

# Are we human? Some examples for mapping non-linear educational practices

di *Martina Capaccioli*

## Abstract

The aim of this paper is to explore some open conditions and trajectories for thinking about models of learning facilitation in the light of non-linear understandings, typical of the posthuman thought. The posthuman framework allows for the thematization of a plurality of methods of educational intervention that decentralize that humanist logic that operates through oppositional and hierarchical models, shifting attention toward “practical provocations” that highlight the vitality of the material and the non-human. Grounding this proposal in the expert work of those scholars who are offering systematizations of this field of study, the article brings together examples of some empirical experiences to illustrate certain applications of feminist new material, posthumanist and postqualitative approaches to education.

**Keywords:** Critical Posthumanism, Relational Materialisms, Posthuman Education, Educational Practices, Assemblages

*First submission:* 04/09/2024, *accepted:* 04/09/2024

## Introduction

This article intends to explore some open conditions and trajectories for thinking about models of learning facilitation and support that emphasise relational, situated, contingent, processual and pluralistic dimensions (Ringrose, Warfield and Zarabadi, 2020; Bracci, 2024). The issues addressed will be analysed by recalling the contribution of the posthuman perspective, which is addressing the limits with which reality and knowledge construction processes have been investigated from binary and humanistic epistemic models (Braidotti, 2013b). We will take the posthuman point of view as a device to probe what can be adopted to learn how to cultivate positionings that allow for the involvement of trajectories of reciprocal co-creation of

*Educational Reflective Practices* (ISSNe 2279-9605), 1/2024

Doi: 10.3280/erp1-2024oa18452

Copyright © FrancoAngeli

This work is released under Creative Commons Attribution - Non-Commercial –

No Derivatives License. For terms and conditions of usage

please see: <http://creativecommons.org>

knowledge, calling into question those forms of agency produced by networks of human and non-human elements of various kinds.

The role that the posthuman is assuming in the field of educational studies seems to be pushing towards research and intervention trajectories that turn the spotlight on those aspects of learning processes that emphasise the centrality of the connections that concur in generating assemblages between the various components of a learning setting (Ringrose, Warfield and Zarabadi, 2020). These are approaches that interpret learning as a performance (Barad, 2003) and that, more than others, focus on the emergent and generative character of learning, on the power dynamics at play, and on the idea that educational practices can be oriented from dynamic interactions that break with the dichotomous categorisations typical of some approaches to education (Ringrose, Warfield and Zarabadi, 2020; Taylor and Bayley, 2019; Fabbri, 2024a; Bracci, 2024; Nicolaidis, 2023).

At the empirical level, international research is providing an increasingly large body of studies that investigate how and under what conditions posthuman educational practices can be experimented, touching on a variety of contexts and areas of intervention. The posthuman framework makes it possible to thematise a plurality of educational intervention methods that decentralise the humanist logic that operates through oppositional and hierarchical models. It also offers a procedural perspective that connects action, participation, learning and research (Gherardi and Crozza, 2023; Fabbri, 2019) that can help develop educational practices that intercept responses to the current challenges of contemporary educational scenarios (Fabbri, 2024a). These contributions promote learning trajectories that recognise the intrinsic vitality of matter, but also its capacity to condition and interact with human beings in ways that transcend traditional conceptions of the relationship between subject, object and knowledge (Ringrose, Warfield and Zarabadi, 2020; Taylor and Bayley, 2019; Bracci, 2024).

Within this scenario, it seemed interesting to propose a reconnaissance of some significant research experiences that could exemplify the trajectories emerging from this strand of studies. With this in mind, the following paragraphs will respectively address a description of the main elements that underpin the posthuman perspective, the epistemological and methodological foundations that support posthuman readings in education, and an exploration of some empirical studies that delve into experiences related to the development of posthuman educational practices.

