On a Corresponsive Sport Science

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Abstract

In our societally extractive age, sport science risks being swept up in the intensifying desire to commodify the experiences of those that scientists proclaim to study. Coupled with the techno-digital revolution, this stems from a vertical (onto)logic that frames the sporting landscape as a static space filled with discrete objects *waiting for us* to capture, analyse, re-present and sell on as knowledge. Not only does this commodification degrade primary experience in the false hope of epistemological objectivity, it reinforces the unidirectionality of extractivism by setting inquirer apart from, and above of, inquiry. Here, we advocate for a different, more sentient logic grounded in the relationality of gifting as understood in Indigenous philosophies. This foregrounds an ecological orientation to scholarship that sets out neither to objectify or describe that which is of concern, but to *correspond with its becoming*. On this, there are three threads we cast forward. First, in a corresponsive sport science, inhabitants are not objects of analysis, but *lines in-becoming*, who in answering to others, form *knots in a meshwork*. These knots constitute communal places in which inhabitants have joined with the differentiating coming-into-being of others. Second, knowledge is not authoritatively (re)cognitive, but *humbly ecological*; not produced vertically through imposition, but *grown longitudinally in responsively moving from place to place*. Third, research does not follow a vertically extractive (onto)logic, but is a practice of *participant observation*. This perspective appreciates that we, sport scientists, are also lines in-becoming that form parts of the knots in which we seek to know. In coda, our thesis is not a call for more qualitative or applied research in the sport sciences. It is a call to response-ably open up to that which sparks our curiosity, answering to what is shared with care, sensitivity and sincerity.

Key words: Ecological; Gift logic; Knowing; Extractivism; Response-ability; Correspondence

Key points

- We sketch an ecological orientation to scholarship that sets out neither to objectify or describe that which is of concern, but to *correspond with its becoming*.
- We ground this sketch in the relational episteme of gifting as understood in Indigenous philosophies.
- Three threads to a corresponsive sport science are cast forward: i) inhabitants are not objects of analysis, but *lines in-becoming*, who in answering to others, form *knots in a meshwork*; ii) knowledge is not authoritatively (re)cognitive, but *humbly ecological*; not produced vertically through imposition, but *grown longitudinally in responsively moving from place to place*; iii) research does not follow a vertically extractive (onto)logic, but is a practice of *participant observation*.

1. Prologue: The gift of a communal garden

I[1] (first author) grew up not too far from a communal garden. Located on Kaurna Land, this was a place where seasonal fruits and vegetables were planted, harvested and cared for by inhabitants, many of whom were neighbours and friends. Accompanying this garden was a wooden sign that read: "*a place for all, looked after by all, nourishing for all*". The use of 'all' on this sign was apt, as the garden constituted a rich multispecies entanglement – a meshing of various plant and microbial life, with humans, birds, small mammals, reptiles, insects, fungi and worms. There were no rules or regulations governing how this place was to be sustained, as no authority controlled it. Rather, inhabitants learned to care for the garden *together*, educating each other's attention to subtle variations of an unfolding ecology they were a part.

Unbeknownst to me at the time, this would be my first experience of a genuinely communal place – a commons. In the exceptional text *Reclaiming the Commons for the Common Good*, philosopher-activist Heather Menzies [1] defines such a place as "a habitat of interrelationships, bound by mutuality: mutual obligation…and also, hopefully, affinity" (ch. 13). This is precisely what the garden was to the community in which I grew up; a place sustained by the responsive actions of those who cared. Because of this, it was not just a site of fruit and vegetable production; it was a place in which *gifts were shared*[2]. This logic was seminal for me; when you view things as gifts, your relation with them profoundly changes. It led to a gratuitousness that kept me from taking more than was needed, while concurrently opening an invitation to reciprocate: *to give back to the garden that gave to us*.

[1] The grammatical use of singular pronouns "I" and (forthcoming) "me" do not denotate a separation from the world. Rather, "I/me" constitute a posthuman self, in which "I/me" am always unfolding *with-in* a field of relations [2 (p. 15)]. The use of such pronouns are grammatical conventions of communicating in the first person. In a similar vein, the forthcoming collective pronouns "we", "us" and "our" do not refer to a conformed view of humankind; a homogenised universal. They appreciate a profoundly diverse and uneven multiplicity of human (and nonhuman) becomings in the sport sciences and beyond [2-5].

[2] Gifts would often take on varying temporalities and materialities, and were not anthropocentric. This logic was better reflective of a worldview that called for our responsibility to the land in which the communal garden resided. This perspective stemmed from the cascading question: *what gave its life for 'our' garden to grow?*

In our societally extractive age, characterised by anthropocentrism, capitalism, individualism, entho-centrism and datafication [6], the environment and its inhabitants are typically perceived resourcefully, as commodifiable objects used to further ways of life replete with social and ecological degradation [2, 7]. A garden like the one described here is now a rarity. In fact, I have not encountered such a place since leaving home many years ago. This is why upon returning more recently, I was deeply saddened to see that it had been covered over by concrete, the land 'purchased' by a body-corporation who had turned it into a carpark estate. Somewhat ironically, the wooden sign denoting its communality had been removed, replaced with an authoritative notice dictating it illegal to park in the estate for more than an hour at a time. I bring this to your attention, as it reflects what Menzies [1] refers to as:

> "a shift from a society and economy embedded in *social relations* and *relations with the land* to a society and economy centred in the market and the utilitarian logic of *maximising production* for market gain" (ch. 14, emphasis added)

We are not immune to such a shift in the sport sciences. Phrases like 'data mining', 'knowledge production' and 'knowledge transfer' proliferate the field, noted in countless articles, policies and in the documents of many national governing bodies and institutions[3]. Such phrases are perverse and can be deeply problematic. They risk seeding a commodified and asymmetric view of athletes, coaches, teams and organisations, situating 'research' as an explicit practice of *extraction* – going in to harvest 'data' for re-presentation as 'knowledge'. This is to deal almost exclusively in what ecological psychologist Edward Reed [8] referred to as an economy of second-hand information. It is a knowledge economy that not only quietens the voices of those that we proclaim to study in the sport sciences, but risks an immunity to *listening*, closing ourselves within an objectified surround of our own arrogant creation [1].

