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Psychology challenged. Refocusing our conceptual endeavors when culture-nature and technology kick in

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Abstract

The challenges that psychology encounters when studying the human and the social in times of accelerating and heterogeneously composed processes of becoming, call for theorizing of and analytical attention to complexity at multiple levels. This attention needs to focus a comprehensive horizon of intra-acting elements and agencies, while still maintaining the human as an important focus of research. In this article I discuss how the efforts to pursue this ambition may find inspiration from some of the analytical perspectives offered by poststructuralist and new materialist frameworks. While surpassing orthodoxy in all versions I encourage a continuous diffractive reading of such perspectives with those of other theoretical traditions to maintain theorizing as a vital, processual and curious endeavor that remains relevant and sensitive to an always moving and surprising empirical reality. My reflections on psychology theorizing is nurtured by brief empirical examples from my own and my colleagues' research. These examples include different versions of technologically involved human relating and agency, e.g., linked to children and young people's use of social media, computer gaming among children, and young people's involvement in digital sexual practices. The technologically mediated, formative processes entailed in digital participation among children and young people constantly open new horizons of potential identities, positionings, and body cultures that call for analytical sensitivity. In the last part of the paper, I discuss the ethical implications of a complexity sensitive psychology theorizing. I argue that the ethics of psychological empirical research must embrace the apparatuses that enable and enact social and subjective being, becoming, and agency as mattering and discursively entangled processes. Without losing sight of the individual, a retuning of research ethics therefore implies working on the vitalization and response-ability of the apparatus in its heterogeneous composition and the agential entanglement that produces the phenomena in focus.

Keywords: Acceleration and psychology theorizing, Material-discursive psychology ethics, Psychology complexity, Social media, Digital agency

This paper concentrates on the challenges that psychology encounters when studying the human and the social in times of accelerating, heterogeneously composed patterns of human and non-human entanglement and becoming. I argue that psychology needs to embrace this complexity at multiple levels and to do so within a comprehensive horizon of intra-acting elements and agencies, while still maintaining the human as an important focus of research within posthuman and new materialist conceptual frameworks.

As the text unfolds, I will use brief empirical examples to illustrate this ambition in relation to psychology's further theorizing. The examples that I have chosen for this text include different versions of technologically involved human relating and agency, e.g., linked to children and young people's use of social media, to practices surrounding a dating app, to violent computer gaming among children, and to young people's involvement in digital sexual practices. In wealthy countries around the world, most children and young people have access to the digital technologies mentioned in these examples. Although this is not the case for children and young people all over the world, the idea about psychology's obligation to understand complexity, remains the focus of my argument. Which matter that matters vary across geopolitical zones of human and non-human becoming, but complexity constituting that becoming still needs theorizing. In the last part of the paper, I discuss the ethical implications of my reflections when conducting psychological research.

In this era of acceleration, knowledge production is compelled to address heterogeneously composed human and non-human entanglements and agencies - both local and global in perspective, volatile across time and space, and enacted through the involvement of digital and other sorts of technology (Søndergaard 2019). Human lives have always been enacted through intricate formative conditions of becoming. But the material-discursive conditions and life trajectories accessible during some previous eras may have made it easier to engage with more straightforward and reductive understandings, such as linear causality, purely descriptive and numerical accounts devoid of theoretical analyses, or other simpler versions of scientific knowing. Today's accelerated performance cultures, rapid nature-cultural and socio-material changes, and volatile conditions for and processes of social and subjective becoming challenge such straightforward ways of engaging with knowledge and, not least, with its production. Thus, within psychology as an academic discipline, it seems almost impossible to single out the individual human, its psychological design and behavior, as a strictly demarcated object for scientific observation, measurement and determination (ibid.).

Entangling digital participation

To take an example, the formative processes entailed in digital participation among children and young people constantly open new horizons of potential identities, positionings, and body cultures that are comprehensive and complicated in quite different ways than those accessible to previous generations in large parts of the world (Davis 2012; Livingstone, Mascheroni, & Staksrud 2015; Renold and Ringrose 2016). Many contemporary teenagers and children access social media, watch vlogs, and interact with influencers. They produce their own YouTube or TikTok videos and share their thoughts and desires with large audiences – exposing themselves to evaluation by peers or by the anonymous crowd in the form of likes, being ignored, ridiculed, or admired. They may see their video productions used in videos produced by other children and young people, whether as a form of admiring

imitation or derision, becoming a stepping stone in these other kids' self-promotion and attempts to gain ground, identity, and belonging in and through the accelerated competition of digital acknowledgement and visibility. These young people and children meet all sorts of reactions, many of them widely publicly distributed, in response to their digital participation (boyd 2014). Their intimate relationships and friendships are performed in digital-analogue interactions, sometimes involving hundreds of daily posts to prove authentic bonding. The navigation of boundaries and of what is to be understood as private, semi-private, semi-public, or intentionally public occurs through both direct and displaced negotiations.

All such processes are facilitated – not by digital technology as a simple and neutral tool for communication, but mediated by the algorithms and enacted affordances that form, direct, invite, and nudge the interaction in particular ways in order to attract, increase, and maintain young people's time on and engagement with specific platforms (boyd 2011; Bucher & Helmond 2017; Finn 2017). The digital affordances are closely linked to the business model in which the platforms and social media are grounded (Zuboff 2019).

