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More-than-human Perspectives on Physical Activity, Health and Education

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Contribution:

Alessandro Bortolotti, Simone Fullagar, Bruno Mora, Niamh Ni Shuilleabhain were invited to participate in the seminar and made theoretical contributions contained in this paper. Eduardo Galak, Alessandra Xavier Bueno, Nicola de Martini Ugolotti, Leonardo Tonelli and Antonio Donato were proponents of this seminar and made theoretical contributions contained in this paper.

Abstract: As Fox and Alldred (2020) note, culture/nature dualism has supplied post-Enlightenment philosophers, scientists and social scientists with a neat way to set limits on the respective concerns of the social and natural sciences (see also Barad, 2007; Braidotti, 2013; Fullagar et al., 2019). This dualism has also

enabled the creation of *distinctions* between “modern” (read “civilised”) and “traditional” (read “primitive”) *bodies* and ways of being-in-the-world (Denowski and Viveiros de Castro, 2014). Yet, when critically exploring issues of embodiment, the influence of the built environment on well-being, climate transitions and/or the ongoing Covid-19 pandemic such distinctions start to become problematic, as eloquently argued in the last three decades by feminist, post-human, new-materialist and political ecological –among others– debates and propositions. Giving continuity to an ongoing dialogue started in 2018 between scholars and activists from Latin America and Europe (see Donato, Tonelli, Galak, 2019) this seminar explored how the interrelated domains of health, physical activity, and education can look like from perspectives that de-stabilise established ontological boundaries between nature, culture, the body, and their relationship. It did so through a dialogue between Alessandro Bortolotti, Simone Fullagar, Bruno Mora, Niamh Ni Shuilleabhain, four scholars from Australia, Italy, United Kingdom and Uruguay. The online event took place as the first of a two-parts online seminar series on Re-assembling the nature-culture-body nexus: practices and epistemologies.

Keywords: Education; Health; Physical Activity; New Materialism; More-than-human perspectives

Resumo: Como Fox e Alldred (2020) consideram, o dualismo Cultura / Natureza forneceu aos filósofos, cientistas e cientistas sociais pós-iluministas uma maneira elegante de estabelecer limites para as respectivas preocupações das ciências sociais e naturais (ver também Barad, 2007; Braidotti, 2013; Fullagar et al., 2019). Este dualismo tem permitido a criação de distinções entre corpos e modos de estar-no-mundo “modernos” (leia-se “civilizados”) e “tradicionais” (leia-se “primitivos”) (Denowski e Viveiros de Castro, 2014). No entanto, ao explorar criticamente as questões de incorporação (*embodiment*), a influência do ambiente construído sobre o bem-estar, as transições climáticas e/ou a pandemia de Covid-19 em curso, tais distinções começam a se tornar problemáticas, como argumentado eloquentemente nas últimas três décadas por debates e proposições feministas, pós humanistas, novo-materialistas e ecológico políticos, entre outros. Dando continuidade a um diálogo contínuo iniciado em 2018 entre acadêmicos e ativistas da América Latina e da Europa (ver Donato, Tonelli, Galak, 2019), este seminário explorou como os domínios inter-relacionados de saúde, atividade física e educação podem ser a partir de perspectivas que de des-estabilizar fronteiras ontológicas estabelecidas entre natureza, cultura, corpo e sua relação. Isto foi feito através de um diálogo entre Alessandro Bortolotti, Simone Fullagar, BrunoMora, Niamh Ni Shuilleabhain, (Austrália, Itália, Reino Unido e Uruguai, respectivamente). O evento online ocorreu como o primeiro de uma série de seminários online de duas partes sobre Remontando o nexa natureza-cultura-corpo: práticas e epistemologias.

Palavras-chave: Educação; Saúde; Atividade Física; Novo Materialista; Pespectivas Mais-que-humanas.