## **Posthuman transformations**

In the introduction to the article *Posthuman Humanities*, published in

2013 in the European Educational Research Journal, Rosi Braidotti argues that in order to be able to thematise the implications of the changes, transitions and hybridities of a historical moment characterised by radical socio-symbolic restructuring, nomadic mobility and high rates of technological mediation, one needs novel patterns of thought that allow one to enter inside the contradictions of such transformations (Braidotti, 2013a, p. 1). This leap out of the familiar (Braidotti, 2016) is conceptualised within the debate on the posthuman perspective. This is an open-ended and non-linear system of thought that is concerned with analysing current social phenomena from the deconstruction of the human (Braidotti, 2019; Ferrando, 2020), picking up on the stimuli promoted by postmodernism (Deleuze and Guattari, 1980; Foucault, 1967), postcolonialism (Said, 1979) and post-anthropocentrism. On the basis of these theoretical roots, for the posthuman to speak of deconstruction means to challenge the imaginary of the human as conveyed by the humanist tradition and to rethink what interpretations to give of this in our contemporary times. Following Braidotti's (2019) arguments:

Historically, humanists have not felt empowered to analyse the vision of the human implicit in the practice of their disciplines. Nor have they been encouraged by institutions to measure the power relations that structure the human, that is, the attribution of differentiated degrees of humanity, according to a hierarchical scale that defines the human through exclusions as blatant as they are systematic. The force of habit makes the human sciences preach themselves in terms of Man, humanity, or civilisation (always assumed to be Western), presenting them as facts. [...] Thus [we have settled for] a discursive model structured by dualistic oppositions that define the Human essentially from what it is not. Thus, with Descartes: he is not an animal, he is not extended and inert matter, not an automaton (p. 13).

The posthuman perspective, then, can be taken as a navigational tool to problematise the limits of the ways in which knowledge construction processes have been analysed from binary logics that provide interpretations of reality through oppositions and negations (Braidotti, 2013b; 2019).

To overcome these distorted forms of categorisation, analysis and interpretation, some onto-epistemological shifts are introduced, assembling elements from critical perspectives that insist on analysing power dynamics through relational, processual, pluralistic and nomadic worldviews (Braidotti, 2013b; Ferrando, 2020).

In the posthuman view there is a shift in terms of the central source of meaning, social activity and knowledge. This is no longer attributed to the individual subject as a predetermined and independent entity, but to the process of agencement (Deleuze and Guattari, 1980; Gherardi, 2016). It can

be defined as an interweaving or constellation of human and non-human elements of various natures – bodies, discourses, artefacts, technologies, affects, rules – that temporarily come together and produce something (Strom, 2015). Rather than the end result, the emphasis is on the process of connection and the idea that agency, i.e. the set of actions that produce the social world, is distributed between humans and non-humans, as a situated and emergent product of these relationships (Bennett, 2010; Cozza and Gherardi, 2023). The construct of agencement suggests that people are not autonomous and self-regulating actors, but share agency with all components of an assemblage. Karen Barad (2003) describes this process, which she defines as intra-active performativity, emphasising that things and people constitute each other in the here-and-now and that subjects and objects are agentially and iteratively co-articulated in intra-action (Cozza and Gherardi, 2023). In other words, reality, phenomena and actors in play are not subjects in and of themselves, but originate through activities of mutual co-creation within assemblages. Performativity, then, can be delineated as a creative process of co-construction that is not only linked to representational forms, originated by subjects, but also to the production of the matter of bodies and actions (Barad, 2003).

The posthuman perspective provides a key to learning how to cultivate our multiple capacities to relate within multiple ecologies of belonging (Braidotti, 2016). Since multiplicities operate through heterogeneous connections, it is highlighted how, depending on the assemblages we take part in at any given time, we cannot always define ourselves as human in the same way and, therefore, it would not seem possible to define a single idea of human. What is emphasised are the differences that characterise intersubjective and interspecific alliances, while not underestimating the forms of injustice and discrimination that the posthuman approach also brings with it (Braidotti, 2016).

A plural subjectivity, centred on the human-non-human relationality, supports emergent, embodied and becoming figurations. Hence, the traditional equation framing the relationship between this subjectivity and knowledge is also challenged. Familiarising ourselves with the posthuman approach allows us to think about the existence of a relational materialism that resists the reduction of both to a linear vision and prefigures transitions of epistemological order, opening up the possibility of reconceptualising what knowledge is, who/what produces it and how (Braidotti, 2016; Nicolaides, 2023; Taylor, 2021; Fabbri, 2024b; Bracci, 2024). What seems to emerge is an inter-objectively constituted process in which the unit of analysis is reconceptualised as multiple and material, situated and dispersed, open and nomadic (Taylor, 2021). Asking why, how, and what influences

these dynamics might serve to explore directions that emphasise the provisional nature of knowledge, that acknowledge the contradictions, paradoxes, and constant variations that characterise the ongoing processes of world-making (Taylor and Bayley, 2019).