The atmosphere in this kind of time and space is tense, speedy, ephemeral, and evasive, with everybody and everything craving reactions. While following a wide variety of global digital platforms, young people gather inspiration for their own relational practices and identity formation (Søndergaard 2019a; Rasmussen and Søndergaard 2020). They may experiment with positionings, identities, and belongings across cultural boundaries and across political, religious, and ethnic normativities. Or they may cling to particular belongings, sometimes formed around the abjection of certain others. Emotional, affective, social, gendered, and other kinds of input as to who they can be and become, and how they may think, act, and relate, proliferate and produce new forms of insecurity and loneliness, new subject positionings, new invitations to belong, and new entanglements of potential ideals and trajectories to navigate (ibid.).

Psychology's conceptualizations and the perspectives and understandings it offers researchers and practitioners should be able to help us address the challenges raised by such phenomena – not only as they occur among young people and children, but in all the sociomaterial and analogue-digital ways of worlding that form the conditions of contemporary life. These theoretical frameworks need to embrace complexity and heterogeneity at multiple levels and through many dimensions. The theorizing must enable and assist empirical analyses addressing all sorts of elements and entanglements involved in such processes of becoming and enactment – which may include subject-formative agencies entangling the material-technological, social, economic, discursive, and many other sorts of potentially enacting agencies. Among these agencies are what Karen Barad terms spacetimemattering (Barad 2007), thereby emphasizing the intra-action of space and time in material-discursive enactments of phenomena in the world. I will return to Barad's conceptualizations later in this paper.

Looking back – looking forward

Once, psychologists tried to capture such kinds of theorizing responsibility by pointing to *context*. However, this concept – context – has for decades been considered too simplistic (Clarke 2003). In the late 1970s, Uri Bronfenbrenner introduced his ecological framework for human development with its five systems – the micro-, meso-, exo-, macro-, and cronosystems – to bring complexity and multilayered processes into psychological thinking

(in Bronfenbrenner's case specifically in relation to child development) (Bronfenbrenner 1979). This was an important ambition that took us further. However, his thinking somehow remained insufficiently dynamic as he still kept his theorizing focused on disparate aspects in and among these systems and layers.

Critical psychological ambitions, such as those developed in the West Berlin-based cultural-historical school during the 1980s, considered theorizing the social and the individual as interrelated endeavors, and theoretically determining the specifically human by analyzing the prehistoric transition from animal to human to be the best way of understanding the human in it's complicated relationship to a (political) environment (Holzkamp 1983). Yet, this would also be a far too mechanical, schematic, and static way of approaching contemporary societies' socio-material and subject-formative processes of becoming.

Meanwhile, other disciplines have developed concepts that may prove more promising, though of course needing direction if brought into psychology. Deleuze and Guattari offer sophisticated thinking with their conceptualization of rhizomes and assemblages emphasizing the interconnected and entangled character of processuality and fluidity involved in human, social, and material becoming and transformation (Deleuze & Guattari 1987). Actor-network theory also offers important analytical approaches to address the 'messiness of the social' and the world as "vague, diffuse or unspecific, slippery, emotional, ephemeral, elusive or indistinct" as it appears and works – changing like a kaleidoscope, or perhaps without much pattern at all, as Law describes it (Law 2004: 2). He invites us to trace the networks of heterogeneous material and social practices as productive and performative in generating reality.

Years before these important theoretical perspectives were offered, Foucault talked about arrangements that group heterogeneous elements into networks, which would produce certain liabilities of effects (Foucault 1977; Foucault 1980); later he would use the term dispositifs, in English often translated into apparatuses, to refer to such networked arrangements (Rabinow & Rose 2003). In their production of phenomena, organizations, subjects, social arrangements, they could connect such diverse elements as "discourses, institutions, architectural arrangements, policy decisions, laws, administrative measures, scientific statements, philosophic, moral and philanthropic propositions; in sum, the said and the not-said" (ibid: 10-11) and it was precisely their networked and interconnected character that effected certain liabilities to form phenomena of various kinds. In Karen Barad's strongly Foucault-inspired theorizing of *the apparatus*, this kind of networked apparatus is emphasized as even more dynamic and processual. This is a point I will return to later.

Philosophy, anthropology, and sociology, more or less mixed with natural science, have in other words already emphasized the heterogeneity in the enactment of phenomena – in the human and more than human worlding. They have done so with varying emphasis on the variety of elements included and in focus in their analyses, while simultaneously offering different ways of specifying the processes of interaction among these elements: like Foucault, as *interacting* and networked, yet still distinct; or like Barad, as *intra-acting* and mutually saturating, and thereby with an entangling transformative capacity enacting new phenomena and agencies from within (Barad 2003, 2007, 2014; Juelskjær et al. 2020; Højgaard & Søndergaard 2011).

Psychology needs to learn. But in doing so, must also further refine this awareness and attention while staying focused on the material-discursively enacted human – the human

worlding from within the discursive mattering and mattering discourses of an, in principle, infinite multitude of forces and agencies. In bringing in theorizing from philosophy, sociology, and anthropology, in other words, the ambition is not to do away with the human and the subject; as Judith Butler kept repeating during the early years of feminist poststructuralism and clearly illustrated in her later works and their analyses of the political conditions for the formation of subjects, vulnerability, and precarious lives (e.g., 1997, 2014), the ambition is to explore the subject's complex conditions of emergence and operation, its material-discursive worlding. It is to ask about the socio-material, materialdiscursive, human-technological – whichever accentuation you prefer – formation of and emergence of the human within, through, and as part of the human and non-human apparatuses that enact our world. With a psychological engagement, it is to keep the analytical focus on the subject in its intra-active socio-material, material-discursive, human and more than human becoming. Furthermore, the demarcation of psychology as discipline could and should obviously be troubled and discussed, but let me stay with that notion for now to facilitate the argument in this paper.