Introduction

This article emerged from an international seminar that explored the “Re-assembling the nature-culture-body nexus” in an online series. The online seminar series was convened by Nicola De Martini Ugolotti together with Alessandra Bueno, Antonio Donato, Eduardo Galak and Leonardo Tonelli. These online seminars gave continuity to an ongoing collaboration started in 2018 between scholars and activists from Latin America and Europe that revolved around the Spinozian/Deleuzian question “what a body can do”. The seminar discussions sought to inform not just scholarly debates but also practice and activist work in the related domains of health, education and physical activity. The following four scholars were invited to contribute to the first seminar (in time-zone order): Bruno Mora, Associate Professor in Cultural Studies of Sport and Physical Education at Universidad de la Republica

Montevideo, Uruguay; Niamh Ni Shuilleabhain, Lecturer at the Department of Health at the University of Bath, United Kingdom; Alessandro Bortolotti, Assistant Professor in Education and Sport Management at the University of Bologna, Italy, and Simone Fullagar, Professor of Sport and Gender Equity at Griffith University, Australia, and Fellow of the Academy of Social Sciences, United Kingdom. The focus on “More-than-Human Perspectives in Health, Physical Activity and Education” enabled broad ranging exploration of perspectives that de-stabilise established ontological boundaries between nature, culture, the body, and their relationships with respect to the interrelated domains of health, physical activity, and education. We organise the following discussion in relation to the questions that were asked and responses that were given by each contributor.

In what ways the current pandemic has so far forced us, or enabled us to rethink the relationship between body, nature and culture in the domains of physical activity, health and education?

Alessandro Bortolotti: Thank you very much for this kind invitation. My expertise is in education so I'm trying to say something about education in relation to the question. I am a follower of the “motor praxeology” elaborated by Pierre Parlebas, who argued that we have different models of the body and just to give you a simple example, sometimes we think about the body in mechanical terms. Parlebas of course suggests not to use this model but another one which is a semiotic model. In short, what it's really important in education, especially in Physical Education but also in education as a whole, is that the body, or the person, *the subject is expressing himself or herself through motor-activities*. So, let me step back to the question, what the pandemic and particularly the lockdown taught us is that, as Marshall McLuhan would say, “the medium is the message”. Using this medium, doing online classes allows you to, especially in physical education, do some kind of gymnastics, so it's again a way of thinking the body in terms of the energetic or mechanical aspect that you address. Therefore, it's kind of limited in this way. So, thinking about the process of teaching and learning, this (virtual) medium offers amazing opportunities, like this one (the webinar itself), it is fantastic, but then we have to counterbalance it with something else, which is more “alive” and must also be a little bit more or maybe much more experiential. So, I am going to talk about that later on, about the second issue but in some way the learning-teaching activities in an online context, from a semiotic perspective is what at least in Italy is called the “worse than worse”.

Bruno Mora: To answer the first question about the pandemic situation, I am going to talk about an assemblage between body, sport and nature, focusing on the reduction of sport to exercise, which I

intend as the reduction of the body to the organism. This reduction affects the teaching of sport, towards the promotion of values which make sport invisible to the culture. Worth remembering here that Foucault (1975) said that in order to see the perfect disciplines at work, the rulers dreamed of the state of plague. I think that reflecting in times of pandemic on the role of technology and how it affects the body and life, enables us to think about the neighbourhood, and the concept of community, where community puts us in relation, not as a possession but as an absence of it, as a debt. Because thinking about possessions put us in a theoretical-methodological position, in a colonial position for Latin American studies.

Niamh Ni Shuilleabhain: I am going to talk about how the current pandemic has enabled us to rethink the relation between body nature and culture in physical activity, health and education in terms of my research on health policy and health education. I think the current pandemic has really forced us to move away from individual rational choice models, as our capacity for action is entangled within broader relations that involve the more-than-human. We are at this moment called to attend to how these forces are intersectional and furthermore take seriously the entanglements of class, race, sexuality, age, illness and disability that shape our lives. As Fullagar and Pavlidis (2021) say in a recent paper that drew on Sara Ahmed's (2004) work, in highlighting how the affective economy of fear is resonating throughout this pandemic has even further amplified the "personal is political". Ahmed's (2004) work demonstrates how affects like fear circulate between bodies and surface and stick to and stigmatize certain bodies more than others. So, this work is really relevant to what's happening here in the UK because we've seen through this pandemic and through recent government health campaigns that have framed avoiding getting ill or seriously ill as a result of coronavirus as an individualized responsibility through moralizing and stigmatising fat bodies. So, this kind of moment within health policy and in the pandemic has really highlighted more than everything these problematics inherent within these individual-responsibility approaches. Especially when they frame complex health issues as the responsibility of the individual, this is more problematic than ever and it really has forced us to rethink how we come to understand the body and how the body is entangled with affective material-discursive human and non-human relations. In conclusion, I think the pandemic has shown us that we must rethink the relationship between bodies, nature and culture when developing body pedagogies around health and physical activity. In particular, because when we fail to do so our pedagogies totally elide the complexity of lived lives and really risk further marginalizing those who are already most vulnerable to the forces that shape our health outcomes.

