Digital Materiality and Subjectivation: Methodological Aspects of Hybrid Entanglements in Processes of *Bildung*

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Abstract This chapter explores possible connections among discourse analysis, materiality and biographical research in the context of subjectivation. The extant methodological/epistemological concepts linking the Foucauldian idea of discourse with biographical research do not provide clear openings for the incorporation of materiality, specifically those in digital form. This chapter proposes an adapted, modified approach to the analysis of material-discursive practices to the end of investigating the materiality and mediality of relationally understood processes of *Bildung*. In so doing, it identifies a need for a post-anthropocentric understanding of the biographical that focuses on the variety of socio-medial relational reconfigurations.

Keywords Materiality • Mediality • Biography • Discourse • Relationality

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P. Bettinger (ed.), *Educational Perspectives on Mediality and Subjectivation*, Palgrave Studies in Educational Media,
https://doi.org/10.1007/978-3-030-84343-4_6

1 INTRODUCTION

For many years now, the social sciences, and correspondingly education research, have been interested in the matter of how people become the individuals they are and in the role of society in this process. Accompanying these debates is a continuous dispute around the possible conceptualisation and indeed the value per se of the categories of the ‘individual’ and ‘society’. The mutual interrelatedness of the individual and society has become an accepted commonplace in educational science, albeit one to which the rise of digitalisation appears to pose new challenges due to its transformative multi-level impact. The concept of ‘deep mediatisation’ (Hepp, 2016) argues that we are currently experiencing a fundamental shift in socio-cultural conditions and media communications whose effects extend into almost all areas of life. The present chapter takes up this discussion in reference to qualitative educational media research as a specific field of education science, illuminating possible interconnections between biographical research and discourse analysis with particular regard to the function of digital artefacts within processes of *Bildung* (see Sect. 2 for further explanation). The methodological considerations underlying the chapter outline possible convergences and lines of connection between biographical research and discourse analysis. In combining these two methodological strands, the contribution argues, we can investigate processes of *Bildung* as specific forms of subjectivation incorporating, in particular, questions of the significance of the material sphere to these processes. While discourse research shows clear references to work analysing subjectivation, qualitative educational research centres the methodology of biographical studies. Accordingly, my concern here will be the extent to which we can relate subjectivation and *Bildung* to each other in theoretical terms, but also what a corresponding interconnection between biographical analysis and discourse analysis might look like.

At the outset of this endeavour, we note a current tendency to conceptualise the analytical strands of biographical research and discourse analysis separately from each other; although both fields of research have seen ongoing development in recent decades, they are as yet effectively without a systematic connection, and their relationship consists largely in mutual incuriosity: “Discourse theory has paid little attention to the relationship between subject and discourse and in particular to the question of what scope for action the subjects, conceptualized as dominated by discourse, may have, while biography research, even at the theoretical level, has not

systematically taken discourses into account” (Pohn-Lauggas, 2017, p. 1095). Biographical research has its roots in symbolic interactionism and phenomenology, adhering in the main to an essentialist idea of the subject as capable of rational self-transcendence, while post-structuralist discourse studies, particularly in the succession of Foucault and Butler, hold a non-centralist concept of subjectivation. Approaches drawing on discourse analysis emphasise contextual facets of subjectivation, such as power structures, as the conditions necessarily precedent to the emergence of certain forms of the subject; the focus of biographical research is directed elsewhere, primarily, that is, on the subject’s internal absorption, filtration of and reflection on societal structures (Spies & Tuiider, 2017a, p. 5). Despite the general consensus on the understanding of biography (in the sense of a life story or life course) as a social construct (Völter et al., 2005, p. 7), biographical research as it takes place empirically is largely, often exclusively, tied to the life stories of individuals, without independent analysis of the social context. Discourse analysis diverges from this in primarily drawing on data collected in a non-reactive manner and, especially in the practice of the associated research, declining, in most instances, to focus on individuals in this form. These differences in research practice and fundamental theoretical orientation (which I outline only roughly here) notwithstanding, recent years have seen the establishment of a number of successful and productive attempts to bring the strands of biographical research and discourse studies together (Pfahl & Traue, 2013; Rose, 2012; Spies, 2009; Spies & Tuiider, 2017b; Truschkat, 2018).

One blind spot largely shared by both research directions is the matter of materiality and its significance to sociality. This chapter will tackle the lacuna, arguing that it is precisely in a synthesis of biographical and discourse research that promising openings for materiality appear.