Having come this far, we can state that no human being – no human behavior, reaction, emotion, or cognitive response – can be isolated from its socially, culturally, materially, discursively, and otherwise interconnected, enacted, and enacting relations; none of this can be studied while ignoring the intricately entangling conditions of formation and becoming (Søndergaard 2019: 485). It is, in short, the formative processes, conditions of becoming, and potential transformation that need elaboration and theorizing as part of meeting the challenge of psychology, and this elaboration must take place within a far broader and more comprehensive horizon of heterogeneously intra-acting elements, forces, and agencies.

Measurement ambitions intertwining intimacies: Going on Tinder

The accelerating demands - linked to standardization, monitoring, control, and capacity building across sectors in the neoliberal system of governance and manifested in the contemporary managerial enthusiasm for measuring everything from performance in school and education to workplace productivity and efficiency in large parts of the world – tend to translate into and saturate some of the aforementioned social and digital interactions among not only children and young people, but also realms of intimacy among adults.

In a study conducted by Penille Rasmussen and myself on sexualized digital practices among young people, we see such tendencies in the quick and often cynical evaluations of imagery posted by teenagers on, e.g., Instagram and Snapchat (Rasmussen and Søndergaard 2020). This material moves across borders and nations. Tracing the material's trajectory to other media and platforms, imagery reappears in online repositories, where pictures and videos are rated and sold based on their value as erotic products.

In some of the studies that my master's students have conducted, examining digital dating, we see interesting phenomena in terms of accelerated self-monitoring and evaluation of others. Nadja Andersen described in her work how finding and connecting to a potential romantic partner via the digital app Tinder enacts a specific kind of accelerated yes-or-no game, resulting in a pile of potential partner matches available for contact, but also amounting to a gamification of the pursuit of erotic and romantic bonding (2019). Tinder was first introduced in 2012 as a location-based app that allows you to seek partners within a heterosexual framing. Users swipe left to reject and right to accept based on a profile,

formed like a playing card, primarily comprised of a portrait with a few sentences attached containing a little information about, or a fun remark from, the person in search of contact. When two people both swipe right, accepting each other based on their 'cards', there is a match and the possibility for contact is unlocked.

Users specify certain parameters, such as age and maximum distance from their own location. This last option is meant to help facilitate the face-to-face encounter that may follow a successful match and subsequent online conversation. And users need not invest much time or consideration in their engagement with the options offered by the app. Swiping left and right can be done anywhere, whether on the toilet or waiting for a train. As Andersen revealed in her thesis, the reason for engaging may even shift (Andersen 2019). On some occasions, it may be used as a serious search for a romantic partner performed alone in a teenager's room. For others, it may be a fun game and a means of bonding in a group of friends playing with the parameters for age and location and teasing each other or negotiating their preferences and normativity concerning romantic matches. And for yet others, it can provide quick and easy access to sex – easily obtained, easily forgotten.

The app's design and architecture invite quick decisions based on brief visual representations and limited written information. This high pace intra-acts with gender discourses that continue to emphasize romance as a gender-asymmetric staging: the man starts the conversation, is supposed to be taller, older, and, in the event of a face-to-face encounter, to pay for the first drink, coffee, dinner etc. – all of which, at least in our part of the world, is then paradoxically combined with ideals of gender equality. These elements, in turn, entangle with a youth culture that hails an ironic and satirical, often boundarypushing and provocative, form of humor.

All of this entangling messiness – digital design, gender, and youth culture, humor practices and many other aspects of this particular digital practice - enacts an atmosphere of superficial evaluation and measurement, offering fellow human beings as objects to each other to be consumed or rejected. It is a somewhat instrumentalizing and, some would say, cynical invitation that is built into and afforded by this piece of digital technology. And some users talk about 'Tinder gaming'. However, as already suggested, it is impossible to generalize across situations and uses of Tinder. Some users see the app as a source of casual sex enjoyed by both partners. Some use it for, or risk being exposed to, abuse, violence, and rape. Some find their 'soulmate', get married, and have children, all facilitated by this digital meeting place.

The theoretical point to draw from this example emphasizes the imperative of theorizing heterogeneity and entangling agencies. No doubt, the digital design, that is the material and technological agencies involved, are strong in forming the conditions for intimate relationships; however, they are not the exclusive and determining factors. Similarly, the discursive agencies and implied normativities, with their disciplining and subject-formative effects, the asymmetrical, yet often paradoxical, gendering, and the youth cultural forces are certainly strong in their intra-agency; but again, they are not the exclusive and determining factors in these kinds of practices. And no doubt, the biological bodies, the desires and embodied self-experiences – themselves the effects of historically specific social and subject-formative processes – are very strong intra-acting forces. But what they are, and what they do, takes form, dissolves, and changes in their intra-action with the digital design and its affordances, with the economic interests grounding and saturating that design, with the biographically and historically saturated subjectivities, and with a sociality that is always already agential as these new subject formations and identity positionings are being formed, challenged, practiced, and moved.