Simone Fullagar: It's such a big question but of course a very good question and something I'm still grappling with very much. Recently Niamh, Emma Rich and I completed a chapter together around critical obesity perspectives and new materialism which is informing our discussion today (Fullagar, Rich & Ni Shuilleabhain, in press). Niamh's comments connect with the others speakers comments about how we open up this question concerning embodiment beyond the kind of visible, phenomenological form that we are often encouraged to think through or a very individualized personal experience. I'm thinking through some of the challenges around the current epidemic in terms of feminist new materialism, and immediately there's a gender politics and also intersectional politics as well that is connected to how we think about the ontological and ethical and epistemological assumptions that we make about the world, and the knowledge that we produce about it, and about problems over how the framing of problems and solutions does things to particular issues and has effects. So I would refer to the paper Niamh mentioned that I have written with Adele Pavlidis (2021) looking at the gendered effects of COVID-19 in terms of the ethical issues and the impacts on equity issues. It is a really troubling aspect of the pandemic in terms of North-South relations and disparities identified by the Black Lives Matter movement. We are seeing so many issues being politicized around bodies, health, and education. Pedagogy is significant in terms of thinking about other ways to educate and inform and engage people in the issues. I come back to thinking through feminist new materialism about how bodies come to matter, or which bodies are thought to matter (or not) in current political framings, policy responses etc. In Australia we've seen policy responses in relation to sport and managing the rollout of sport as we have been much more fortunate than other countries in terms of the response. We are also seeing white male sport privileged; the National Rugby League has fought hard to maintain its competition and has a lot of media coverage. We're seeing a lot of people working in community sport for equity, inclusion and diversity losing jobs and of course women's competitions have been undermined as well. There have been different impacts on physical activity and sport but also the emergence of digital spaces and digital forms of engagement that have a kind of creative dimension that forms new communities. So many women have been taking up those opportunities at home, but home is a really contested space with gender-based violence increasing and with homelessness. With all the complexities and entanglements that work-home-technology has produced there is a key question that feminist new materialisms ask: how does home come to matter? What are the kinds of materializing practices in our changing leisure, home, work and public lives? How is this going to shift and change again as the fundamental natureculture relations become recognized in terms

of the origins of this pandemic - in the way humans are exploiting nature, animals and the way in which we think about viruses as part of our entangled existence. The human and nonhuman co-exist with 80% of our bodies made up of other microbes and entities - how human are we? I think the masterful fantasies of certain humans is being undermined by this pandemic and really forcing us to rethink the limits of human exceptionalism and how we create different relationships other than mastery and domination.

What tools for praxis can more-than-human perspectives provide in the domains of physical activity, health, and education?

Niamh Ni Shuilleabhain: Both new materialist and post-humanist perspectives provide tools for practice that really foreground consideration of the ethical implications of entangled agencies. This involves exploring how these entangled agencies, or the cuts that make possible certain worlds and not others. So, this means that we really cannot situate ethics within a humanist framework as ethics are dependent on entanglements of the more-than-human. Kathrin Thiele (2016) really emphasizes how ethics cannot come after the fact or after meta-physical or philosophical issues are settled. Rather, ethics must foreground our inquiries and are always already at stake in the processes of meaning making and knowledge production. Thiele (2016) clearly emphasizes that in our 'coming to know', ethics are already implicated at that point. This might seem like it does not necessarily orient immediate action, and it certainly does encourage more slow-considered research. However, in their landmark paper on ethics, Thiele (2016) reminds us not to stop short in producing specific cuts and instigating certain and not other worlding visions, but just to be considerate of the effects and affects that come as a result of the actions that we do take. In terms of physical activity, health and education these perspectives are key at this point in time as they allow us to enact ethics as iterative issues of doing that allows us to respond in the moment to the effects and affects that our policies or pedagogies are producing. So this was something we were just speaking about surrounding policy implications, and in our recent collaborative chapter Professor Emma Rich picked up on this in their piece of writing about how post-human perspectives provide praxis for policy formulations and policy enactments (Fullagar, Rich & Ni Shuilleabhain, in press) . Bringing these kinds of ideas, and this idea of praxis, towards policy might look at leaning into the complexity of the effects and affects of policy enactments. Instead of trying to bracket out the tensions and complexities, Rich draws on Warin (2015) in saying that it could allow the opportunity to lean into those tensions between intended policies and the capacities they have in particular contexts. This would allow for further listening, further revision,