[3] See [9] for an interesting critique on such a 'productive' account of what it means 'to do' sport science.

Over the years, we (the authorship) have grown uncomfortable with this objectified form of extractivism in the sport sciences, leading us to (re)search for an alternate logic. Recently, it dawned on me that the communal garden I attended all those years ago was offering yet another gift: a thread to guide our ongoing pursuit. This would root the ethics of openness, participation, generosity, reciprocation and responsibility; appreciating relationality not as a unidirectional interaction between independently bounded objects, but as a *correspondence that flows along with-in a world never settled*. To some, such a view of the sport sciences may seem utopic, and arguing for it a philosophical discourse in what is anti-experiential mainstream. Such sentiment, though, just speaks to the current extractive state. If we are to take seriously our role in fostering conditions supportive of a communal future, then we have an obligation to work toward a sport science responsive to *all*[4]. Among other things, this perspective would require attunement to different ways of knowing – moving from a discourse rooted in the epistemological inversion of objectification, toward an eagerness to be present; coming to know things of concern by joining with their becoming, answering to what is shared with care, sensitivity and sincerity. Science, after all, depends not on objectification, but on observation:

> "[…] and all observation depends on *participation* – that is, on a close coupling, in perception and action, between the observer and those aspects of the world that are the focus of attention" [11 (p. 75, emphasis added)].

Our challenge is to bring this observant participation – the tight coupling of perception and action – to the fore in the sport sciences. This is not a call for more qualitative, applied or translated research. But a call to *correspond* with what we proclaim to study, learning directly from what it has to share. Occupying a representational space above, guised under the (false) premise of objectivity, it is all too easy for us to wash our hands of what is actually going on; to blame those on the ground (i.e., coaches,

[4] Like denoted on the garden's welcoming sign, the grammatical use of "all" includes human and nonhuman beings. For recent posthumanist theorising in the sport sciences, see [10].

athletes, practitioners) for not applying and complying with what we have authoritatively told them. Perhaps this hierarchical occupancy is one of the reasons why the integration of research has been questioned within our discipline[5]? Like experienced in the communal garden all those years ago, joining *with* may just be what helps us move toward a more corresponsive future; a future where we are bound together *in* difference, not *by* it.

2. Introduction

> *Can sport science be un-disciplined? What if instead of imposing (sub)disciplinary concepts from afar, we joined in; inhabiting the places we studied, learning to go along with the goings on? How would this un-disciplined inhabitation change the way we come to know things? What possibilities could the un-disciplining of sport science open up?*

These cascading questions are not intended to be answered. They are more like paths of travel that help us attune to ways sport science could be re-imagined. Recently, these questions led us to consider research as a sustainable practice in the sport sciences [14] – a practice of opening up to what is of interest, educating our attention to what it has to share by seeing, hearing, feeling, smelling and tasting things *directly* [15-17]. Here, we develop this thesis, sketching steps toward *a corresponsive sport science*. While by no means is this unfolding sketch complete, it does present an important philosophical progression in our[6] emerging line of research, opening a path to be explored in the years to come.

To start, we situate the current state of mainstream research in the sport sciences within our societally extractive age [2, 6]. Characterised by anthropocentrism, capitalism, individualism, datafication and an ethno-centric market economy, this is an age in which the environment and its inhabitants are at

[5] For overviews to the limitations of instigating change through research in the sport and exercise sciences, see [12, 13].

[6] The grammatical use of "our" here should not be construed to denote an exclusive ownership, as if "our" research is locked away from the goings on of the world. Rather, "our" appreciates the many correspondences that continue to shape the coming-into-being of "our" ideas – from scholars in disparate fields and coaches of many different sports, to farmers in North Queensland, hiking trails along Southern coastal regions and coffees with friends. Unashamedly, "our" ideas are response-ably leaky!

continual risk of objectification and commodification. Within the sport sciences, this (onto)logic[7] plays out subtly through the proliferation of second-hand information, in which primary experience is transformed into 'data' for re-presentation as 'knowledge' [7, 8, 18]. Through the deeply-entrenched hypothetico-deductive theory of the scientific method [19], research has seemingly become a vertically integrated process of *knowledge production through extraction* [cf. 11, 14, 20]. While undoubtedly fostering important discoveries in the sport sciences, this inversive and extractive episteme is fundamentally limited; positioning inquirer apart from, and above of, inquiry; severed from the unfolding ebbs and flows of an environment in flux [20]. Not only is this perspective of research vertical, extractive, unidirectional and representational, it is *unresponsive to the experiences of those it commodifies*. There is, in other words, no gratitude for what is taken, no reciprocation for what is shared. Just hard facts, results and outputs, produced and sold on behind paywalls[8], waiting to be re-packaged and transmitted back to those on the ground for application in practice.

To counter this unsustainable extractivism in the sport sciences, we work toward a logic grounded in the relationality of gifting as understood in Indigenous philosophies [21, 22]. The gifting logic offered extends far beyond the mere economic exchange of objects or the transmission of pre-packaged, secondary information. It is a deep and respectful appreciation of our coexistence *with* the world, a responsibility to that which is shared. This is about letting things speak for themselves; paying close attention such that we can *respond* with care, sensitivity and sincerity [1, 15]. Thus, gifting logic opens up an entirely different way of relating with the world, foregrounding an ecological orientation to scholarship that sets out neither to objectify or describe that which is of concern, but to *correspond with its becoming* [14, 23]. This corresponsiveness, we suggest, can foster the growth of a communal

[7] The grammatical use of "(onto)logic" is intended to denote a logic of imposition, germane to extractivism. That is, a 'logic' to impose 'onto' a performance environment that we seek to know about.

[8] While we welcome the dissemination of scientific findings, the rise of 'pop-science' in the sport sciences and beyond exemplifies such extraction and production. Such work oft-focuses on re-packaging 'simple' messages that are sold onto mainstream readerships without careful consideration of the nuance entangled in the original ideas.

sport science, where people, who are attentive to the experiences of others, *share gifts together*[9]. Communality, however, is not to be construed as a push for conformity, homogeneity or (sub)disciplinary integration. It is an appreciation of the immense variation (and profound inequality) of life that constitutes an ongoing process of *differentiation* [3, 24; also see Footnote 1). Otherwise stated, in a corresponsive sport science, because 'we' are different and ever-differentiating, *everyone has something to give precisely because they have nothing in common*; an appreciation echoing the very etymology of 'community' – *com-* (together), plus -*munus* (gift) [23 (p. 6)].