If psychology researchers are to understand such practices and their social and subjective effects, they/we need assistance from theories capable of capturing and conceptualizing variations and diversity in terms of entangling trajectories and agencies, of intertwined effects and dilemmas, of contradictions and volatile becoming. We need theoretical and analytical frameworks sensitive to heterogeneity, processual and entangled agencies, and enactment.

From choosing to diffractively reading

In thinking about theory, and about refining and developing theoretical frameworks sensitive to heterogeneous processes of being and becoming, we may learn from Donna Haraway and Karen Barad's introduction of *diffraction*. This is a concept used to bring together not only phenomena and material-semiotic, material-discursive agencies in our analyses, but also different kinds of theories, and, as Barad puts it, reading such theories through each other (Haraway 1996; Barad 2007, 2014).

The term intra-action is central to this thinking and closely linked to the meaning of diffraction and diffractive readings. Barad prefers the term intra-action to interaction because she wants to emphasize that the agencies, elements, and phenomena encountered in the apparatuses permeate and transform each other and that they, in that very transformative movement, enact new agential phenomena that immediately enter the intra-agencies already forming the apparatus that produced them. This level of dynamic and processual relationality marks the kind of ambition Barad's agential realism works with and, according to Barad, the term interaction simply cannot communicate that ambition sufficiently precisely, because it suggests encounters among disparate entities rather that mutually entangling and transforming intra-agencies.

Barad uses the word apparatus to denote such processes. However, as mentioned earlier, you may associate this thinking with Foucault's dispositif – although his conceptualization has its own virtues, emphasizing power relations, subjectification, and other aspects of human and non-human becoming that Barad is open to but does not elaborate on with the same enthusiasm (Foucault 1977; Foucault 1980; Rabinow & Rose 2003). Or you may want to lean on Deleuze and Guattari's rhizomatic thinking and focus on maintenance versus change via the concept of assemblages and their embedded striated and smooth spaces, lines of flight, and deterritorialization (Deleuze & Guattari 1987). Alternatively, you might prefer to employ Latour's and Law's assemblages and actor networks (Law 2004). All of these terms encourage analytical sensitivity to complexity and heterogeneously composed processes of becoming and being. In Barad's case, it is *the apparatus* that is foregrounded and thereby an ambition of understanding worlding in terms of hyper-dynamic intra-agential processes of enactment, transformation, and becoming (Barad 2003, 2007, 2014).

The intra-active and intra-agential material-discursive apparatus is what, in Barad's thinking, enacts phenomena. However, even a hyper-dynamic configuration such as this will need a conceptual grip on the also congealing, stagnating, stabilizing dimensions of processes of enactment. Barad uses the conceptualization of agential cuts and the congealing of practice, the latter a term borrowed from Butler (Butler 1993), to capture such aspects. The agential cuts simultaneously cut agential phenomena together and apart via their intraagencies, thereby forming, transforming, and confirming agential phenomena. What we

recognize as the discipline psychology or as the taken-for-granted behavior associated with masculinity and femininity, for instance, are effects of material-discursive agential cuts.

In thinking and imagining all these processes, movements, transformations, and agential entanglements, the term intra-action, as already indicated, carries an important communicative responsibility. It also carries a strong role in supporting the conceptualization of diffraction. In Barad's agential realist version of new materialism, or post humanism if you prefer, the term diffraction is brought in from the field of physics, which is where she has her educational background. Diffraction refers to the way in which waves (sound, light, water) combine and move; how they intermingle, move into and through each other; how they reemerge from within; how they keep moving, dissolving, reemerging, and changing (Barad 2007). These movements imply differences and boundaries as generated from within – and that is where we find the agential cuts, cutting phenomena and agencies together-apart, drawing boundaries, defining and demarcating. It is these kinds of movements and enacting conceptualizations that form the very foundation for Barad's thinking.

I will let these conceptualizations assist me in making my next point. If we, as psychologists, are to qualify our analyses of intra-acting agencies in attempts to understand the enactment of complex and heterogeneously enacted phenomena, we need different ways of knowing, and we need existing knowledge about the specific elements and agencies entangling in the apparatus, or dispositif, which produce the phenomena in focus. However, we need that knowledge – not as a truth claim about a demarcated, an out of context, phenomenon, but – as qualified suggestions about the phenomena that will be useful to bring along when we start analyzing the phenomena in their intra-action and enacting entanglement with other phenomena and forces in the apparatuses that produce whatever constitutes our research focus.

Let me therefore at this point in my argument do a bit of reparative work in relation to my insinuation at the start of this paper that simplistic and reductionist research approaches risk generating inaccurate knowledge because of their reductions, and because of their beliefs in simple causalities and their monolithic character. In my view, psychology that is rooted, for example, in the natural science tradition does contribute valuable knowledge if that knowledge is situated as one among many contributions to a diffractive reading and a diffractive study of the more comprehensive apparatuses that produce the phenomena we want to understand. As part of diffractive readings, these kinds of knowledge production are important agential contributions.

This also means that the argument here is more a critique of the contemporary scientific hierarchy that places natural science-based psychology at the top, in many contexts considering such approaches as producing results that most closely approximate something called the truth regarding psychological phenomena. What I offer, in other words, is more of a critique of such a positioning of this particular research approach, agentially cut in a very particular way, than a clear-cut rejection of it. It would be much more helpful, much more productive, if theoretically informed complexity-analytical ambitions formed the foundation for our academic thinking – and the specific approaches, results, and studies were considered and brought in as contributions to our diffractive readings and our diffractive analysis.