2 *BILDUNG*, BIOGRAPHY AND DISCOURSE: POINTS OF INTERCONNECTION AND OF DEPARTURE FOR EXPLORING ENTANGLEMENTS OF MEDIALITY AND MATERIALITY

This section seeks to shed light on the interconnections between this chapter’s three central theoretical points of reference: *Bildung*, subjectivation and biographical research. In outlining these moments of linkage, I will generate a theoretical framework as a point of departure for a study of

the potential role of materiality, specifically digital artefacts, in processes of *Bildung* and for possible approaches to analysing these processes.

Bildung and Subjectivation as Complementary Approaches

The concept of *Bildung*, key to German-language education science, centres in its classical sense on the idea of unfolding potential for human development via an individual's reflection on the self and the world. Originating from the humanist ideal of the subject's self-empowerment initially proposed as a guiding principle for a German education system by Wilhelm von Humboldt in the nineteenth century, *Bildung* has come to signify a way to develop the self by extending the bounds of that self's existing worldview (Koller, 2012, p. 11). Beginning in the 1980s, educationalists in Germany have revisited and advanced the concept; particularly notable developments towards the notion of *Bildung* as a transformative process are in evidence in the work of Rainer Kokemohr (1985) and subsequently of Winfried Marotzki (1990), Hans-Christoph Koller (1999), Heide von Felden (2003) and Arnd-Michael Nohl (2006). In Koller's words, the conceptualisation thus generated "creates a notion of *Bildung* that allows it to be critically linked to both social theory and empirical research" (Koller, 2017, p. 34).

Most of these approaches to *Bildung* are at pains to distinguish it from learning. With reference to Marotzki, Koller (ibid.) asserts that "*learning* should be considered as taking in new information. *Bildung*, on the other hand, would include learning-processes on a higher level, during which the way of *processing* new information changes [...] *Bildung*, then, cannot be understood simply as the process of acquiring knowledge or competencies, but rather as a transformation of the subject's relation to the world, to others and to itself.". This idea of *Bildung* as transformative implies close links to biographical research. There is a consensus within "*Bildungs*-oriented biographical research" (Felden, 2017, p. 153) that the analysis of processes of *Bildung* permits the reconstruction of biographical narrations. Accordingly, the usual procedure is to subject social aspects of *Bildung*, and the influential sets of conditions within which these processes take place, to empirical consideration on the basis of the reconstruction of individual cases, i.e. by analysing narrative interviews (ibid., p. 155). Critics of this approach maintain that it claims to derive supra-individual aspects of biographical processes of transformation near-exclusively from individual narratives (Rosenberg, 2010).

As we continue our survey of the concept, we cannot fail to notice the close association of the concept of *Bildung* with theories of subjectivation. Both of these distinct theoretical strands direct our attention to the interrelationship between the individual and society, figuring it as constitutive of the emergence of the human self-concept and of change therein. Unlike *Bildung*, which frequently posits a subject with the capacity for reflection on itself and the world, the concept of subjectivation, in line with its specific theoretical elaboration in each instance, makes more emphatic reference to external processes via which the outworkings of power fall upon that subject. Notwithstanding the concession that those involved in these processes may well ‘have minds of their own’ and resist the influence of power as active subjects, theories of subjectivation foreground issues of the subject’s constitutedness (as opposed to its (self-)constitution) and the ways in which this subjectivation, as a process both experienced and undergone by individuals, takes place (Ricken, 2019, p. 97). Theories of *Bildung* place contrastingly greater emphasis on forms of emancipatory revolt originating with the individual, which draws their primary attention to the issue of how subjects assert themselves in the face of hegemonic orders, carve out spaces for themselves to exercise their freedom as subjects, and effect change.

Subjectivation is an analytical construct that in many instances refrains from setting normative prescriptions and, although its tendency is to critique power, will frequently approach specific forms of subjectness and manners of subjectivation connotated as ‘desirable’ with a degree of neutrality. Considerations drawing on theories of *Bildung* differ from this in that, as a rule, they feature, at least implicitly, underlying normative stipulations. Although they do not always reflect on these prescripts or call them into question (Koller, 2016), we may assume the presence of such value-laden criteria in the consensus of thought undergirded by theories of *Bildung*, and perceive their activity in, for example, the demarcation of processes of *Bildung* from other processes and the conferment of pedagogical desirability on the former. *Bildung*, as set out by Taylor (2017, p. 422), is not simply a matter of the acquisition of knowledge or skills, but has a comprehensive regard to profound processes of change against the backdrop of specific ideals: “[Bildung] has been figured as both an intellectual and moral endeavour; it is about more than knowledge, and it is about sensibility and character; and while its focus is the holistic development of the individual, it is also about how individual cultivation is

articulated to a vision of a better society. The central concern of *Bildung* is what constitutes an educated or cultivated human being?”.