Next, three threads of a corresponsive sport science are cast out. First, inhabitants are observed, not as objects of analysis, but *lines in-becoming*, who in answering to the lines of others, form *knots in a meshwork* [25 (ch. 3)]. These knots constitute communal places where inhabitants have joined with the differentiating coming-into-being of others. Moreover, they are not tied off, but consist of loose ends that responsively stretch out in the hope of entanglement with others [26 (ch. 9)]. Second, knowledge is not authoritatively (re)cognitive, but *humbly ecological*; not produced vertically through imposition, but *grown longitudinally in responsively moving from place to place* [1, 15, 24]. This episteme flips the inversive and extractive knowledge economy of the sport science mainstream – moving scientists from objective bystanders who occupy a static space above, to *observant participants who inhabit a dynamic place with* [1, 3, 20, 26]. Third, research does not follow a vertically extractive (onto)logic of that which is 'done to' or 'on', but is undergone together, through the carefully diligent practice of *participant observation* [20, 26]. This echoes the relationality of our theorising: a corresponsive sport science is not a method to be applied in research; it is a way of knowing in research. That is, only because we are *of* the world can we correspond with the various things that call for our attention: *we are part of the knots in which we seek to know, not apart.*

3. An extractive (onto)logic

[9] As mentioned in Footnote 2, gifts can take on many different materialities and temporalities. While we explore this later, we have chosen not to elaborate on what gifts may 'be', given it is more reflective of a worldview, not a material exchange *per se*.

In the first chapter of the book *Our Extractive Age*, Shapiro and McNeish [6] discuss how human extraction of natural resource has contributed to a significant environmental crisis. Such is the magnitude of this crisis and our societal role in it, some have gone as far as to (controversially) suggest that we are living in a new geopolitical era, situating humankind as the major catalyst to geological change [27]. While consisting of many complex features, this extraction-based crisis is most noted through the advancement of industrial capitalism and colonialism stemming from 17th century Europe [2], leading to the mechanisation of labour, the mining of hydrocarbons, global warming, ecological degradation, social injustice and the rapid datafication of primary experience. With specific reference to the latter, this 'advancement' has bled into models of science, education and mass communication [2], driving a teleology that positions humans and other beings as resources to be mined and objectified, ultimately leading to their commodification. Not only does this seriously degrade primary experience, it dampens collaboration and communality in favour of production and conformity [2, 8]. The extractive (onto)logic explored by Shapiro and McNeish is thus wide reaching, woven through varying domains, materialities and temporalities, rendering it not only spectacularly apparent through immediate environmental degradation, but also silent and hidden, manifest in "a process of long dyings" [6 (p. 2), 28 (ch. 2)].

Such expansive views shed new light on emergent forms of extractivism, and even bring into question purportedly 'sustainable' discourses focused on 'green development', 'green building' and the use of totalising technologies that attempt to 'greenwash' the crisis such technologies risk perpetuating [6, 18]. For example, many industrial-scaled renewable energy projects still follow an (onto)logic grounded in anthropocentrism and capitalism, in which the earth is re-configured, and its 'resources' exploited and commodified, for the betterment of humans[10]. Extractivism, thus, is more than just an act of resource exploitation and degradation; it is:

[10] While we use the term "humans" abstractly here, we do appreciate that such "human" betterment is not a betterment *for all humans*.

198 "a particular way of thinking and the properties and practices organized towards the goal of
199 maximising benefit through extraction…" [29, (p. 20, emphasis removed)]

200 This definition helps us attune to how an extractive (onto)logic could concurrently play out in the
201 abuses of individual rights, affecting human well-being and flourishing. Whether as a political regime,
202 a theory, a scientific method, a principle of organisation, or an attitude that "rests upon a
203 universalizing 'natural law' in which the exploitation of 'nature' features as an ontological
204 prerequisite" [18 (p. 177)], extractivism is far more prevalent than what may be assumed.

205 Recently, this (onto)logic has been unfolding in the ever-intensifying techno-digital landscape through
206 the extraction of personal data embroiled in the use of devices purported to offer 'online'
207 entertainment, mass communication and quick access to 'knowledge' [18]. Not only can such personal
208 data be stored, it can be mined and leveraged for monetization, thereby situating the consumer as
209 "both the resource for collecting data and the target of the potential uses and abuses of the data
210 collected" [18, (p. 176)]. A datum, by its very definition, is that which is given – an offering. Though,
211 what practices of digital extractivism reflect is not a reception of an offering, but a taking of what is
212 not. The erosion of individual rights can occur subtly, through the collection, storage, sharing, selling
213 or stealing of secondary information that documents features about one's life, thereby representing
214 a major risk to the right of privacy.

215 *3.1 A hidden (onto)logic in the sport sciences?*

216 Here, the relevance of such digital extractivism in the sport sciences is explored through the pervasive
217 tendency for sport scientists to 'collect', 'store', 'mine', 'process', 'analyse', 'model' and 'visualise'
218 *data*. Sport science, it seems, has rapidly become a (sub)discipline simply bound up in the production
219 of 'big data' [30], as if its collection and analysis characterise what it is that a sport scientist 'does' [cf.
220 31]. Such data-centrism, though, begs the question: *how many sport scientists are actually spending*
221 *time with the phenomena they proclaim to know, not just the datasets, harvested indirectly, that*
222 *specify features about them?* Asking such a question, while perhaps uncomfortable, does help

highlight the oft-unspoken dangers of incessant datafication. Not only does it risk degrading primary experience in favour of 'objective truths' believed to be encoded within fragmented bits of extracted data [8, 31, 32], it proliferates into an economy of second-hand information, where observations rooted in primary experience are transformed into data for re-presentation as 'knowledge' – fostering an estimated (not actual) view of reality [cf. 8, 11, 20, 33]. Stated differently, with all these data at their fingertips, sport scientists risk conflating secondary information with knowledge, inadvertently blinding themselves from what the world can share *directly* with them [34, 35].