Barad and Butler – looking at children and computer games

Diffractive readings are, however, not only relevant in relation to highly diverse theoretical frameworks and paradigms; they are also relevant in more detailed reworkings of theoretically informed analytical approaches. I will try to illustrate this by focusing on a micro-moment drawn from one of my analyses of violent gaming practices among children (Chimiri et al. 2018; Søndergaard 2013, 2016, 2018). My point here is that I could not have performed such analyses, here illustrated by a single micro-moment in an interaction among gaming children, using either poststructuralism or agential realism alone. Both were needed. And the analysis might even have been further refined and improved by introducing and diffractively reading together additional theoretical resources to inform the analytical perspective.

When I started working with technologically mediated gaming among children and young people in 2007 as part of a project on bullying among children in school (Schott and Søndergaard 2014; Søndergaard 2014, 2015, 2017), I had already worked with poststructuralist theory and analysis for many years. However, in spite of Michel Foucault's conceptualization of the dispositif, Judith Butler's book Bodies that Matter (1993), and the work of other truly groundbreaking and inspiring scholars within that tradition (e.g., Davies 2000), I found myself in need of an approach more focused on the material and technologically entangled processes involved in the children's gaming. I needed conceptualizations that could help me think about the digital technologies, discourses, and other materialities involved in this gaming alongside and intertwining with the children's social relations and, ultimately, also with bullying practices. Bringing in Don Ihde and Peter Paul Verbeek's post-phenomenological conceptualizations of material and technological intentionality was helpful, but insufficient in relation to more sensitive analyses of the subject-socio-technology relation (Verbeek 2005). Actor-network theory also failed to satisfy that need, because this framework, at least in its early versions, still cultivated the material turn to such an extent that it seemed to suffocate any theoretically refined approach to the formation of subjectivity and of socio-material asymmetry (Latour 1993; Müller 2015).

Although agential realism is similarly unable to provide a refined conceptualization of subject formation and patterns of socio-subjective-material asymmetries, as a framework it is more open to a rethinking of such processes and of the social conditioning of gender intersecting with other social categories in their analogue-digital intra-agency than some other new materialist frameworks. Working with colleagues, I therefore focused on developing and reconceptualizing poststructuralist concepts such as subjectification, abjection, and positioning — with the perspectives and understandings linked to materialization from agential realism read diffractively into the theoretical takes and thereby assuming a more central role in our analyses (Højgaard & Søndergaard 2011; Søndergaard 2013; Davies 2014).

Some would argue that this theoretical shift was already accomplished by Barad's diffractive reading of Judith Butler and the Danish physicist Niels Bohr (2007). However, in putting Barad's theoretical perspectives to work – as a psychology researcher conducting qualitative analysis – it became clear that her diffractive reading needed further refinement, further specification. I kept finding myself (as I still do) turning to Judith Butler and the

tradition she represents for inspiration when faced with complicated and intricate processes of subject formation and enactment of social patterns, of social conditioning, and negotiations of normativity in my ethnographic material (e.g. Butler 1990, 1993, 1997a, 2004).

In Barad's preparation for and elaboration of her diffractive reading of Butler and Bohr, and further diffractive integration of numerous other scholars, not least Donna Haraway, she is particularly clear in her critique of Butler. In Barad's view, Butler does not go far enough in her theorizing on matter, and she criticizes Butler for mainly conducting her analyses of materialization as a congealing of practice in relation to the intricate conditioning of sex/gender. Meanwhile, Barad herself is nowhere near as refined and thought-provoking as Butler's early work (1990, 1993, 1997a) in her theorizing of the intricacies of subject formation, of normativities, of sex/gender, and of performativity in other forms of sociosubject-material enactment. The same is true regarding the theorizing of socio-political processes and of, e.g., vulnerability, grief, and political (non-)violence offered by Butler's later work (1997b, 2004, 2015, 2020).

Barad has very important things to teach us about intra-active material-discursive materialization and enactment of phenomena generally speaking, and I welcome and value that teaching as part of my own thinking. However, I have increasingly come to agree with Sara Ahmed, who warned us not to fetishize matter (2008: 35). Ahmed accused Barad – and new materialism – of caricaturing poststructuralism as matter-phobic. She cited Barad's use of a range of 'matter/discourse is not'-sentences: "Matter is not little bits of nature", "Matter is not immutable or passive", "Matter is not an individually articulated or static entity", "Discursive practices are not anthropomorphic place-holders for the projected agency of individual subjects, culture or language" (ibid.). Ahmed wondered if anybody ever made such claims? And, if so, who?

Ahmed thereby also questioned the very foundation of the material turn, pointing to earlier feminist work on biology and matter that, in fact, did emphasize the entanglements and traffic between nature/biology/culture and between materiality and signification. And she quoted Donna Haraway: "I am not interested in policing the boundaries between nature and culture – quite the opposite, I am edified by the traffic" (1989: 377, cited in Ahmed 2008: 35). Ahmed argued: "By turning matter into an object or theoretical category, in this [Baradian, Ed.] way, the new materialism reintroduces the binarism between materiality and culture that much work in science studies has helped to challenge." (Ibid)

It is widely accepted that the core ambition of agential realism is exactly the opposite, namely to keep the entanglements between matter and discourse, materialization and culture, the non-human and the human analytically vital. Nevertheless, it may be helpful to keep Sarah Ahmed's point in mind with regard to my suggestion earlier in this paper that we – as psychologists – maintain a focus on the human while theoretically thinking with and analytically being informed by a new materialist and posthuman conceptualization of worlding.