A further distinction between *Bildung* and subjectivation reveals itself to us as we turn to matters of research and how it is done. Research into subjectivation has recourse to a wide variety of reconstructive and interpretive instruments, with an influential preponderance of poststructuralist conceptualisations; research on *Bildung*, by contrast, specifically that of the qualitative kind and particularly where it emphasises transformational aspects, appears to cluster notably in the area of biographical research (Felden, 2016; Fuchs, 2011; Marotzki, 2006). The predominant methodological technique in evidence is that of narrative interviews whose subjects set out their life stories spontaneously, recounting episodes as they occur to them. The narratives thus attained serve, in biographical research influenced by *Bildung* theories, as a basis for the reconstruction, via a range of methodologies, of potential processes of change in subjects’ attitudes to their selves and to the world. The central focus here, then, is on mental processes catalysed by specific life situations: “the transformation of attitude towards the world and the self is mostly initiated by a significant experience and is often connected with reflexivity” (Felden, 2017, p. 158). In this concept, *Bildung* takes place when we observe a transformation in the framing the subject gives to its relationship with itself and the world. The increased flexibility and expansion of individual horizons that *Bildung* entails frequently goes hand in hand with a life episode or life course characterised by the encounter with a crisis for which the attitudes to the self and the world held hitherto fail to offer adequate solutions (ibid.).

This brief outline of the differences between *Bildung* and subjectivation does not tip the scales against the multiple common factors shared by the two, as evident in the recent increase in work which places theoretical considerations around *Bildung* and the subject in reciprocal reference and interrelation (Bünger, 2015; Ricken, 2019; A. Schäfer, 2019) in the hope—seen from the *Bildung* perspective—of, among other things, creating greater space for the analysis of power in theoretical discussions around *Bildung* and raising awareness of the structures within which *Bildung* takes place. This chapter will argue for an interconnection between recent work in subjectivation theory and research (Alkemeyer et al., 2013; Alkemeyer et al., 2018; Geimer et al., 2019) and theories of *Bildung* as a productive way of meeting the concerns of those who perceive a mentalistic reduction of the *Bildung* concept as set out above and, in so doing, call

into question the conventional conception of the subject at the centre of theories of *Bildung*, with its Enlightenment tradition drawing on the notion of a subject possessed of the capacity to exercise reason and reflection.

Media pedagogy in particular points to a further convincing argument for linking *Bildung* to subjectivation. In recent years, the latter field has begun to engage with issues related to mediality and materiality, opening up new analytical routes to a nuanced view of how a subject comes to be (Eickelmann, 2019; Geimer & Burghardt, 2019; Spengler, 2018). Analysis of subjectivation that seeks the moment of ‘doing’, of performativity, provides points of connection to current developments in media theories which conceive of mediality as the “constitutionality of media which reveals that and how they operate” (Jäger, 2015, p. 110) and in so doing set their underlying conception apart from an essentialist view of media, laying greater emphasis on the role of processual human-media configurations (Voss, 2010). The power structures at work in these processes are particularly amenable to explorations via the analytical and terminological toolkit provided to us by research into subjectivation. Media pedagogy which continues to centre the conventional understanding of *Bildung* runs the risk of launching itself from an idea of ‘the media’ which is essentially a short circuit, adhering to traditional dichotomies and their corresponding prescriptive norms (such as subject/object, body/mind) to an extent that fails to grasp the constitutive power of mediality, particularly in its digital form. The worst case ensuing from this is a view of media as nothing but an accessory to social phenomena which, albeit ubiquitous in their spread and firmly established in our lifeworlds, do not appear as foundationally entangled with processes and paths of subjectivation.