In research, this can lead to an arrogating tendency for sport scientists to *look at* what is of interest *through* a conceptual lens, all while occupying an authorised position from afar [20]. This is founded on a vertical ontology [36], where reality is sought in hidden layers below what is apparently observed. It follows that to *actually* explain a phenomenon, one must search for causal processes or mechanisms that reside somewhere beneath its goings on. Such positionality privileges the production of supposed 'objective truths' that are generated from *the scientist's vantage* – an epistemological process Haraway [37] refers to as 'the god trick'[11]. In mainstream sport psychology, for example, this ontology rears itself through the (oft-fiercely defended) presumption that decisions and actions are distinctive, separatable entities driven by mentalistic (computational) inferences, predictions or representations constructed and stored in advance [cf. 38]. Tied to this ontology is an objective episteme that views knowledge possessively; that is, something to be produced, commodified and transmitted into the receptable minds of passive recipients, waiting for application when the time is 'right' [cf. 33]. Surmised by Ingold [26], it is a belief in which:

> "…lessons learned through observation and participation are recast as empirical material for subsequent interpretation…. Lessons in life become '…data', to be analysed in terms of an exogenous body of theory [or concept]" (p. 4-5, text in brackets added).

[11] As Haraway [37] notes, 'the god trick' is performed by the dislocated scientist who sees "everything from nowhere". This presumed (objective) position of authority is what leads observations to be turned into resources for appropriation.

Driven by the pervasive use of hypothetico-deductive theory of the scientific method [19], it appears as though knowledge-producing research has become the 'flavour of the month' in the sport sciences. Indeed, while undoubtedly leading to interesting discoveries, there are deep philosophical, moral and ethical concerns associated with this vertical ontology scantly considered by sport scientists. First, it oft-demands that phenomena be leveraged from context, sterilised from the messiness of life so that it can be controlled and explained by way of reduced, quasi-mechanical processes – all in order to (supposedly) advance 'our' knowledge [26, 39-41]. This perspective typically leads phenomena to be conceptualised as an articulated or connected up network consisting of fundamental parts that must first be experimentally deconstructed and isolated, and then put back together so as to 'understand' how it functions. This fosters an overly-simplified re-presentation of the phenomena, purported to be controlled by abstractly conceived mechanisms, construed in the mind of the scientist, that are located beneath or within its goings on [36, 41]. By default, this worldview encourages sport scientists to *cut through and look at*, not *go along with and feel*; turning wonder, astonishment, humility and observation into control, prediction, management and objectification.

Second, given such verticality, research is oft-framed as something that a sport scientist 'does to' or 'on', guised under a representational lens [13, 20]. It is to look at the world deterministically backwards. That is, in a representation-before-phenomena sequence, where phenomena are viewed independently, as objects of analysis complete and coherent in and of themselves, waiting to be known about through the extraction of data matched against prior-formed hypotheses [11 (p. 141-165)]. Akin to fitting pieces of a puzzle into their correct place on a board, such vertical integration is static, pinning down a fluid reality through classifications, categorisations, labels and representations. Though, as Ingold [42 (p. 38)] argues, no appeal to verticality gets around the fact that the individuals whose behaviour scientists proclaim to explain are in fact representations of their own imagination reflected back in the observations recorded. In other words, what is encountered in knowledge-producing research is an intellectualisation of what is going on, not necessarily the coming-into-being

of the thing itself. This begs the uncomfortable question, are 'we' at risk of committing epistemicide[12] in the sport sciences – turning other people's ways of knowing into objects for scientific analysis in the name of 'research'? If so, should we rid ourselves of the word 'research' in the name of un-extractivism? Or, should we move toward redefining 'research' in a way that it was intended: *the ongoing pursuit of truth*? If this pursuit is never finished, never complete, then 'research' would not be a commodifiable practice of generating 'outputs', but would be an aspiration, a curious process of trying to get things right, be that empirically, conceptually, ethically or aesthetically. It is through its perpetuality where ends become new beginnings, and answers become new questions; where we search, *and search again*.

Third, the unidirectionality associated with a vertical ontology actively separates the scientist from the very thing they proclaim to know, preventing them from directly attending and responding to its coming-into-being [14, 15]. Paradoxically, this separation of knowing from becoming implies that to know what is of interest, one must occupy a space inside the field of inquiry while absolving themselves from its unfolding ecology of relations [26 (ch. 1)]. Oddly, the production of such "knowledge without a knower" [43 (p. 52)], is to accept that the sport scientist's presence in the same world – that is, their sociocultural positioning, experiences, interests and skilled attentive responsiveness – is not just unessential, but actively avoided when seeking to know what is of concern. Indeed, some may claim this positionality is integral for sport scientists to be 'objective'. To us, however, such a claim is nothing more than a guise to ease the discomfort one may feel for getting away with taking that which has not been given. Framed differently, this objectively detached positioning would be akin to suggesting that in order to know something or someone we love and care

[12] Like Haraway [37] suggests, this manifests in the insistence that one form of knowledge reigns supreme. In this instance, we suggest that 'the scientists' knowledge is prioritised over others; a view which risks flattening the world, reducing it of its infinitely rich variegations. What we propose here, is that scientists voice is just one in an unfolding ensemble – not 'the' one.

about, we must somehow remain distant to their goings on, such that we can objectively 'build up' our knowledge about them, produced by way of mediated observations cut through from afar.

4. Toward a different logic

For most of us, of course, this is not how we come to know loved ones. We do not objectively (re)produce knowledge about them through the extraction of data used to indirectly specify features of interest. Rather, we grow knowledge *of* them by spending time together – dwelling in each other's presence, joining with their interests, as they with ours, to become deeply woven into each other's lives [1]. That is, we *go along together*, educating our attention to things that unfold within various contexts, like changes in facial expressions, vocal inflections, or alterations in touch and grip, such that we can respond with care and sensitivity [41]. Care, in this sense, is far more than abstract well-wishing. It means becoming affectively and ethically entangled – getting involved with that which is of concern to us. For it is in this entanglement where knowledge grows, manifest in the attunement of a perceptual system to the detection of patterns in information omnipresent in the surrounds, allowing us to experience the coming-into-being of things without need for mental inference or representation [44-46]. This knowledge *of* the world is not found in texts, data or symbols, nor is it vertically 'built up', transmitted from supposedly knowledgeable superiors or approved authorities. Rather, it is grown by *looking*, along with *listening*, *feeling*, *smelling*, and *tasting* [45 (p. 242)]. It is the knowledge, according to Menzies [1], that arises from direct observation and attentive experience, grown in the deep relations sustained with the particular places we inhabit with and alongside others.