## **Posthuman trajectories in education**

Among the disciplines that are taking up the stimuli coming from posthuman lines of thought, the field of educational science studies is among those that internationally present an increasingly broader landscape of enquiry and debate (Braidotti, 2019; Ringrose, Warfield and Zarabadi, 2020; Fabbri, 2024a; Bracci, 2024). The issues addressed touch on a variety of contexts and areas of intervention – from childhood studies to higher education studies, from everyday and informal to formal and institutional contexts – and are analysed from the contribution of that interdisciplinary chain of approaches that Carol Taylor (2021) calls FNMPHQ (Feminist New Material, Posthumanist and Postqualitative Approaches).

The research question that transversally concerns this field of study is: what does it mean to talk about education and educational practices assuming a theory of posthuman subjectivity (Fabbri, 2024a)?

Transferring the insights advanced by the posthuman viewpoint to the field of educational research has meant confronting those theses that suggest looking at learning processes from open, non-unitary, relational and situated visions (Snaza et al., 2014; Fabbri, 2024a).

Thus, educational models emerge that invite us to locate the learning setting in the contexts and intra-actions that determine it (Fabbri, 2024a). In turn, the ontological, epistemological and methodological foundations of these trajectories of enquiry call into question the tendencies to maintain a focus on macrostructures, to privilege discourse over materiality and to emphasise the rational character of thought structures (Strom and Martin, 2022; Fabbri and Melacarne, 2023). What is emphasised is that, on their own, these positionings do not allow for the consideration of interconnected conditions, elements and variables that characterise the uncertainty of contemporaneity and the educational needs outlined by it.

Within this framework, scholars and educational scholars confronting posthuman positions gain some coordinates that can suggest which elements to intercept when they want to thematise learning trajectories that are based on doing and becoming, blurring the boundaries of the human (Ringrose, Warfield and Zarabadi, 2020; Murriss, 2020; Fabbri, 2024b; Bracci, 2024).

Within this trajectory, learning processes are outlined by the constructs of agencement, intra-action, materiality and situativity. The interactions and connections with other actors in the learning setting (individuals, technologies, objects, animals, plants and so on) and the ways in which these are constructed in the unpredictability of everyday life become central. The focus is on the processes involved in generating networks between things, on how things influence and modify each other in ways that continually open up or preclude new possibilities. Among the aims of these studies is to shed light on how the ways in which people learn are conditioned by what happens during the processes of assembling human and non-human elements, and how the nature of educational processes moves within situated and emergent realisations of actions (Ringrose, Warfield and Zarabadi, 2020; Murriss, 2020; Quinn, 2024; Fabbri, 2024a).

Although investigated with different accents, the underlying hypothesis is that the elaboration of new theoretical and practical perspectives on education that deal with educational processes, placing them in the contexts of intra-actions where the conceptual divisions between nature-culture, subject-object, mind-body, masculinity-femininity, technology-environment are challenged, can intercept generative and transformative aspects of learning (Braidotti, 2019; Fabbri, 2024b; Bracci, 2024; Nicolaidis, 2023). A reading key of this kind makes it possible to look at such dualisms not as dichotomies, but as elements that are interrelated and integrated in experience (Fabbri and Melacarne, 2023). Learning, according to this perspective, recalls trajectories that work on situated experience (Haraway, 1988; Lave, 2019; Fabbri, 2007). In other words, it contributes to emphasising modes of knowledge production that pay attention to the stories and actions emerging from a specific culturally and historically delimited context. Thus, learning processes can be interpreted as inseparable from other practices that take place in a specific space, environment and time (Fabbri, 2007). They are implicated and circumscribed in situations. Human and non-human actors participate in situated networks of assemblages, within which knowledge is distributed among the various components in relation and conveyed in the course of this heterogeneous dynamic. One is co-implicated at the particular moment in which knowledge materialises and therefore responsible (Haraway, 1988) because the learning process is intra-relational, emergent, situated and contingent (Taylor, 2021; Fabbri, 2024b).