Discursive Traces in Biographical Articulations

Criticism of qualitative empirical research into *Bildung* has held that it frequently—at least in its practical research—focuses too exclusively on the individual, the status of whose narrative, self-reflective statements as the be-all and end-all of processes of *Bildung* in fact merits questioning reassessment. I intend to respond to this admonition and make this aspect of my argument accessible by highlighting the links between biographical and discourse-centred research. In so doing, I proceed from the central assumption that bringing these approaches into interrelationship with one another is productive and, what is more, the synthesis serves to neutralise

the weaknesses of each. I will structure this endeavour with a line of argumentation drawing fundamentally on the reciprocal referencing between the two research approaches as outlined above, with a specific spotlight on the relevant methodological issues. It is important to note here that, as far as biographical research in education science is concerned, this bridging of the apparent gap to subjectivation is as yet a preliminary endeavour (Dausien & Hanses, 2016, p. 166).

If we assume the perspective of discourse-centred research, with Foucault as its predominant figure, we may, when examining the basic theoretical premises from which biographical research proceeds, initially find ourselves struggling to perceive where, or indeed that, it offers points of connection. Biographical approaches stem consciously from traditions such as classical interactionism and phenomenology, bearing the key influence of the Chicago School and advancing a corresponding view of the subject (Merrill & West, 2009, p. 22; Völter et al., 2005, p. 10). The concept of the subject put forward by discourse analysis, following Foucault, appears almost diametrically opposed to the biographical view, placing at its heart not the subject in action, but a critical distancing from the conventional notion of the subject with frequent recourse to Foucault's oft-cited proclamation of the subject's 'death'. Schäfer and Völter (2009) have demonstrated that Foucault's critique of the subject does not of necessity imply a rejection of biographical research; instead, they perceive a prompt to the researcher to "*specifically* [*konkret*; emphasis in original] relate the Foucauldian propositions on the origins of the modern subject to the practice of reconstructive biographical research" (ibid., p. 165). Their suggestions for putting this into action include bringing a greater emphasis on performative self-presentation into the analysis of biographical interviews, enabling interrogation of the forms of subject production that become evident to us amid the matrices thus generated. A concomitant of this proposed procedure would be a shift in analytical perspective whose aim would be to recover and expose to a multi-faceted view the relationships to the self that are embedded in articulations around the individual's life course and to identify and note the positions assumed by that self in societal structures of knowledge (ibid., p. 168). This attitude of the researcher would hinge—to put it concisely—on the assumption that discourses permeate the articulation of memory (ibid., p. 171). At heart, we have here a problem for biographical research in the form of a dual discursivity of both everyday experience¹ and the biographical narration that might emerge, for instance, during an interview. There is

nothing fundamentally new about this distinction, which appears, for instance, in Rosenthal's (2004) approach to the differentiation of experienced from narrated life stories. If, however, we throw discourse analysis into the mix, and with it the associated questions around societal orders of knowledge, the production and subversion of subject positions or the ways, shapes or forms of subjectivation, we find ourselves facing the additional difficulty of needing to expand our corpus of material with the addition of further types of data; it will, at any rate, appear problematically limiting to train our focus exclusively on narrative interviews if we are to generate assertions which a discourse-analytical perspective would deem robust.

A further observation of relevance here is that of the analysis of power made possible by the forging of an interconnection between research on discourse and biographical work. Discourse analysis opens up a broad methodological path down which we can pursue the assumption of the nature of the life course or 'life story' as a social construct and in so doing undergo a heightening of our awareness of the various forces and inequities within and from whose entanglement subjectivity emerges into being. This path is also a route of access to biographical processes as instances of the re/production, affirmation, transformation or subversion of subjectivations; it broadens our horizons from the subject as an "entity-individual [Individuen-Entität]" (Reckwitz, 2012, p. 16) to the sets of sociocultural conditions framing it. Spies (2009, p. 71) asserts the decisive importance of agency as a concept in the synthesis of discourse-centred and biographical research:

"because we see time and again in biographical studies that the narrators of life stories, albeit they are interpellated or addressed by discourses, that what they 'make' of the subject positions made available to them—that is, how they fill them, modify them, refuse them—is a great deal more 'wilful', 'autonomous', or just simply more complex and chaotic than the interpellation or address has in mind". (Ibid.)