further adaptation that has not really been a key part of policies that have focused on rational behaviour change or on individual agents as the source of all power. So yeah, I think it provides us a praxis in the areas of health and physical education by allowing us to consider the implications of our actions not only amongst humans but amongst the more-than-human also, and allows us to enact ethics as a dynamic situated doing and consider those tensions and those complexities that are often bracketed out when we do enact pedagogy or a policy.

Bruno Mora: In our group we think through three main concepts: from Latin American extension, from the critical teaching of sport and from sport as a public arena, which is a concept of Eduardo Archetti (1984). Extension is a concept that was born in Cordoba (Argentina) in 1918, based on three dialogues. The dialogue of disciplines, between physical education, psychology, anthropology, medicine, etc. The dialogue between society and the university. Finally, the dialogue of functions, since teachers can exercise management, extension (which is the work with organizations in the neighbourhood), classroom teaching and research. We try to assemble these dialogues in different places. The means to achieve our objectives was the critical teaching of sport. This process implies dismantling the traditional teaching of sport, reduced to evolutionary stages (initiation-specialization-high performance), reduced to institutionalized views (formal-non-formal, school-territorial, or others), reduced to – not the best interpretation of Parlebás – of the internal logic (what happens inside the court). By taking sport as a public arena in teaching, borders are diluted, and sport comes to be analysed as a social fact. No longer with technical, humanistic, bio-medical or evolutionist observations, but all this is interpreted with a critical perspective of society and the body. Therefore, a new agenda for the teaching of sport is built from the conjunction of a social program (where we meet the mass – media, social media – public politics, cultural) and a traditional disciplinary program (technical-tactical, regulations, etc.), are elements discussed from their power relations. In these relationships, we work in neighbourhoods and with public policies, and our job is to compare what public policies propose and intervene in the neighbourhood based on the different tensions we observe. One of the things we observe is that social policies on drugs work on the paradigm of risk and harm. However, public policies on sports tend to penalize and stigmatize, including gender and class divisions that are not very educational.

Alessandro Bortolotti: I have to say that I will be very basic in my answer to this topic. When I think about tools, what comes immediately to my mind is what in English is called “Outdoor Education”. I mean that after the (March-May 2020) lockdown we really feel we have the need to be more outside.

Just to give an example, I know the housing market here is completely changing because everybody now wants to buy a new house with at least a courtyard, a terrace, a small piece of garden, because they really suffered to be a lot like “Hikikomori”, probably you know this term which is a Japanese and means a person who at the end of the day doesn't go out of his or her room, like being in prison. So, we had the need to get outside, to counterbalance this kind of communication with a more real one, where bodies and the person can be face-to-face in a more authentic relationship. This is a teaching-learning process which is complex in a way, it doesn't mean that it is difficult, it means that when you change probably just one knot of the network that composes it, everything changes, it is going to change. It is a system, so from a teaching perspective, by going outside, teachers had/have to rethink how to teach because you cannot just do the same thing, the same activities, keep your approach that you usually have inside on the outside. This is the other value, because at least in Italy, but I know also for example in New York, and in the UK now outdoor learning is increasing. Why? For health reasons, but the other value, again, is that you can be more experiential. So, when you are outside you have to change your relationship for example with the pupils, transforming your approach as a “sage on the stage” to another one which it's like a “guide-on-the-side”. So, it is not a context where the teacher has control of everything, but rather where he/she has to change relationships, and from the learning side everything changes, because this approach starts to allow experiential processes, children can be more active, can be exploring the landscape. So, I think the pandemic could push us in some way to change the approach at least at school, which is not bad. On the long term, it can be, I think, interesting and we can maybe have some changes which is not bad and of course to change the approach and the relationship with others and landscape change everything and we will talk about that next the next issue.