## **What is happening in the field of education studies? Some possible stories**

At the empirical level, international research is providing an increasingly large body of studies that investigate how and under what conditions posthuman educational practices can be experienced. The posthuman framework makes it possible to thematise a plurality of educational experiences that decentralise the humanist logic that operates through oppositional and hierarchical models. It also offers a procedural perspective that connects action, participation, learning and research (Gherardi and Cozza, 2023; Fabbri, 2019), shifting attention towards practical provocations (Murriss, 2020) that highlight the vitality of matter and the more-than-human.

The data from these studies, albeit in their heterogeneity, begin to delineate the outlines on which the work of scholars dealing with educational theories and practices from a posthuman perspective is moving. Drawing on this framework of ideas and research experiences can make it possible to map some of the emerging orientations with respect to possible conceptualisations and methods with which posthuman approaches to education can be declined.

Rather than proposing a snapshot of an open and moving landscape, which would inevitably be partial and far from exhaustive, we would like to propose a survey of some useful empirical experiences to exemplify certain applications of FNMPHQ approaches to education (Taylor, 2021), basing this proposal on the expert work of those scholars who are offering systematisations of this field of study (for example, see the volumes edited by Karin Murriss, Carol A. Taylor, Annouchka Bayley, Jessica Ringrose, Katie Warfield, Shiva Zarabadi).

This exploration will move from the identification of a few key macro-concepts emerging from the literature, within which to place the contributions that have focused on these aspects, following a distinctive but relational logic (Ringrose, Warfield and Zarabadi, 2020). Specifically, we identified four areas of interest – agencement, distributed agency, intra-action and performativity – which were subsequently reworked and aggregated in order to provide as fluid a picture as possible of the ways in which these four macro-concepts relate to each other. The two resulting areas were populated with emblematic examples of empirical studies investigating one or more aspects related to the macro-concepts identified within the field of education studies. Within this strand, particular reference was made to research on teaching practices and methodologies applied in different levels of formal education and to studies that explored the processes of constructing the subjectivities of educational professionals.

## *Agencement and distributed agency*

Educational research using the construct of agencement (Deleuze and Guattari, 1980) experiments with practices starting from the epistemological assumption that knowledge construction processes originate within entanglements and connections between human, non-human and more-than-human, material and discursive actors, which function collectively and are always in motion (Strom, 2018). From this perspective, thinking about educational intervention methods means proposing learning paths that encourage reflection on the role of non-human agents in thought development processes.

In an article investigating teachers' professional development processes, Kathryn J. Strom and Adrian D. Martin (2022) provide some useful examples to thematise assemblages within formal learning contexts. According to the two authors, classrooms and teachers can be thought of as assemblages. In the first case, a classroom assemblage includes human elements (teacher, student), space and material objects (classroom space, blackboards, desks), discursive elements (school norms, curricular content), and various socio-cultural, economic and political factors (testing policies, availability of resources). It also refers to the particular way in which this multiplicity functions in a specific situation (what types of content are taught, who and what takes part in the teaching processes, with what tools). In the second case, a teacher can be thought of as an assemblage if he or she is seen as the whole, and an integral part, of his or her own background, learning experiences, the broader classroom system, together with students, physical space, content and contextual conditions (Strom and Martin, 2022, p. 115).

The construct of agencement can also be stressed to emphasise the idea that learning can shift to a relational view that decentralises humanistic rationality. For example, in an article co-written with Kathryn Strom, John Lupinacci (2019) describes a teaching unit designed to support doctoral students who will go on to leadership positions in educational settings to develop relational, fluid and plural perspectives. In particular, it explains how through the use of narrative examples that provide accounts of caring practices and knowledge transmission systems, developed by animals, it is possible to learn from more-than-human educational agents.

Further examples can be drawn from Margaret Somerville's research experiences (Somerville, 2016; Cole and Somerville, 2020; cf. Fabbri, 2024a) on the relationship between social ecology and learning. The focus of these studies has been the analysis of interactions between school and pre-school children and elements of nature. We examine the results of some educational interventions developed in what the author calls wetlands



(Somerville, 2016), i.e. natural settings in which children can participate in relational networks with water, mud, leaves and other components of nature. What is highlighted is that interactions and play with these elements constitute a fluid and messy aggregate of actions that produces forms of situated and experiential learning that cannot be separated from these relationships (Somerville, 2016; Cole and Somerville, 2020; cf. Fabbri, 2024a). For example, contact with mud conveys forms of affective literacy (Cole and Somerville, 2020) that enable learning, in complex social and natural situations, how to thematise certain aspects related to environmental sustainability.