Why, then, should it be any different for sport scientists setting out to know the very things that are of concern to them? Why, we wonder, must they pervasively follow a vertically integrated and extractive (onto)logic that actively separates; driving a compulsion to cut through and look at, not go along with feel? Why must they follow an episteme that renders their presence unresponsive to the very things they care about; cutting themselves off from the generative ebbs and flows of a world in flux in order to become 'knowledgeable'?

4.1 From interrogating to conversing

In thinking through these questions, searching for a way ahead, we found inspiration in the approach to scientific inquiry pioneered over two centuries ago by polymath, Johann Wolfgang von Goethe (1749 – 1832). Specifically, Goethe's delicate empiricism does away with explanations, abstractions and classifications of phenomena-as-objects by encouraging *a conversation with* [41, 47]. This is based on a mutuality in which one discovers the limitlessness of knowing when directly conversing with what is of interest, positioned not atop, but *alongside* [41]. In essence, it is to ask, not "how can I find ways of adapting the phenomena to my specific approach", but "*how can I make myself into a better, more transparent instrument of knowing?*" [41 (p. 31, emphasis added)]. Think, for example, of when we enter into a conversation with loved ones. In these conversations, we are actively open to response from the other – that is, we are *present* to them. This presence is not a series of discrete instances that are connected up, but meanders along nested timescales, as we are ever-drawn into attending and responding to subtle (and not-so-subtle) changes in the others well-being, ebbing and flowing in response to fluctuations in environing conditions. Often while in these conversations, we ask sincere questions[13], and they are asked of us. The sincerity of these questions resides within their care and inherent uncertainty – they are not cloaked with answers hidden beneath their asking, but are ways of helping us remain open to the other [41]. This means they are not pre-planned, unidirectional or interrogative; they are suspended in attentiveness to what is shared – flowing not vertically, from-to, but *longitudinally*[14], along-side.

The caveat is that conversations can only flow along if what is shared is done so in a way that invites *response*. This means that science as a conversation ontologically situates the scientist as part of the world in which they seek to know [41]. It does not expel them to the sidelines, mediating observations

[13] While situated verbally between people, questioning need not be de-limited to such. One can, for example, pose a question to a plant by manipulating various features of the environment. By carefully observing how the plant responds to such a 'question', one can adjust their response accordingly. Questions, thus, are akin to 'probes' or 'experiments' that help us come to know the world a little *better*.

[14] See [14, 26] for an overview as to this directionality. Moreover, such a directional shift in ontology aligns with the Wittgensteinian attitude of horizontality [36].

through (sub)disciplinary concepts used to produce secondary information, but foregrounds their active participation 'with' – requiring them to ask questions, and offer responses, in ways that keeps the conversation going along. This renders knowing, not a matter of accumulation and construction (i.e., knowing more), but of sensitivity and attunement (i.e., knowing *better*), a distinction which appreciates the generative dynamics of inquiry when undergone as an ongoing conversation: it does not end, nor is there a limit to knowledge growth [41]. As Reed eloquently notes:

> "When one is examining the world for oneself there is no limit to the scrutiny – one can look as carefully as one wishes, and one can *always discover new information*. But this is emphatically not the case with secondhand information" [8 (p. 94, emphasis added)]

A photograph of my parents, for example, may indeed help me know about various features captured on the image, like their clothing, facial expressions or acquittances at that particular moment. It is an object of analysis in this regard; an object to be scrutinised. Though, such scrutiny is limited, constrained by the confines of the pixels and colour hues imprinted onto the film I *look at*. Comparatively, when I am *with* them, actively participating in their coming-into-being (as they with mine), there is no limit to observation. Every question and response are replete with curiosity, care and sincerity, presenting an opportunity to know the other better than before by growing ever-sensitive to the information that directly specifies their becoming. Our conversing, in other words, could be considered as the unfolding of a perception-action system. The use of 'unfolding' here is important, as not only does it foreground a temporality, but it fosters a deep sense of humility; an appreciation that the world is not filled with discrete objects waiting to be known about through the imposition of prior-formed concepts. But that it constitutes ever-entangling *things* perpetually suspended on the cusp of becoming some-*thing* else; my parents and I included. This is precisely why, even after all these years, they are still a source of wonder and astonishment to me.

According to Menzies [1 (ch. 22)], humility is important in helping us come to know what is of interest, as it fosters an encounter that allows us to learn with and alongside others. This would imply that to

know is not to cut through and look at, but to go along with and feel, appreciating our coexistence in a world that is never quite the same from one moment to the next. Perhaps knowing, then, is not (re)cognitive, but *ecological*; it is not what or how much you possess, nor what you have produced, extracted, or consumed, *but who you are as a fellow traveller in a world of flux*. This means that knowing would come from creative acts of discovery with and alongside others, grown by attending to the unfolding of things positioned not as an occupant, but as a participant contributing the worlds worlding. As explored next, this perspective foregrounds an entirely different relationality – progressing from a unidirectional, vertical and extractive (onto)logic rooted in production, objectification, commodification, imposition and transmission, toward a logic grounded in the ethics of openness, participation, gratitude, reciprocation and responsibility.

4.2 The relationality of gifting

Historically, gifting theories have been based on an understanding of the gift as a mode of exchange shrouded in obligations, forced returns and pay-backs [21]. Such views are embroiled in a capitalist economy, where one seeks to maximise profit in return for goods and services. This renders gifting a self-vested practice that compels "[t]he receiver…to give back to the giver an equivalent of what she has received" [48 (p. 28, emphasis added)]. Though, in a series of compelling works, Rauna Kuokkanen offers a profoundly different insight to gifting through its grounding in Indigenous philosophies:

> "The gift is a reflection of a particular worldview, one characterised by the perception that the natural environment is a living entity which gives its gifts and abundance to people provided that they observe certain responsibilities and provided that those people treat it with respect and gratitude (i.e., if certain responsibilities are observed)" [21 (p. 72)].