The dual analytical perspective proposed by Spies in this context sets the frameworks presented to subjects by discourses as distinct from the positions taken by subjects as actors. Following Stuart Hall, Spies proceeds from the premise that interpellation serves as a connector between individuals and discourses in a process of articulation shaped by power which establishes and temporarily stabilises a system constituted of

differences (*ibid.*, p. 74). It is via these processes that discourses take on the task of attaching significance and generating a heterogeneous multiplicity of subject positions as effects of this articulation, positions which subjects may assume or leave and which as such create a time-limited identity (*ibid.*, p. 75). We must read this process neither as one of entirely free choice exercised by autonomous subjects nor as a deterministic swallowing up of subjects by all-powerful discourses before they can exercise any agency in the first place. Instead, individuals are called to forge connections within discursive structures they do not have the choice to exit, albeit their constitutive discourses are always incomplete and discursive reconfigurations give rise to a subject's ability to act, that is, to agency—which we can define as the capacity of subjects to take up new subject positions and to invest their resources in them, and therefore as the capacity for self-articulation (*ibid.*, p. 79). Applying these ideas to biographical research, Spies considers that we can, “with the aid of biographical analysis[,] reconstruct positionings [...] that point to specific discourses and document the individual's embeddedness in societal power relations” (*ibid.*, p. 83). Spies shares the perspective identified above on the problem of dual discursivity, observing that discursive positions and positionings are at work both in the moment of narration and in the experienced past. The chief analytical point of reference identified here by Spies as needing careful consideration on the part of the researcher consists in the interference of the discursive embeddedness of the narration in the present, in which it is being produced (*ibid.*, p. 82). This would make the distinguishing characteristic of biographical research inspired by discourse analysis its high capacity to undertake extremely detailed examination of the form taken by subject positionings and the ways in which subjects adopt them.

The considerations set out by Spies doubtless create a significant point of departure for our own train of thought, but we would do an incomplete job at this stage if we were to fail to point out once again the issues with restricting the data analysed to narrative interviews. While a perspective led by biographical analysis may deem such a limitation advantageous, a discourse-analytical view would need to raise the associated significant constraints which, in my view, the inclusion of other types of data material might make more manageable. From this stems the assumption, which will guide the further course of this chapter, that both biographical and discursive processes may manifest in a range of different shapes and forms,

including and beyond verbal utterances. What now follows, true to this assumption, will centre the material manifestation of discourses and life stories.

Biographical Processes; a Material-Discursive View

I will follow our exploration of the relationship between *Bildung* and subjectivation, the analytical potential inherent to this relationship, and its methodological translation into a link between biographical analysis and research into discourse with a search for the extent to which this proposal might contain the seeds of a process of analysis driven by awareness of materiality which could fruitfully supplement conventional approaches to biographical analysis. A look at the current state of play confirms that biographical research has paid only marginal attention to materiality to date, and more recent accounts of the concept have no foothold at all in the discipline. Liebsch (2018, p. 45) is among those who point to the lacuna, noting that “[...] we are [...] thus far without attempts to interconnect the ‘biographies of things’ with [those] of human actors” (Liebsch, 2018, p. 45). The day-to-day practice of biographical research certainly encompasses artefacts, typically documents such as letters, diaries and other autobiographical formats, yet fails by and large to reflect methodologically on the significance of things to biographical processes. As a rule, the recapitulation of life stories within a biographical interview revolves around the spontaneous verbal account. Materiality, or, put differently, socio-material contexts, attract attention, if at all, as components of the narrative, but are not deemed to merit a distinct empirical approach via—for instance—artefact analysis (Lueger & Froschauer, 2018). The conclusion from this observation must be that the material turn (Dolphijn & van der Tuin, 2012; Kissmann & van Loon, 2019), with its emphasis on the significance of material affordances to social contexts, has thus far bypassed biographical research and particularly its methodology, with isolated exceptions (z. B. Engel, 2020; Wundrak, 2015). This gap in the research when it comes to the materiality (and indeed the mediality) of the biographical is not a new discovery (Fetz, 2009), yet few have paid it any note in recent years, with ideas issuing from the area of Actor-Network-Theory (ANT) largely failing to strike a chord in biographical research.