Simone Fullagar: I'm thinking along similar lines to Alessandro in terms of a parallel to experiential education and the outdoors. I'm thinking about creativity and creative knowledge practices being really important. As we want to be thinking about praxis and change in terms of how we mobilize different knowledges and ways of knowing the world. These include, ways of knowing through the body, ways of understanding and knowing difference that is also breaking down nature-culture relations or self-other relations. This means thinking about how we experience our bodies and learn through the body, and through embodied movements, whether that's sport, dance, other kinds of embodied movement. How do we learn through those experiences to understand and engage with particular research methodologies that are creative? Do these practices help draw movement and the creative arts into

dialogue with each other to help us produce knowledge and engage with and understand the affective power of movement?

I think a lot of people are feeling that now - when in lockdown or in restricted environments when they can't move - the desire to move, the desire to feel free is something that certainly gives educators and people also working in health-related areas something to work with. It's different to the usual individualized messages, such as, 'do your 30 minutes of physical activity a day' to be healthier, or to reduce obesity. All of those behavioural, individualized messages have failed for so long and lack creativity. I think we're at a moment where we need to have more affirming, vital approaches and pedagogic understandings of relations to really help people experience a greater sense of being alive. This also is important for mental health because we know that the pandemic is having a huge negative impact on people's mental health. Feeling highly anxious or depressed, for example, is something that is lived in the body and that tension is held in the body. So, we need to also be thinking about how sport and health, physical activity and education can work with other disciplines and create more interdisciplinary understandings. For me as a researcher I'd like to think about how I can use some creative methods, such as body mapping which is a method I have used in collaboration with creative organisations such as Untold dance-theatre in Bristol UK. I worked with a group of women who were learning somatic movement practices and this involved a lot of unlearning of gender normative ways of moving, highly restricted ways of moving. It was also an undoing and questioning of body shaming and all of those other intersectional power relations that come to bear on bodies and restrain movement. What we did with the body mapping (which involves drawing either in a kind of realist representation or a more creative representation of one's body on a life size piece of paper) was to explore the affective qualities of movement (Fullagar, 2021). How one feels constrained and also how one feels freed up through movement can enable different experiences in relation to other bodies (in this case other women). Through this methodological practice we can challenge in a creative way and surface the taken for granted assumptions about gendered embodiment and then work with more affective pedagogies (Hickey-Moody, 2013). This approach seeks to understand what those affects 'can do' and how they can engage people in moving in ways that they perhaps previously couldn't imagine. So, I think creativity and affect are going to be really important concepts and practices to be researching and thinking with. The exciting part is that we have lots of potential to collaborate with non-academic partners, with activists, with organizations to explore these alternatives and see where they can go.

To what extent more-than-human perspectives can enable us to (re)think and (re)shape the spaces of education, physical activity and health? With “spaces” we understand here not only the physical spaces of health, education and physical activity, but also digital spaces and the ways in which different spatialities entangle each other and produce each other. So, we keep the idea of space quite open to the blurring of boundaries and understandings.

Alessandro Bortolotti: Thank you for allowing me to explain a little bit more about this issue with a perspective that is trying to merge both outdoor education, more-than-human perspectives and languages. So, I would like to introduce you to some different perspectives using different languages. Because when we talk about Outdoor Education probably everybody, at least everybody among us, is able to understand roughly what we are talking about. We're talking about going outside in some way, doing some activities, and then maybe reflecting upon that and so on, usually in an experiential way which is an approach quite different from a “traditional” one – or a virtual one, what I already described as “worse than worse”. I mean, I'm not a fan of a “just virtual” model which is the virtual class, but for example if you go in Northern Europe, you probably have to get accustomed to the term *Friluftsliv*. What does it mean? Is it Outdoor Education? In some ways yes, they do something like the Anglo-Saxon Wasp culture does, but it's not exactly the same.

Friluftsliv literally means “free air life”. So, everybody says “oh it's just living the landscape” or “live in nature”, but in Scandinavian culture there are some specific conditions, e.g.: around Scandinavian schools for example there are no fences. So, pupils can escape if they want, because it is a real open space. It's not the case in the United Kingdom nor Italy, not at all. There are fences. Children are not free and therefore not allowed to move much outside – not just like a Scandinavian pupil. So, from an Outdoor Education perspective, if it is in a public school (while if it is in a forest school it might be different), but generally speaking in public schools, in UK and Italy Outdoor Education or Outdoor Learning means that there is much more control than in Scandinavia. In Italy again it's surely different, even if the “label” “vita all'aria aperta” (literally “open air life”) it sounds like the Scandinavian “Friluftsliv”, it is less free, absolutely. Again, for another example in Czech Republic, it's called “Turistica”. Why is *Turistica* interesting? Because in Czech Republic, this is an historical issue, they had for many years, for decades, occupation by the Nazis first and the Soviet then. So, how could they keep and survive the traditional culture? By doing “Turistica”. Going up on the hill where nobody could observe what they're doing, because it was forbidden, activities like traditional dance or traditional