Among the defining properties of the construct of agencement, distributed agency suggests that one can think of models of educational intervention based on the idea that learning is influenced by a heterogeneous set of agentic forces operating in the connection in action between various elements.

In this vein, Kay Sidebottom (2019) traces the network of teaching activities that involved a community of teachers-in-training over the course of an academic year. Here, consideration was given to the impact that certain human-non-human entanglements, activated in everyday life experiences, had on the learning paths of future teachers. The didactic experimentation progressed through several moments starting with a reflection on the sharing of learning spaces and times with one's animals, and then widening the field to other material agents - the cramped study spaces that we carve out for ourselves in crowded living rooms, the work of our children that appears on our PCs, the background chatter in bars where we sit near an outlet, the draught from the window next to our desk, the daily interruptions to get a coffee - the ways in which these elements are involved in assemblages that condition the fragmented nature of adult learning have been explored (Sidebottom, 2019, p. 228). Our learning, then, is not only influenced by the agents of the world around us but is integrated with them (Sidebottom, 2019). Subsequently, the assemblages that formed the space for reflection were extended to online connections. Using the online conversational device made it possible to bring together heterogeneous points of view (local, national and international actors from different disciplines) and to co-construct new knowledge through processes of socialisation and negotiation (Sidebottom, 2019).

These constellations of educational practices propose models of learning that are also constructed, reconstructed and modelled in real time, starting from the agentic network of contributions of those involved in the learning process: human and animal colleagues, environments and artefacts, digitally mediated connections and so on.

## *Intra-action and performativity*

Thinking about educational practices constituted by intra-actions (Barad, 2003) allows us to focus on the processes that generate educational phenomena and learning. Thus, it is proposed to privilege the analysis of the actions, collisions and negotiations (material and discursive) that constitute the assemblages that influence the outcome of educational processes. In the aforementioned contribution by Kathryn J. Strom and Adrian D. Martin (2022), the two authors clarify that in a vision that calls into question the construct of intra-action, one can think of the development of subjectivities – whether these refer to educators or learners – not as the final outcome of the completion of an educational process, but as the set of non-linear processes, in which the multiplicity of entities present engage in a continuous process of exchange and mutual influence, operating in an inseparable manner (Barad, 2003). It is what binds the set of actors, material, temporal, discursive and spatial resources and their interactions that, for example, enable an individual situated in a specific context to be recognised as an educational professional.

An illustrative case of how intra-actions can condition subjectivities and educational practices is provided by Elizabeth A. Picard (2016) on the methodological orientations adopted during daily teaching practices by some teachers in a primary school in the southeastern United States. The focus of this empirical investigation was the use of digital platforms and social networks for the design of teaching activities. It describes how, in the face of a renewal of district standards to be met for curriculum planning, research participants initiated novel practices by buying and selling teaching materials and resources through certain online spaces. Having at their disposal a widely populated platform powered by teachers for teachers made it possible to cope with the need to review existing teaching materials and to be able to determine their quality criteria. Furthermore, it has allowed for the interception of emancipation trajectories, insofar as, in these digital spaces, it is possible to share ideas that are successful among colleagues, providing a source of income. Or, it offers those who do not feel so creative a chance to access new ways of thinking about teaching. Picard (2016) explains that “the teaching materials created, bought and sold through these sites are linked to the production and maintenance of what counts as good enough in teaching, which is ultimately linked to the very subjectivities of the teachers who buy, sell, pin and create intervention plans on these platforms” (p. 15). According to the author, such technological spaces intra-act with the curricular materials offered for sale and with the very subjectivity of the teachers who make these materials available. Teachers not only construct the

teaching materials, but these material agents work, at the same time, on the discursive and material production of their subjectivity (Picard, 2016). The continuous restructuring of quality standards of what counts as good practice influences how other teachers negotiate and produce their subjectivity. In other words, for many teachers using these digital platforms these material actors represent part of who they are or who they want to be (Picard, 2016).