The picture is not greatly different with regard to discourse research, in which engagement with materiality and its significance is yet in its infancy. Notwithstanding a handful of attempts to synthesise, for instance, ANT with dispositive analysis (van Dyk, 2010, 2013), there has been little

empirical activity aimed at establishing the significance of material entities in discursive structures. One reason for this may lie in the argument, frequently advanced by the proponents of new materialism, of a rejection of the linguistic turn, which represents a key point of reference at least for many of those discourse-analytical approaches whose chief focus is linguistic. Those schools of discourse analysis centring the sociology of knowledge indeed appear to be drawing very clear lines of demarcation against new materialist approaches, despite supporting in principle an increased emphasis on materiality in discourse analysis (Keller, 2019). New materialist approaches, with their self-set task of taking up and carrying forward the critique of the subject and other concepts first advanced by poststructuralism, would seem to lend themselves to a continuation of discourse analysis as set out in the poststructuralist frame. If we proceed from the conceptualisation of discourse as outlined above with reference to Spies (2009), with its foregrounding of articulation as a discursive practice, we find ourselves able to access considerations around material-discursive practices which also appear, for instance, at the heart of work by Karen Barad (2003). In the words of Schmidt (2019, p. 137), “[m]atter is discursive in the same way that discourse practices are always already material. [...] discourse practices are not activities propped up by humans, but specific material (re-)configurations of the world, each of which enacts boundaries, properties and significance in a different way”. Barad’s contribution in this context includes the concept of ‘intraaction’, which she places at the core of her fundamental ontological presumption of the world as a continuous process of becoming, a performative loop of re/configuration. This definition, consciously set at a noticeable distance from the anthropomorphic concept of interaction, serves as Barad’s emphasis of her assumption that phenomena constitute themselves by means of their agential potential for discreteness and that *relata* are therefore not antecedent to the acts of relationising which affirm them as such (Barad, 2003, p. 814):

“It is through specific agential intra-actions that the boundaries and properties of the “components” of phenomena become determinate and that particular embodied concepts become meaningful. A specific intra-action (involving a specific material configuration of the ‘apparatus of observation’) enacts an *agential cut* (in contrast to the Cartesian cut—an inherent distinction—between subject and object) effecting a separation between ‘subject’ and ‘object’”. (Ibid., p. 815)

Barad, drawing closely on Foucault, conceives of a ‘discourse’ not as what is said, but as what this ‘what-is-said’ enables, circumscribes, constrains. In this reading, material-discursive practices are not equivalent to verbal utterances producing meaning, but instead “specific material (re) configurings of the world through which local determinations of boundaries, properties, and meanings are differentially enacted. That is, discursive practices are ongoing agential intra-actions of the world through which local determinacy is enacted within the phenomena produced” (ibid., p. 820).

This view—which we might usefully term post-anthropocentric—of materiality’s significance in discursive structures prepares the ground for an analytical heuristic for the interrogation of processes of subjectivation that unfold in the long as well as the shorter term. Practices of a material-discursive nature require retrospective access rather than analysis *in actu*. It is at this point that artefacts, through their status as material manifestations of discursive structures, reveal their central role in the reconstruction of change—understood in the spirit of *Bildung*—in material-discursive configurations.

3 MATERIALITY, MEDIALITY AND DISCURSIVITY IN PROCESSES OF ‘TRANSFORMATIVE *BILDUNG*’: METHODOLOGICAL EXPLORATIONS AND EXEMPLIFICATIONS

The view of the life course set out above, using the lens of subjectivation theory, adopts the notion of entangled materiality and discursivity as the fundamental process-ontological attitude underlying a relational concept of hybrid forms of being and centres it in its progress through its considerations. What follows will demonstrate the appropriateness and efficacy of this position as a basis for engagement with the mediality undergirding processes of *Bildung*. To do so, we first need to define this mediality, which in my view goes considerably beyond supplying a more rhetorically nuanced term to replace (for example) ‘the media’. I see this terminological shift as tied to a corresponding change in media-theory mindset as identified, *inter alia*, by Jäger (2015), who sets out the distinction as follows: ‘Media’ frequently connotes notions of reification, presuppositions of an availability of these ‘media’ to external determination of what they *are*. Anchoring one’s approach in mediality, by contrast, means asking what media *do*; how they exert impact in practical realities; how they make

a difference and take their part in constitutive processes. Mediality, in other words, places its focus on the “operative property of media” (ibid., p. 110), a perception with a performative conceptualisation of media-ness at its root.