languages were forbidden. “Turistica” allowed people from Czech Republic to keep their traditions. So, for them now to go outside means to be again able to keep their culture. So, just to wrap up, going outside, getting in nature, what does it mean from an educational perspective that wants to be outdoors? It means that there's a cultural way to live your landscape and you get it immediately, because also at least in Italy there are many differences, for example between a city and/or other different contexts. So, I think it interesting because this place-based education allows you to understand this phenomenon starting from the basic, it's a kind of local and bottom-up approach.

Bruno Mora: In our nomenclature, the nomenclature of extension, we call it “integral training space” (EFI). We work on projects with territorial and geographical policies. In addition, I work in an EFI of the group I mentioned in the previous intervention, of social and cultural studies on sport. We encountered a problem during the pandemic, because we tried to get people to participate in political decisions, but now they are hungry. They have many problems at work, in the neighbourhood. Nevertheless, we work with soup kitchens and other organizations that are alleviating this situation. A particularity of the EFIs is that we find different levels of violence that we can find in this critical situation. Such as the use and particularly the consumption of technology and how it structures the lifestyle. I am going to talk about two projects. The tatami project, whose main actors are girls and boys who practice judo in a weekly space within the university. We work with physical education and psychology undergraduates. Girls and boys stay in the project and learn political participation, creation of games, besides having a relationship with teachers from the Federal University of Fluminense and the National University of La Plata. And the other project is called *picaditos etnográficos* (ethnographic kickabouts) whose objective is to construct narratives of women's soccer in the first person. In addition, these narratives make us discuss about themselves, they do research on (sport) heroines, which can be thought of as a critique of modern sports, patriarchy and heteronormativity. It is necessary to start thinking that another soccer is possible in Latin America, even more including professional clubs and their political changes. “Picaditos etnográficos” works with several researchers in the same meeting. Some play soccer and some are out on the field. After all, we talked to make a synthesis of everything that happened in that game with the organizations, which we consider an educational space as well.

Niamh Ni Shuilleabhain: In relation to my research, more-than-human perspectives enable us to reshape spaces of education, physical activity and health by shifting our focus away from individual actions towards those relations from which phenomena emerge. So, these spaces of education, physical activity and health are configured by affective, material-discursive, human and non-human

relations. Therefore, by applying approaches that engage these multiple phenomena we may begin to reconfigure these spaces. So, scholars like Emma Reynold, Jessica Ringrose and Anna Hickey-Moody have well demonstrated how creative approaches that engage these phenomena can be employed in the context of schools with really great effects. My PhD research explored more specifically how these approaches may be deployed within schools' health education spaces so that these spaces might become more sensitive to body dissatisfaction and concerns surrounding eating disorders. At the start of my project, I had been trying to develop pedagogies to transform these spaces. I was often focusing more on the discursive and on human agencies within the classroom and unfortunately some of those pedagogies I developed with that focus were rather limited in challenging those relations through which conditions like body disaffection emerge. This was in part because these relations are co-constituted by interactions that involve material and more-than-human phenomena. Using post-human perspectives in these spaces enabled me to move towards challenging how those broader classroom relations were configured. So, I suppose moving past a focus on what a person might have said, or 'done wrong', towards thinking about the materializing effects of classed, racialized and gendered power relations within the classroom. So, for example, asking what made that behaviour acceptable or normalized within that space. Relating back to Simone's previous answers, my research was informed by, and built on, scholarship that demonstrates how creative methods can serve to mobilize and amplify the way that young people already work within these spaces, and engage multiple phenomena like the material classroom, to destabilize and reshape spaces of physical education, activity and health. So, yeah more creative pedagogical approaches do provide the opportunity to disrupt some of the normative territorialising affects that are at work within these spaces and that work through material and more-than-human relations. So, what I mean by that is that we cannot often just focus on individual imperatives even if they are more creative, like for example "be more artistic" or just introduce dance. We must also focus on how that space is enabling or orienting certain embodiments, certain ways of coming to know the body certain ways of knowing the self and feeling about the self. So, I think in engaging and interacting more creative exploratory, as Alessandro said experiential pedagogies, post-human perspectives allow us to consider how we are engaging and configuring the space, so that these new forms of embodiments, or just slightly different ways of coming to know the body, are allowed, enabled and further encouraged within spaces of physical activity, health and education. More-than-human perspectives provide lots of opportunity for rethinking these spaces by allowing us to engage multiple agents. Candace R Kuby and colleagues