Let me now illustrate why it is important to reconsider and retune the analytical perspectives of new materialism in order to ensure the ethnographically engaged part of our work as psychology researchers remains sufficiently sensitive to any complexities involved in the entangled human and non-human enactments of phenomena.

Negotiating gender in gaming

Here follows the aforementioned micro-moment in the form of an empirical example to illustrate my point. In my study of video gaming, a group of 10-12-year-olds allowed me to watch them play Counter-Strike, a so-called first-person shooter game in which the gamers play from a first-person perspective, control a set of weapons, and eliminate enemies during armed conflicts in various locations. The young people play with and against both strangers and people, they know online. This is a game that can be played either as a single player or in teams.

On this particular day in their afterschool institution, Mick, Daniel, Sarah, and Ryan are playing Counter-Strike surrounded by a number of spectators. The adults have left the room and the children turn up the volume on all the machines. They shout at each other and at their avatars as the game moves on.

Mick shouts angrily: "Daniel, you ..." and punches Daniel's analogue body the moment after his avatar has been shot by Daniel's avatar. The other children get frustrated with Daniel because he keeps shooting their avatars. They keep hitting and kicking his analogue body during the game, but Daniel leans a bit to one side or the other to avoid their punches and remains seemingly unaffected on his chair in front of the screen while his avatar keeps moving and killing. The atmosphere is intense. "Yeah, I got him!" Ryan shouts in triumph having killed Sarah's avatar. Sarah says: "It was a her!" An avatar soldier has been killed and falls forward, blood splashing everywhere, and everybody cheers. Getting no response, Sarah shouts again, louder this time: "It was a her!" – and this time it works. Her avatar spawns, but is shot shortly after and Ryan shouts: "I whacked her" and cheers loudly. Sarah says, with barely hidden contempt: "Yeah! It was not that hard to say, was it?" indicating her satisfaction with the correction of gendered naming.¹

Many things are at stake in this small excerpt, but one aspect has to do with the gendering of violence: Is it possible to acknowledge killing, fighting, and acting as a soldier as girl agency, or does a girl doing these things in a videogame have to be addressed as male if in any way possible? Where are the agential cuts to be enacted within the intertwining of normativity, technology, analogue and digital embodiment, play, humor, identities, and much more? When I started working on this small excerpt and other observations from my research material², I needed more than new materialist and agential realist conceptualizations to understand processes of subjectification, normativity and negotiation, variations in agency and agential reconfiguration, and enabled social and embodied bonding. However, I also needed more than poststructuralist perspectives to be able to analyze such processes and phenomena in their material-discursive entangling and intraagency.

gaming practices and bullying.

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¹ See Chimirri, Andersen, Jensen, Søndergaard, and Wulff Kristiansen (2018: 337-343) for an analysis of the same empirical material as part of a more comprehensive analysis of 'video game concern'.

² The research material was produced through interviews and observations among children and young people at schools and in after-school institutions. It also includes children's drawings, notes from participation in gaming conventions, visits to internet cafés, as well as several other different types of material produced with the aim of providing optimal insights into the processes that form children and young people's also digital practices within their everyday lives, among these digital

Negotiating agential cuts via this game appears highly entangled by the virtual material design. Although masked, all avatars are designed as male: Their heavily armed bodies and movements are designed to hail masculinity of the kind familiar from American war movies. And for the boys playing, there runs a taken-for-granted coherence, an absence of agential cuts, between analogue bodies (although these boys' pre-teen bodies did not exactly mirror their avatars) and digital gender, violence, killing, and the material-discursive enactments of culturally intelligible masculinity.³ Sarah, however, calls that coherence, that embodied taken for granted, into question.

Eleven-year-old Sarah seeks to redefine the socio-material order while playing with Mick, Daniel, and Ryan. She insists on gendered coherence between analogue and digital bodies, regardless of the digital material design, and she insists there can be coherence among female and violence, killing, and fighting similar to the taken-for-granted coherence linking the male and violence, killing, and fighting when the gamer is a boy. As such, she wants to move the agential cuts usually enacted and lived by the other gamers, supported by the technological materialization offered in the game, and thereby to twist the agency of this materiality in its entanglement with culture and discourse – with normativity. And she succeeds – at least during this game. The boys accept referring to her digital male avatar as a woman ("I whacked her"!), although they hesitate and probably at first do not see why she would refuse the offer of a more dignified and superior positioning as a male avatar fighter. Although they stumble a bit at her insistence as it forces them to question the otherwise automatic asymmetry between male and female fighting in their game, they accept. They do not want to lose her – she is a good gamer.

Sarah most likely does not know that she contributes to moving boundaries and agential cuts, and thereby normativities. A much richer analysis could, of course, be performed, more closely examining the details in the reconfigurations following the transformation of agential cuts and focusing, for instance, on what these reconfigurations might effect in relation to other agential cuts (e.g., patterns of bonding and new potentialities concerning intersectionality and its meanings and practices, pushing boundaries linked to dignity, intelligibility, relationality, normativity, embodied self-perceptions, and hierarchies, and negotiating the understanding and interlinking patterns of killing, cynicism, 'evil', heroism, and being successful, to mention but a few of the analytical options). However, just these first few steps in attempting to develop an understanding of what is going on show the necessity of continuous refinements and diffractively elaborated retuning of our analytic concepts, here done by reading the two conceptual frameworks diffractively together: new materialism/posthumanism and poststructuralism.

