, Booth and Zalewski, pp. 128-146, Cambridge, Cambridge University Press.

Nietzsche, F.W. (1998), *Zur Genealogie der Moral. Eine Streitschrift*, Dizingen: Reclam.

Oliver, M. (1996), *Understanding Disability: From Theory to Practice*, Basingstoke: Macmillan.

Paterson, K., Hughes, B. (1999), "Disability Studies and Phenomenology: The Carnal Politics of Everyday Life", *Disability & Society*, 14: 597–610.

Penney, J.N. (2013), "The Biopsychosocial model: Redefining osteopathic philosophy?" *International Journal of Osteopathic Medicine*, 16: 33-37.

Petasis, A. (2019), "Discrepancies of the Medical, Social and Biopsychosocial Models of Disability; A Comprehensive Theoretical Framework" *The International Journal of Business Management and Technology*, 3 (4): 52-44.

Price, M. (2014), "The Bodymind Problem and the Possibilities of Pain" *Hypatia*, 30 (1): 268–284.

Schalk, S. (2018), *Bodyminds Reimagined: (Dis)ability, Race, and Gender in Black Women's Speculative Fiction*, Durham: Duke University Press.

Schrödinger, E. (1958), *Mind and Matter*, Cambridge: Cambridge University Press.

Shakespeare, T. (2006), "The social model of disability" *The disability studies reader*, 2: 197-204.

Shakespeare, T., Watson, N., Alghaib, O.A. (2017), "Blaming the victim, all over again: Waddell and Aylward's biopsychosocial (BPS) model of disability", *Critical Social Policy*, 37(1): 22-41.

Sicca, L. M. (2016), Diversity management, Inclusione, Analisi organizzativa (Spunti, punti e appunti), *Prospettive in Organizzazione*, http://prospettiveinorganizzazione.assioa.it/diversity-management-inclusione-analisi-organizzativa-spunti-punti-e-appunti-sicca/, January 04, 2022.

Siebers, T. (2008), *Disability Theory*, Ann Arbor: The University of Michigan Press.

Sterne, J. (2021), *Diminished Faculties: A Political Phenomenology of Impairment*, Durham: Duke University Press.

Thomson, R. G. (2017), *Extraordinary bodies: Figuring physical disability in American culture and literature*, New York: Columbia University Press.

Turner, B.S. (2001), "Disability and the Sociology of the Body", in G. Albrecht, K. Seelman, M. Bury, *Handbook of Disability Studies*, 252–266, Thousand Oaks, CA, Sage.

Wolff, F. (2010), *Notre humanité. D'Aristote aux neurosciences*, Paris: Fayard.