Similarly, Sarah J. Calderwood, in an article examining the possibilities, constraints and tensions that arise in intra-actions between teachers and digital environments, considers how subjectivities can be reimagined in digitised visuospatial environments (Calderwood, 2023). Here, the author reflects on the ways in which the use of a virtual learning environment is not merely constituted as a tool applied to educational practices, but is recognised as a non-stable and non-neutral entity that shapes and determines teachers' and students' social worlds and educational practices (Calderwood, 2023). Among the themes developed from the analysis of teachers' actions within the platform, their openings and closures, one that emerges, for example, relates to device management skills. In order to emphasise the role played by the technological artefact within the intra-actions activated during the training moments, Calderwood explains how teachers often experienced a sense of loss of control (or, we might say, loss of agency) of the educational process when the virtual learning environment did not function as desired or acted outside of expectations, ultimately prompting teachers to reflect on what it meant to be a professional educator in the digital age (Calderwood, 2023).

Performativity is the construct that Karen Barad (2003) uses to theorise the meaning-making process resulting from intra-actions. It opens up reflections on the conditions under which meanings can be formed from human and non-human entanglements. This means that, according to this perspective, even when dealing with learning processes, an a priori understanding of people and things as separate and distinct elements is not given. What is called for is a focus on examining the boundaries of meaning that the links between human and non-human generate when dealing with educational practices (Niesche and Gowlett, 2019; Fabbri, 2024). Carol Taylor (2020) stresses this perspective in her research experiences in university contexts. Amongst the many examples reported in a work analysing what the author defines as material moments within a university classroom, an emblematic case is identified (Ringrose, Warfield and Zarabadi, 2020) in her observations with respect to the happenings that revolve around the lecturer's chair-body ensemble, during the course of some lectures. The purpose of this particular study was to draw attention to how objects, bodies and spaces do performative work in making meaning and

enacting gender inequalities (Taylor, 2020). Taylor argues that this particular set - a man's body and office chair (different from the others) - generated practices of meaning-making related to gender inequalities insofar as, together, they materially gave rise to tacit forms of male hegemony exercised in the occupation of classroom space (Taylor, 2020).

## Conclusions

Questioning what it means to talk about education and educational practices assuming a posthuman perspective and what is happening at the empirical level to the field of education studies that assumes a posthuman point of view, this article sought to gather some international empirical research for a survey of experiences that could exemplify some of the conditions for experiencing posthuman educational practices. To pursue this reflection, the onto-epistemological origins of this perspective were traced, which highlight how it is possible to decentralise the human from knowledge production processes and give attention to the power and influence of the non-human (Barad, 2003; Braidotti, 2013b; 2019). The literature insists on a family of constructs that bind together, shaping the conceptual foundations of this theory. Of these, those of agencement, distributed agency, intra-action and performativity have seemed the ones to be highlighted. Familiarising ourselves with these dimensions suggests that social phenomena can be interpreted as originating from an interweaving (agencement) of human and non-human elements involving technological, material, discursive, corporeal, virtual and spatial apparatuses. This emphasises the connection and inseparability between all these aspects, drawing attention to the process, to how these things intertwine with each other (intra-action). It is through this connection that things attribute meaning to each other. In other words, meaning is generated through the relationship and not a priori (performativity). This, finally, implies that the agentive force, the capacity to respond to change, is distributed among the various elements, within the human-non-human entanglements (distributed agency).

Transferring the insights advanced by the posthuman viewpoint to the field of educational research has meant confronting those theses and empirical experiences that suggest looking at learning processes from open, non-unitary, relational and situated visions (Ringrose, Warfield and Zarabadi, 2020; Fabbri, 2024a; Bracci, 2024).

From the research reviewed, the implications for the field of education studies appear to be multi-directional:

- Enhancing the relational dynamics between the human and non-human actors that make up the learning setting (individuals, technologies, objects, animals, plants and so on);
- Directing attention to how assembly processes between human and non-human elements condition learning and educational practices on an everyday level;
- Moving away from conceptual divisions between nature-culture, subject-object, mind-body, masculinity-femininity, technology-environment;
- Thematising learning as a material-discursive phenomenon influenced by the agentive forces distributed among the various actors involved;
- Valuing the situated and emergent nature of educational and learning processes;
- To emphasise modes of knowledge production that pay attention to the stories, actions and experiences emerging from a specific culturally and historically delimited context;
- Thematising learning processes as inseparable from other practices taking place in a given space, environment and time, and think of them as implicated and circumscribed in situations.