It is important to introduce to the analysis the materializations offered to Sarah – both analogue and digital – and to be aware of the embodying effects they perform. However, if we do not pay sufficiently refined analytical attention to culture and discourse, to imaginaries, affects, and all their enacting power entangling with materializations of social patterns, social and subjective agency – one could continue – if we do not do that and qualify analyses along such lines, we risk losing a lot of important insight. And we also risk losing

³ See differing agential cuts in an ethnographic study of World of Warcraft, a game that implies more magic, more genders and less violence than is the case in Counter-Strike, in Sundén and Svenningsson 2012.

interest in important kinds of research material, such as data on fantasies, imagining, dream data, emotional data, and sensual data (St. Pierre 1997; Søndergaard 2013).

Ethics, heterogeneously composed and accelerated apparatuses

These particular children, playing with digital violence, already maneuver the accelerated digital-analogue interactions in ways that work well within their friendships, producing a lot of fun and action while also touching upon and working with some of the troubling aspects of life that they try to get a grip on (Søndergaard 2013, 2016, 2018). However, some young people engage in other digital practices that also entail challenges mixed up in entertainment and bonding, and these practices likewise invite theorizing and analyses capable of broadening our understanding of highly complex phenomena and their enactment. They also highlight some of the ethical issues that need thorough elaboration, enabled by a rethinking of psychology from within new materialist frameworks, and, although I cannot offer such a thorough and elaborate analysis, in the last few pages of this paper, I will broadly outline my arguments regarding how to approach such ethical issues.⁴

In my aforementioned ongoing work with Penille Rasmussen looking at young people and their digital practices, we also study some of the more problematic aspects of such practices, involving the non-consensual sharing of sexualized digital visual material (Rasmussen and Søndergaard 2020; Søndergaard 2019a). This issue enacts a lot of pain, struggle, and shame for those that are non-consensually exposed, and a mix of excitement, bonding, guilt, and danger among those sharing and trading the material. It also reveals ambiguities, changing and opaque boundaries that tend to blur any clear-cut demarcations among different forms of desires, suffering, hopes, and disappointment, and sometimes also between victims and perpetrators.

This is a topic and a research field that concerns adult. Sometimes those exposed are condemned because, it is argued, they should not have allowed such pictures and videos to exist in the first place – something that cannot always be controlled, both because the imagery in question may be produced in all sorts of ways, and because boundaries of intimacy and image sharing have transformed over the years. Recently in Denmark, however, public condemnation has mainly focused on those receiving and sharing such material. It is a topic that invites strong reactions from adults and, like other researchers working in conflictual areas, Penille and I are encouraged to take sides and to engage in determining who is the victim and who is the perpetrator; who should be punished and condemned and who should receive legal compensation.

The focus in this paper is not the empirical findings of our research. I merely draw on this study because it illustrates, but also challenges, my final point, which accentuates that the accelerated social enactments effected in the intra-agency among technology, discourse, and capitalist market rationales, entangling with sexualizing, and otherwise inter-linked, anger and troubled becoming among some teenagers. All such kinds of intra-agency mean that we

⁴ A more detailed elaboration and reconceptualization of ethics and psychology using new materialist thinking can be found in the article *Psychology, Ethics, and New Materialist Thinking* – *Using a Study of Sexualized Digital Practices as an Example* (Søndergaard 2019b)

as psychology researchers in complex, and sometimes troubled research fields, face a different and more comprehensive form of ethical demands.

We are used to thinking of ethics in terms of the well-being and integrity of the individuals involved in our research, emphasizing our responsibility for securing anonymity, consent to participate, etc. However, the ethics we need to embrace when embracing the theoretical ambitions unfolded in this paper also need to address the apparatuses that produce the human entangled in the non-human as phenomena (Søndergaard 2019b).

Furthermore, in our study of young people's sexualized digital practices, this more extensive perspective on ethics interlinks with our methodology. In doing digital ethnography, we do not necessarily know who, how many, and where people are. The trading of images and videos moves rapidly in and out of emerging and closing websites. Repositories of sexualized imagery open and close depending on users, customers, supply and demand, and sometimes on the fear of legal action. The material itself even changes character and meaning across online contexts (Rasmussen and Søndergaard 2019; Markham and Baym 2009).

Looking at this traffic, we as researchers do not know if the names of digital traders and of those who comment on and write reviews of such material correspond with persons bearing those names in analogue life. We often do not know how the material was produced and how it entered circulation across websites. We do not know whose bodies are exposed, nor if the body parts that are zoomed in on actually belong to the face they are claimed to belong to in the next picture or if these body parts are taken from Porn Hub or an entirely different context. Furthermore, among the closed, sometimes very extensive, user base of these websites, it is difficult to ask every member for their consent when we enter the site and follow various forms of activity (franzke, Bechmann, Zimmer, Ess and the Association of Internet Researchers 2020; Markham and Baym 2009). As such, internet research, digital ethnography, and the fields that may be opened by our research, call for a rethinking of research methodology (Markham 2013), which includes a rethinking of research ethics. Digital interaction is an integral part of contemporary and future human life in large parts of the world, and, as psychology researchers, we must deal with the challenges and complications that this digital intra-action in our research fields produces. Therefore, as researchers, we need to join together in this retuning of ethical reflection – an endeavor that may prove useful not only to our field of research, but, more broadly, as a development and further refinement also relevant within other areas of empirical psychological research.