Not only does this situate gifting from a 'together-oriented' perspective, it opens an ecologically dynamic conception of the world, viewed as an intricate mesh of nested and lively relations. As Kuokkanen [21] explains, the land in many Indigenous philosophies is a physical and spiritual entity, of which humans form just one part (also see [40]). What gifting rituals maintain is the intricate

389 relations with the land on which all life is contingent, thereby helping secure the physical, social and
390 spiritual well-being of an individual, group and broader community [22].

391 The notion of community here is not to be construed as a conformed and anthropocentric universal –
392 a community of rationalised human similarity. Rather, it is a recognition of the immense variation of
393 *all* life suspended in a continual process of differentiation, positioned with-in an unfolding field of
394 relations [3, 24]. Thus, because all are different and ever-differentiating, all have something to give –
395 rendering *difference*, not similarity, as the bind that weaves communities together [49]. In a
396 community bound by emergent difference – that is, in 'a community of those who have nothing in
397 common' – not only are the ethics of openness, participation, generosity and reciprocation central,
398 but *responsive* and *responsible* presence by all is required [49]. For example, the gifting logic woven
399 into the communal garden discussed in our prologue was integral to its continuity. Not only did it
400 prevent inhabitants from extracting and commodifying 'produce', it fostered an invitation to
401 reciprocate; to respond to that which was given. In doing so, inhabitants became deeply implicated in
402 the garden's unfolding ecology, progressively learning to attend to its ebbs and flows in ways that
403 fostered its continual regeneration. Otherwise stated, by relating deeply with the garden, inhabitants
404 became *responsive* to and *responsible* for its offerings.

405 In this gifting worldview, responsibility extends far beyond the possession of accountability. It reflects
406 one's willingness and ability to respond – their *response-ability* [3, 14, 23, 50, 51]. When woven into
407 the humility espoused by Menzies [1], this is to commit oneself to an openness ground in presence;
408 to learn with and from the world by allowing one's attention to be responsively educated to things
409 that may have otherwise remained hidden, perhaps cloaked behind authoritative, prior-established
410 concepts or representations. A wonderful example of such humble response-ability in science is noted
411 in the profound reflections of primatologist Shirley Strum [52]. Specifically, in seeking an approach to
412 inquiry that allowed Strum to get to know baboons from a "baboon's perspective", Strum recounts:

> "I made a determined effort to forget everything I knew *about* how baboons are *supposed* to behave [by way of vertically integrated concepts, paradigms or representations]. Instead, I tried to let the baboons themselves 'tell' me what was important" (p. 30, emphasis and text in brackets added).

Becoming response-able is to let the world to speak for itself and to openly dwell in its presence, rendering oneself available for the response of another. Like entering into a conversation with a loved one, it is in this presence where knowledge grows; where we learn to pay attention to what is shared with us, to adaptively going along with its goings on [15, 17]. As noted in Strum's eloquent reflection, this is not a matter of 'decoding', 'translating', 'interpreting' or 'making sense of' what has been gifted to us – cutting through and looking at. But of learning to *observe*, *hear* and *feel* that which has been shared, leading to the unfolding of a careful, sensitive and sincere *correspondence*.

There is a subtle, but important point to highlight here. In response, we are qualitatively different than before; we are "ourselves in encounter with another" [53 (p. 46)]. By their nature, such encounters are indeterminate, meaning that in response, we are transformed in a somewhat unpredictable way. To correspond, then, is not to impose onto, but to *join with*, actively coupling our perception and action to the unfolding of what captures or attention to keep the conversation moving in direction determined *as we go*. Not only does this responsiveness require participation, it calls for the ethics of openness, generosity and reciprocation, as without which, correspondence would likely regress into an extractive, unidirectional interrogation. Thus, the relationality of gifting we advocate for here foregrounds an ecological orientation to scholarship that sets out neither to objectify or describe that which is concern, but to *correspond with its very becoming*.

5. A corresponsive sport science

What does such an ecological orientation imply for the re-imagination of scholarship in the sport sciences? To initiate conversation in response to this question, we now cast out three threads germane to its logic. First, inhabitants (i.e., coaches, athletes, practitioners) are observed, not as

438 objects of analysis, but *lines in-becoming*, who in responding to the lines of others, form *knots in a*
439 *meshwork* [25 (ch. 3)]. These knots, which are of loose ends, constitute communal places where
440 inhabitants have joined with the differentiating lines laid down by others [26 (ch. 9)]. Second,
441 knowledge in a corresponsive sport science is not authoritatively (re)cognitive, but *humbly ecological*
442 [1]. It is not produced vertically through imposition, but *grown longitudinally in moving from place to*
443 *place with others* [25 (ch. 3)]. This flips the extractive epistemological inversion of the sport science
444 mainstream, moving scientists from objective bystanders who occupy a static space above, to
445 *observant participants who inhabit a dynamic place with* [3, 20, 26]. Third, research evolves from an
446 extractive process of knowledge production, to a responsive practice of *participant observation* [20,
447 26]. This evolution echoes the relationality of our theorising: a corresponsive sport science is not a
448 method to be applied in research; it is a way of *knowing in research*.

449 *5.1 Corresponsive lines in-becoming (re)forming knots in a meshwork*

450 In a study of wayfinding in the community of Igloolik, Aporta [54] noted that for the Inuit, as soon as
451 one moves, they become a line. To hunt an animal, or to find another who may be lost, is to search
452 for their line in-becoming woven into the very texture of the unfolding surround. This means the land
453 is perceived, not as a passive, discrete surface on which objects sit atop, but as an active mesh of
454 interweaving lines, created and sustained by the movements of all living things. It is, in a word, a
455 *meshwork*. We borrow this term from Ingold [55], who describes the meshwork as a reticulation of
456 lines "laid down by animate beings as they thread their ways through the world" (p. 82). While these
457 lines follow no consistent direction, they are ever-responsive to those laid down by others. This
458 corresponsiveness does not lead to a connecting up, but a joining with; forming not an originating
459 point in a network, but an unfolding *knot in a meshwork* [17, 55; see Figure 1].