Even such a brief definition as this casts a spotlight on points of intersection with the ideas outlined previously in the chapter. A view of biographical processes—of *Bildung*—which proceeds from the notion of configurations and reconfigurations of heterogeneous entities and seeks to identify the characteristic forms of such re/configurations in the material-discursive mode—whose transformation is well described by the concept of *Bildung* itself—will find in the idea of mediality a heuristic expansion of these horizons.² This is a perspective which will read digital artefacts not as substantialistic entities, but, following Barad, as material-discursive practices, thus avoiding an over-hasty agential cut in adherence to a traditional subject/object dichotomy. The intent here is to describe, persistently and by small steps, processes of configuration and reconfiguration, holding *Bildung* in mind in order to identify potential transformative instances and variations of it in the course of the process and of time. One potential difficulty crops up, here as in other variants of biographical research, in the inevitable limits imposed by the retrospective mode, which call for a pragmatic approach, backed up by solid methodological foundations, to processes pertaining to the past. A further important factor is the empirical rarity of the profound process of transformation described above as the epitome of *Bildung*, which, far from being the oft-encountered typical case, is instead rather the exception (Geimer, 2014). With this in mind, we would do well to refer to Bourdieu’s concept of praxis in reading material-discursive practices as habituated schemata which, while not immutable, tend towards inertia, persistence and the reproduction of extant structures.³

The prospect of doing research into *Bildung* on the basis of the approaches we have sought to bring together here prompts us to align ourselves with a post-humanist conception of methodology, which means imparting less attention to the subject as a human being possessed of the capacity for reason and turning instead to the concept of “embodiment—material, affective, finite”, which “proves to be of greater importance (ontologically) than consciousness” (Snaza & Weaver, 2015, p. 5). The strength of the humanist tradition is evident testament to the extent of the challenge such a fundamental shift poses to the conceptions education science currently holds of its subject.

Bringing these considerations to bear on the field of research into *Bildung* does not mean we have to expel the biographical narrative interview from our methodological repertoire; it does, however, fundamentally change its status in the research process and lead us inexorably towards the inclusion in our work of additional data types and formats, beyond verbal utterances produced by human actors. Ethnographic methods would seem an obvious choice in this context, yet the long-term character of processes of *Bildung*, and the uncertainty that remains as to whether this methodological approach would succeed in capturing genuinely transformative instances, likely mean they are virtually impossible to apply in practical research.

The totality of the entities involved in processes of reconfiguration is too manifold to offer us realistic prospects of ever completely mapping the field. This raises issues of the assignation of relevance to these entities. An exclusive focus on instances of relevance articulated by human actors would soon see us overrun by the established patterns of anthropocentrism. We might set up one line of defence here by including artefacts in the analysis and in so doing both directing attention towards the material-discursive agency inherent to non-human entities and generating new ways to handle the problem of retrospectivity. I perceive particular promise in this respect in digital artefacts accessible via the internet, such as websites, blogs, social media posts and, fundamentally, any other manifestation of media articulation (cf. Bettinger, 2017, for a concrete methodical implementation). My specific hope here is in their capacity to incorporate ‘material agency’ (Bettinger, 2018), and its potential for change, into the analysis. This might free us from an exclusive reliance on verbal utterances when we seek to examine the reconfiguration of relational structures. Further, the use (for instance) of internet archives could enable us to examine processes of transformation in the light of changes in artefacts over time. *Bildung* thus appears amenable to examination as a distributed process, whose the analysis can benefit emphatically from not making sole reference to the retrospective linguistic representation of that process, but widening its analytical reach to include the various material manifestations of *Bildung* in their changing relational engagement over time.

This apparent assault on the primacy of verbal utterances in qualitative research is very much a road less travelled, particularly in biographical research, and will require us to rethink foundational concepts and overhaul our terminological toolkit for the description and analysis of processes of *Bildung*, currently stocked typically with products of deeply

rooted traditions from the social sciences and humanities. The upshot of these acts of revisiting will be to demonstrate that processes such as thought and action are not the exclusive preserve of human beings, but instead the results of distributed, reciprocally referential instances of relationing among heterogeneous entities (Springgay, 2015, p. 79). Research conducted from this point of view will require acute awareness of the involvement of non-human entities in these entanglements, even and especially where such involvement is not evident at first glance; it will also need the use of an analytical heuristic for the processes of mediation, translation or delegation which unfold in dynamic socio-medial structures. Where our interest lies in *Bildung* conceived of as a transformative process, we will want to pay particular attention to forms of the stabilisation and destabilisation, production and reproduction, and dissolution of relationalities over time. Harnessing the concept of agency outlined above in line with Spies (2017) will enable such an analysis to avoid falling into the trap of rushing to classify specific qualities as human, instead approaching the entities involved in subjectivations with awareness of their multi-layered, heterogeneous constitutions.