One first step we need to take concerns a reconsideration of the reiterated individualizing focus in mainstream ethics guidelines. We should consider moving towards a deindividualization of ethics, as well as of the conceptualizations that ethics are linked to, such as care and empathy, both of which are central concepts in psychologists' ethical approaches to research. We need to think about ethics, care, and empathy within the more comprehensive perspectives of material-discursive intra-agency. To understand destructive and dysfunctional phenomena, for example, and to intra-act with them in transformative ways, we need to embrace, entangle, think, and become with the apparatus that produces such phenomena. We need to work on the vitalization (Khan 2012; Bennett 2010) and response-ability of the apparatus in its heterogeneous composition and the agential entanglement that produces such phenomena, and we need to do so while not only focusing on single human individuals.

To this end, response-ability is a new materialist term drawing attention to conditions and practices that enable objects and organisms, including humans, to respond. Barad links response-ability, responsibility, and mattering in her conceptualization of ethics (Barad 2012; Søndergaard 2019b). Thinking with response-ability, caring and becoming with care, within material-discursive apparatuses of human and non-human intra-agency, the individual *is*, but *this being* is enacted and enabled through, as part of, and intra-acting within more comprehensive agential encounters. Our aim in future research will be to study and contribute to understanding and knowing about the apparatus that effects the phenomena in focus – but we will thereby also potentially contribute to the vitalization and response-ability of the intra-agencies and elements of the apparatus. To do so becomes an option for us as researchers precisely because the material-discursive intra-agency already entails processes in which elements, forces, and phenomena not only encounter but also transform each other in that very encounter, and by entering into these intra-agencies, we already become with and agentially entangled in these processes (ibid., Barad 2017).

To try to demarcate certain parts of the apparatus from intra-agency – to freeze, fixate, and control them, cut them away, close down their response-ability – would hamper this intratransformative process. So – although perhaps provocative, even repulsive to some – ethics need to deal with all parts of the apparatus, all entangling and intra-agency, including those parts usually recognized as 'the bad guys', and including those parts that produce the 'evil', that effect suffering in other parts of the apparatus. This entails engaging with the 'dysfunctional', or whichever destructive phenomena we as psychological researchers study. We need to embrace and intra-act in an ethically vitalizing and involving way with all parts of the apparatus. The apparatus needs different intra-agencies and different response-abilities to change its effects in terms of suffering and destruction. In short, in acting ethically as psychology researchers, we need to be and become with and within the apparatuses we study, and to do so with care and empathy, also embracing the destructive parts in order to understand their intra-agential enactment and effects, and through that to enhance their transformative and potentially transformed intra-agential involvement and kinds of response-abilities. This, however, is where the attention and obligation to individual human well-being needs to be reintroduced from within this framework as part of the comprehensive ethical perspective and ambition. Individuals are cut together-apart within apparatuses – processes also requiring care, empathy, and vitalizing efforts.

Concluding remarks

In this paper, I have argued that psychology's conceptualizations and the perspectives and understandings it offers both researchers and practitioners should help us address the challenges raised by highly complex and heterogeneously composed phenomena, including those involving socio-material and e.g. analogue-digital ways of worlding that form the conditions of contemporary life in large parts of the world. Theorizing must enable and support empirical analyses addressing all sorts of elements and entanglements involved in processes of becoming and enactment. I have emphasized analytical potentials developed within new materialist and posthuman frameworks, but also the need for psychological researchers to continue to consider the implications of such thinking for our understanding of social and human phenomena in their material-discursive enactment. In doing so, I have encouraged maintaining a steady curiosity in relation to potential diffractive readings – e.g., with poststructuralist classics and others who have refined analytical perspectives on social and subjective formation and power asymmetries – so as to keep track of the human in its

material-discursive enactment. Rethinking ethics from within a new materialist framework diffractively read and refined with e.g., poststructuralist perspectives invites a less individualistic focus on researcher responsibilities. Without losing sight of the individual, the ethics of psychological empirical research must embrace the apparatuses that cut individuals together-apart in particular ways and enact their being, becoming, and agency as entangled in matter and discourse that are more comprehensive in scope. I therefore also argue that, as part of a retuning of research ethics, we need to work on the vitalization and response-ability of the apparatus in its heterogeneous composition and the agential entanglement that produces the phenomena in focus. Furthermore, we need to do so while not only focusing on single human individuals, but also their conditions of becoming, transforming, and intra-acting.

As psychology researchers, we have to stay with the trouble, as Donna Haraway advises us (2016), while often doing our research in conflict-ridden apparatuses. Staying with the trouble, encouraging its intra-transformative involvement, would be one small contribution as psychology researchers to a vitalization of intra-agency in some of our discipline's agentially cut apparatuses, which nevertheless link into and intra-act with the more comprehensive apparatuses in and of the Anthropocene, and even the Chthulucene as Haraway terms our current era, where we have to deal with socio-material mess and learn and repair (Haraway 2016; Søndergaard 2019b).

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