Following Rosi Braidotti's (2016) warning, rather than seeing the posthuman as the next hegemonic paradigm, we think that this perspective constitutes a challenging stimulus and an opportunity to reflect on the conceptual and empirical architectures that characterise the field of education studies (Bracci, 2024; Fabbri, 2024a; Fabbri and Melacarne 2023). What the openness to processes of enquiry involving the posthuman point of view can bring to the debate on education and educational practices is an open question, articulating theoretical-methodological dilemmas and conflicts (Fabbri, 2024b). A possible reading key, a more or less shareable path, which suggests what are some of the ongoing tensions in a complex panorama of studies and research dealing with these issues.

## References

- Allport, G.W. (1954). *The Nature of Prejudice*. Reading: Addison-Wesley.
- Barad, K. (2003). Posthumanist performativity: Toward an understanding of how matter comes to matter. *Signs: Journal of women in culture and society*, 28(3), pp. 801-831.
- Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Durham and London, UK: Duke University Press.

- Bracci, F. (2024). Posthuman epistemology of transformative practice. In V. Boffo, G. Del Gobbo, P. Malavasi (eds.), *Giving the word: pedagogical, educational and training professionalism. A 100 anni dalla nascita di don Milani. Junior Conference*, Lecce, Pensa MultiMedia, pp. 544-550.
- Braidotti, R. (2013a). Posthuman humanities. *European Education Research Journal*, 12(1), pp. 1-19.
- Braidotti, R. (2013b). *The posthuman*. New York: John Wiley and Sons. Translated in Italian, *Il postumano. Vol. 1. La vita oltre l'individuo, oltre la specie, oltre la morte*. Roma: DeriveApprodi, 2014.
- Braidotti, R. (2016). Posthuman Critical Theory. In D. Banerji and M.K. Paranjape (eds.). *Critical Posthumanism and Planetary Futures*. Springer, pp. 13-32.
- Braidotti, R. (2019). *Posthuman Knowledge*. New York: John Wiley and Sons. Translated in Italian, *Il postumano. Vol. 2. Saperi e soggettività*. Rome: DeriveApprodi, 2022.
- Calderwood, S.J. (2023). An exploration of human and platform intra-actions in a digital teaching and learning environment. *Learning, Media and Technology*, 1, pp. 1-13.
- Cole, D.R. & Somerville, M. (2022). The affect(s) of literacy learning in the mud. *Discourse: Studies in the Cultural Politics of Education*, 43(2), pp. 188-204.
- Cozza, M. & Gherardi, S. (eds.) (2023). *The Posthumanist Epistemology of Practice Theory*. Cham: Palgrave Macmillan.
- Deleuze, G. & Guattari, F. (1980). *Mille plateaux. Capitalisme et schizophrénie*. Paris: Les éditions de Minuit. Transl. it., *Mille planes. Capitalism and schizophrenia*. Naples and Salerno: Orthotes, 2017.
- Fabbri, L. (2007). *Communities of practices and reflective learning. Per una formazione situata*. Rome: Carocci.
- Fabbri, L. (2019). Active research methodologies: what action, participation, learning and research have to do with each other. *Educational Reflective Practices*, 1, pp. 7-18.
- Fabbri, L. (2024a), Sociomaterial artefacts as educational paradigms. In J. Magrini and M. Parente (eds.). *Educazione zeroisei: sistema integrato e poli per l'infanzia. Riflessioni e confronti a partire dall'esperienza formativa toscana*, Florence, Centro regionale di documentazione per l'infanzia e l'adolescenza, pp. 108-115.
- Fabbri, L. (2024b). Transformative Learning in the Era of Post-Reflexivity. *Adult Education Critical Issue*, 4(1), pp. 1-6.
- Fabbri, L. & Melacarne C. (2023). A post-humanist epistemology of reflexivity?: *Educational Reflective Practices*, 1, pp. 5-21.
- Ferrando, F. (2020). Leveling the Posthuman Playing Field. *Theology and Science*, 18(1), pp. 1-6.
- Foucault, M. (1967). *Le parole e le cose: un'archeologia delle scienze umane*. Milano: Rizzoli.
- Gherardi, S. (2016). To start practice theorising anew: The contribution of the concepts of agencement and formativeness. *Organisation*, 23(5), pp. 680-698.

- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14(3), pp. 575-599.
- Lave, J. (2019). *Learning and Everyday Life. Access, Participation, and Changing Practice*. Cambridge, UK: Cambridge University Press.
- Murris, K. (ed.) (2020). *Navigating the postqualitative, new materialist and critical posthumanist terrain across disciplines*. Abingdon and New York, US: Routledge.
- Nicolaidis, A. (2023). *Generative Knowing. Principles, Methods, and Disposition of an Emerging Adult Learning Theory*. Gorham, US: Myers Education.
- Niesche, R. & Gowlett, C. (2019). Entangling Karen Barad with/in educational leadership. In Niesche R. and Gowlett C. (eds.). *Social, Critical and Political Theories for Educational Leadership*. Singapore: Springer, pp. 111-134.
- Picard, E.A. (2016). Getting' a little crafty: Teachers Pay Teachers©, Pinterest© and neo-liberalism in new materialist feminist research. *Gender and Education*, 1, pp. 1-20.
- Quinn, J. (2024). *Invisible Education. Posthuman explorations of everyday learning*. Abingdon and New York, US: Routledge.
- Ringrose, J., Warfield, K. & Zarabadi, S. (eds.) (2020). *Feminist posthumanisms, new materialisms and education*. Abingdon and New York, US: Routledge.
- Said, E.W. (1979). *Orientalism*. New York, US: Vintage Books.
- Sidebottom, K. (2019). Disruptive Pedagogies for Teacher Education: The Power of Potentia in Posthuman Times. In Taylor, C.A. & Bayley, A. (eds.). *Posthumanism and higher education: Reimagining pedagogy, practice and research*. Cham, SW: Palgrave Macmillan, pp. 217-236.
- Snaza, N., Appelbaum, P., Bayne, S., Carlson, D., Morris, M., Rotas, N., Sandlin, L., Wallin, J. & Weaver, J.A. (2014). Toward a posthuman education. *Journal of curriculum theorising*, 30(2), pp. 39-55.
- Somerville, M. (2016). The post-human I: Encountering “data” in new materialism. *International Journal of Qualitative Studies in Education*, 29(9), pp. 1161-1172.
- Strom, K.J. (2015). Teaching as assemblage: Negotiating learning and practice in the first year of teaching. *Journal of Teacher Education*, 66(4), pp. 321-333.
- Strom, K.J. (2018). “That’s Not Very Deleuzian”: Thoughts on interrupting the exclusionary nature of “High Theory”. *Educational Philosophy and Theory*, 50(1), pp. 104-113.
- Strom, K.J. & Lupinacci, J. (2019). Putting Posthuman Theories to Work in Educational Leadership Programmes. In C.A. Taylor and A. Bayley (eds.). *Posthumanism and higher education: Reimagining pedagogy, practice and research*. Cham, SW: Palgrave Macmillan, pp. 103-122.
- Strom, K.J. & Martin, A.D. (2022). Toward a critical posthuman understanding of teacher development and practice: A multi-case study of beginning teachers. *Teaching and Teacher Education*, 114, pp. 1-11.
- Taylor, C.A. (2020). Objects, bodies and space: Gender and embodied practices of mattering in the classroom. In Ringrose, J., Warfield, K., & Zarabadi, S. (eds.). *Feminist posthumanisms, new materialisms and education*. Abington and New York, US: Routledge, pp. 47-62.

- Taylor, C.A. (2021). Knowledge matters: Five propositions concerning the reconceptualisation of knowledge in feminist new materialist, posthumanist and postqualitative approaches. In Murriss, K. (ed.), *Navigating the postqualitative, new materialist and critical posthumanist terrain across disciplines. An introduction guide*. Abington and New York, US: Routledge, pp. 22-42.
- Taylor, C. A. & Bayley, A. (eds.) (2019). *Posthumanism and higher education: Reimagining pedagogy, practice and research*, Cham, SW: Palgrave Macmillan.