Engaging in research under these premises also calls upon us to know they involve a testing of the self-reflection demanded of all researchers engaged in qualitative study. We are called, as prompted by the discipline of science and technology studies (STS), to subject to critical examination our own entanglements with human and non-human actors, which form the preconditions of the emergence of new knowledge, and interrogate them in relation to issues such as effects of power, hegemonic subjectivations within our field of research, and marginalised subject positions. If we are to do genuine justice to the situatedness of the processes that generate knowledge, we need to go beyond methodological expertise and the skilled application of research methods, and adopt into our researcher-being the continuous assessment and reassessment of the agential cuts that we perform in the course of the research process and that constitute the phenomenon at the centre of our interest. And we need to regard this not as an object distinct from and independent of us, but as a process of becoming inextricably interwoven with our practices as researchers.

4 CONCLUSION: *BILDUNG*, BIOGRAPHY AND THE PROCESSUALITY OF SOCIO-MEDIA CONFIGURATIONS

I hope in this chapter to have highlighted the distinct contrast between the point of view I have laid out and the conventional positions on which biographical analysis typically draws. Further, my intent has been to embark upon an uncertain path whose every step raises questions. In taking up where poststructuralist analyses of discourse have left off, turning to material-discursive practices and to the associated post-anthropocentric and post-essentialist conception of the subject, we might at first glance seem to have lost virtually all connection to biographical research. It has been the business of this chapter to propose a second glance—indeed a more thorough second look which reveals the potential benefits residing in the attempt to bring together these two directions in spite of all the differences in evidence.

Biographisation, in our context and through the lens provided by this chapter, offers itself to a reading as *a mode of the production of continuity in the performative process of relationing*, resting not solely on the life story of an individual as a “structured past, present and future of a life course” (Weidenhaus, 2008, p. 251) but taking in a much wider terrain encompassing the entities involved and seeking the instances of boundary-drawing and agential cuts that, over time, generate continuity and/or discontinuity, patterns of identification and distinction. Having regard to the crisis often acting as the initiating moment of *Bildung* as a process of transformation, we could formulate this phenomenon in terms of a rupturing shock to established ways of relationing, with the potential to catalyse new dynamics in relational structures. The specific value of the joining of these distinct strands of research, as I have proposed here, seems to me to lie in the long-term nature of such processes; as biographical research tends to overlook the significance of material arrangements, so do subjectivation studies and Agential Realism rather neglect long-term developments. There is a distinct difference here from relational analysis, which investigates phenomena *in actu* and whose written observations and video recordings draw on the ethnomethodological tradition. The specific challenge of the biographical brand of material-discursive reconstruction I have put forward here consists in the necessity of drawing

retrospective conclusions around configurations of social, media and material entities that had existed—and held relevance—in the past, but no longer exist now.

The appropriateness of the ‘biography’ label, with its highly anthropomorphic inherent connotations, to the sort of work imagined here is perhaps arguable. We at least find ourselves unable to escape the insight that our proposition requires a significant expansion of the concept of the nature of ‘life stories’ as social constructs (Alheit & Dausien, 2000), an expansion which would incorporate non-human entities, as independent and possessed of agency, into every stage of the analysis. Indeed, it seems we will need to consider a life story as materially/discursively constructed. A conception of *Bildung* from the point of view of a “decentring of the subject” (Koller, 2001) would be a necessary, but not sufficient precondition of research approached in this way.

I will conclude by noting the pressing need for a debate on the ethical and normative principles which, from the perspective of education science, we cannot do without. If we as researchers attempt to proceed as I have invited us to do in this chapter—in a manner representing a marked departure from the humanist notions underlying the current conception of *Bildung*—we face numerous questions with fundamental salience, not solely to education research, but to the foundations of the education science we know today and the identity of our discipline—indeed questions with the potential to turn these on their head. I believe we are challenged to take up this stimulus and carry it into future research, if we are to remain productively relevant to the academic discourse in this area and retain our capacity to analyse, critique and influence the referentiality to the practical world of action that is so characteristic of education science as a discipline.

NOTES

1. In the interest of avoiding misunderstandings, I would like to emphasise at this point that Foucault and the bulk of the discourse analysis-centred approaches following him do not hold the notion of a one-sided, autonomously active discursive sphere confronting subjects, but rather regard discursive practices as effectively the ‘living core’ from which discursive phenomena issue. Some theoreticians of discourse analyses, however, may disagree.
2. Cf. also the introduction to this volume.
3. A counter-position emphasising the instability of practice is set out in (H. Schäfer, 2013).

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