460 ******INSERT FIGURE 1 HERE******

461 These distinctions are important and require elaboration. In a network, life is lived at the points
462 connected up by straight lines of *transport*. Think, for example, of one sitting on a train travelling

across a landscape in order to arrive at a station determined prior to departure [5]. While on the train, the passenger is most likely unresponsive to the goings on of their surrounds, some of which may be rapidly passing by their window. Locomotion and perception, for the passenger, are uncoupled – they themselves do not move, but are *moved* from station to station in a series of stop/starts. The network, thus, is based on a logic of connecting *up*. A meshwork, however, takes as its basis that all life is lived *along* lines of growth and movement that meander *through* various places [55]. This meandering is not connected in a stop/start sequence, but rather *carries on*, which means that the knots constituting it are not points or destinations determined prior to departure, but emergent communal places where many lines in-becoming have been drawn tightly together through correspondence [26]. These lines are not destined to reside within the knots they form, but to always overtake them, reaching out in search for entanglement with others. This holds that everyone you meet – as an unbound line in-becoming – is already on their way to somewhere else. Life, in the meshwork, carries on not because it is connected up or fully articulated, but because it is response-ably open, perceptible and always on the move. Otherwise stated, in the network, life is lived *at* the points *between*, while in the meshwork life is lived *along* the lines *in-between*; the former is *unresponsive,* ground in the logic of connecting up; the latter *corresponsive,* ground in the logic of joining with. As an aside, the notion of the meshwork echoes similarity to Deleuze and Guattari's [56] philosophic concept of the rhizome, which contrasts to that of the arborescent thought, represented as the tree. In a tree, a seed takes root and grows vertically by way of a robust trunk supporting many branches, coherently linked to the point of origin that connects *up* – like that of a directed network – representing an essentialist, linear and bounded logic generating 'either/or' binaries[15]. Contrastingly, in rhizomatic thought, the process of existence and growth does not come from a single or central point, but consists of living filaments with no particular form, unity or structure. A rhizome – like that of the meshwork – does not start from anywhere or end anywhere; it *grows from everywhere*, suspended in a state of *becoming*.

[15] This metaphor for thought is enlightening, even though it was not aware that such artificial, linear and bounded logic does not exist in trees' functioning, nor even in nature (see, [57]).

The implications of this first thread are profound for the sport sciences. They imply that inhabitants are not as objects of analysis to be studied about, but lines in-becoming to be studied *with*. This 'with-ness' immediately positions the scientist alongside the very line in which they seek to know, rendering their presence integral to the very knot forming the meshwork [20]. In accord with our ecologically oriented theorising, knots in a meshwork would be conceptualised as communal places replete with affordances [44, 45], inviting opportunities to grow knowledge of the environment. Indeed, while exemplifying what these knots could be risks de-limiting their emergent richness, some apparent examples may include parks, ovals, courts, chess-boards, rock-climbing walls, sporting organisations, or surf breaks – that is, communal places in which differentiating lines in-becoming are woven through corresponsive processes of growth and movement. Think of the intricately messy relations that knot together when a surfer corresponds not only with another, but with the movements of the swell, wind, socio-historical constraints entangled into that particular break, and the coming-into-being of various avian and marine life that may also inhabit that particular coastal region. The surfer needs to be attentive to the ever-differentiating lines laid out such that they can move in ways that keeps the correspondence going along, thereby playing their part in sustaining the knots *knotting*. As reflected in the relationality of gifting, this requires *all* to participate, remaining open to what is cast forward by others in ways that invites response. For a sport scientist to know the surfer, they would need to join with the goings on and respond in ways that tangles them further into the knot, which includes a need to resonate with the discourses and norms that also shape the knots coming-into-being. In other words*, knowledge is grown in the midst of joining with the world's goings on*. Moreover, given the lines that form the knots in a meshwork are bound by difference, not similarity, inhabitants must be responsive to all precisely because all are different [49]. This appreciation opens up a corresponsive sport science to communality, binding together the differentiating lines of scientists, coaches, athletes, practitioners and many others in ways supportive of their unfolding difference[16].

[16] As an aside, this leads us to an interesting question: what would a communal sport science – *a sport science for the common good in a community of those with nothing in common* – entail? While we have foregrounded a

5.2 Knowing is ecological

Central to the relationality of gifting is an appreciation that the continuity of all life is suspended on the intricate mesh of relations woven between inhabitants and the land. This implies that to know is to join with these relations and to go along with their goings on. In the seminal text *Art as Experience*, John Dewey [58] argued along similar lines, proposing that if one *really* wanted to know the flowering of plants, they must join with the soil, air, water and sunlight, which in their weaving, condition the plants' growth. Joining with such relations requires immersion within the field of inquiry so that one can primarily experience the coming-into-being of what is of interest. It is, thus, not the production of secondary information that fosters the growth of one's knowledge, but an ever-attuned perceptual system resonating with specifying information available for pick-up in the surrounds [44, 45]. For in the production of secondary information, perception risks being arrested, as one falls back upon some previously formed scheme that creates the basis of what it is they *recognise* [58].

This process of knowing through recognition is denoted by what David Rubin [59] metaphorically described as a complex-*structure*. In this metaphor, knowledge is mentalistic; a representation that has been transmitted into the mind of an individual prior to stepping forth into the environment. The application of this knowledge is:

> "a simple and straightforward process of sorting and matching, so as to achieve a homology between structures in the mind and structures in the world" [11 (p. 159)].

Comparatively, through immersion one comes to know by responsively opening up to the goings on of what interests them [58]. There is an inevitable surrender here; a giving up on the desire to interpret and control, replaced with a humble openness that allows one to attend to things as they emerge [60]. Such a view aligns with Rubin's [59] counter-metaphor: a complex-*process*. In this metaphor, the active practice of knowing is prioritised over the property of knowledge, which is to say that

direction of travel in response to this question through our meanderings here, we will leave its traversal for future works.

knowledge is not *applied* in practice, but to know is *by way of* practice. Far from being produced and transmitted, ready-made, into the mind of a passive recipient, knowledge is grown through ongoing correspondence with-in an unfolding mesh of relations [11]. This is precisely why, in a corresponsive sport science, knowledge is predicated, not on the production of secondary information, but on direct perception [45]; it is not (re)cognitive, but *ecological*.