(Kuby, Gutshall Rucker and Kirchhofer, 2015; Kuby, Gutshall Rucker, 2016; Kuby, Gutshall Rucker, 2020) have done amazing work in literacy education that engages material elements of the classroom. We need to think about how these spaces are enabling different forms of embodiments and how we might contend with affects of discomfort that can arise when we're trying to challenge and shift these spaces towards, like Alessandro said, spaces of freedom for multiple forms of embodiments.

Simone Fullagar: We are so far away but we're so close at the same time which is great. It is really interesting to hear everyone else's perspective on this question which has got me thinking about needing to foreground our relational understanding of spaces of physical activity, health and education. Which I think is entirely congruent with a new materialist perspective and I would take the notion of space a step further and think about *timespacematters*, as Karen Barad (2007) would say, because space is always bound up with time. Many of us probably used the term Covid-time to refer to this weird sense of past-present-future shifting in our everyday lives with heightened uncertainty that we face during this pandemic. There are a couple of projects I think are relevant here and one is a new one that just started with my colleague Adele Pavlidis at Griffith University and some other colleagues where we are looking at the return to sport and fitness in Australia, particularly Queensland. We are exploring how sport organizations are responding and what are they doing in terms of managing their spaces and organizing their spaces, and how are they thinking about equity issues and particularly gender equity in the return to sport. Because all of our government guidelines about return to sport have been very much focused on risk-management and disease-prevention. They haven't given sport organizations any further guidelines on how to manage people's fear, their potential shame if they have had the virus, or all the anxieties and affective responses that are being generated that might prevent people from engaging in sport or fitness and gyms or outdoor spaces. These relations will in turn influence how people relate to each other and how the non-human aspects of that are managed and organized. That can be the fields and the canteen and all the other equipment. All of those things that become part of our sporting lives are being highlighted I think during these shifting time-space relations. We plan to use some creative methods to engage participants who have returned to sport under physical distancing measures about how they have been impacted and how sport has come to matter differently in their lives. We are just at the start of this project but we're going to talk to sport participants as well as volunteers, officials and key policy makers within sport and within government about this process. We want to tease out some of those different approaches to knowledge and to

understand what has been left out of the discussion in terms of people's experiences, inequalities and the more-than-human approach relations.

The other project that this question has me thinking about as I'm writing it up, is a project that was undertaken with young people who are outside the mainstream education system because of various behavioural issues. They may have been diagnosed with ADHD or with a range of problems that meant they weren't able to stay in the mainstream school system. They are in a flexi-school, as we call it in Australia, and part of that school program involved an equine program where they worked with horses for six weeks. Working with horses meant that they had to learn to relate differently and I have been drawing on my colleague Anna Hickey-Moody's (2013) work on affective pedagogies to explore those human-animal relationships and how important they are to open up different modes of learning. Often we have a very human-centric view of learning - the human teacher that instructs the human student - however if we take animal and human relationships into account we're actually thinking about how the horse plays a role as the pedagogue. This has meant paying attention to how children learn through very different sensory and affective modes than they would in a structured classroom. It is a very different kind of relation they have with the horse as the animal and a very different space - the assemblage of the horse, stables and equipment and all of those things. What we have analysed so far in terms of seeing the shifts in the children's learning, behaviours and interactions is that concentration improved, their sense of confidence and ability to interact positively. Improvements were noted by the teachers, volunteer instructors, parents and the other children which has then opened up a different way of narrating those children's subjectivities as hopeful learners. This is a discursive shift to children with potential rather than children who are problems that have been defined by deficit narratives. I think the human-nonhuman relations are going to be part of our conversations about the future provision because we need to really be thinking about the shifting relationships as they play out as spacetime matters.

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