There are important corollaries of this un-extractive episteme for the sport sciences, four of which are briefly outlined here[17]. First, knowledge is not produced from afar, but dynamically grown in context through *immersion* – requiring one to expose themselves to the goings on of what captures their interest [61]. For example, to know the goings on of a sports organisation, one would need to immerse themselves in the everyday practices of that particular context, exposing themselves to the intricate relations that come-into-being as inhabitants knot together in correspondence. Indeed, this exposure invites vulnerability and requires a deep sense of humility. But it is in this vulnerable humility where one learns with and from others, attending to things that could guide them along their way [14]. Second, knowledge is *attentional* – it requires one to be drawn out into the world such that they can respond to what is shared; reflecting an attitude that Ana Tsing [53] refers to as the "arts of noticing". The 'arts of noticing' is not about searching inwardly for putative control mechanisms, nor is it to impose prior formed concepts onto a fluid reality. It is about being open to an epistemic mood of wonder; joining with the coming-into-being of what draws one's attention; learning to see, hear and feel things – *to notice* – in ways that invite response. Third, knowledge is not acquired or transmitted, but *grown by dwelling-with-others-in-place* [62]. The knowledgeable sport scientist is not the one who ascribes hard facts to the constituents of what interests them, but the one who is deeply embedded within the context of what holds their attention, aligning their perception and action to its ebbs and flows. This is why, in a corresponsive sport science, knowledge is not what you have, *but who you are as a fellow line in-becoming knotting into a (re)forming meshwork*. Fourth, knowledge is *limitless* and

[17] For a detailed insight, see [14].

inexhaustive, extending for as far as one seeks to travel [8]. The corollary of this holds that the world is conceptualised as an ever-knotting meshwork woven by lines in-becoming already on their way to somewhere else. In this dynamical perspective, knowing would involve going along with these lines as closely as one wishes, following up all the interesting things encountered along the way. By default, this means that 'being' a sport scientist would have no end; it would be an ever-unfolding journey *in-becoming* [5].

5.3 Research as a practice of participant observation

In speaking of his journey into phenomenology, anthropologist Tim Ingold [63] reminds us that when studying people whose background and experiences are different from our own:

> "…the task is not to interrogate them with pre-prepared questions, answering to our personal agendas, but rather to observe what they do and listen to what they say, and to learn – as far as practically possible – to perceive things in ways that *correspond with theirs*" (p. 719, emphasis added).

This view resonates deeply with the last thread cast out here: in a corresponsive sport science, research moves from a vertically integrated process of that which is 'done to' and 'on', to that which is undergone together through the diligent practice of *participant observation*. Espoused in the above excerpt, this is not about directing pre-determined questions *at* the world in order to study *about* its constituents, but is to join with its goings on, learning to attend, as best we can, to its continued unfolding, answering to what we learn to see. To this, there are two threads we open.

First, participant observation is not an ethnographic method of inquiry. For clarity, ethnography – by its very definition – is a description of people, rendering it documentational [26]. In an attempt to 'make sense of' documented observations, ethnography could still fall into a vertically extractive (onto)logic by deducing observations through a conceptual or representational lens, thereby fostering the production of qualitative data stored 'after the fact' [20]. Participant observation, in contrast, is a way of *knowing in research*. This is to situate the scientist *with-in* the field of inquiry [26], rendering

583 their presence open, allowing them to learn from what captures their interest by watching, listening
584 and feeling. It is to undergo what the ecological psychologist James Gibson [45] referred to as an
585 *education of attention* – coupling one's perception and action to various features of the world that
586 draws their curiosity. By observantly participating with-in the field of inquiry, sport scientists could
587 learn to directly attend to features of their surrounds that may have otherwise remained unattended
588 – perhaps cloaked behind strict adherence to (sub)disciplinary method – and learn to respond in ways
589 resonant with inhabitants. This makes participant observation, not documentational, but
590 *transformational*.

591 Indeed, while observation implies participation, it does not discount the importance of noting or
592 writing about the very things that one undergoes during research. Such writing, though, does not serve
593 as a repository for secondary information to be mined in the production of knowledge at a later date.
594 It relates far more deeply to the immediate *experiences* one undergoes when participating with-in an
595 unfolding field of relations different to that of their own. One may write, for example, on how
596 performing a certain task encouraged them to attend to their surrounds in ways not experienced
597 before. This sentience in writing brings us to the second point of research as a practice of participant
598 observation; *it acknowledges the visceral involvement of the scientist as a responsive line in-becoming*
599 *with-in the field of inquiry they seek to know*. In the vertically extractive (onto)logic of knowledge
600 production, this involvement would likely be seen as a weakness, perhaps rendering results 'too
601 subjective' to yield any 'objective truth'. However, as noted in the relationality of gifting, such
602 involvement is not just a strength, but a necessity, for it opens observation to truth beyond
603 objectification. This means that writing as an observant participant does not absolve others from
604 attending to things themselves; it opens a path rooted in experience, actively encouraging others to
605 join. As Ingold [63] surmises, this:

606 > "[…] is to join our own lines with the writing of the world, whether with the paths of human
607 > inhabitants as they find their ways around, or the tracks of animals, or the meandering vegetation.

> And just as our minds mingle with the world in writing, so the minds of readers mingle in turn with ours. All these lines…are braided in a meshwork which ravels and unravels as it goes along" (p. 737).

This is precisely why we opened our paper by sharing experiences of attending a communal garden many years ago. Its purpose was not to document facts about the garden or its constituents, but to open a path for us *all* to explore; a path grounded in primary experience. For in casting these experiences out response-ably, it was our hope that you – the reader – would mingle and join with them, knotting your line in-becoming with ours as the paper unfolded. Herein lies the emancipatory potential of a corresponsive sport science: it is *how* one writes, not as much *about* what is written. After all, the very point of writing as an observant participant is not so others can read about, but so that others can read *with* – joining their experiences with ours such that together, in our unfolding difference, we can find ways of carrying on.

6. Coda

Continuing along our emerging line of inquiry, the aim the current paper was to sketch a corresponsive sport science. Differing to the vertically extractive (onto)logic of the mainstream, the scholarship we advocated for neither explains or describes that which is of concern, but corresponds with its very becoming. This is about joining with what we seek to know – learning from what it has to share such that we can, in turn, go along with its goings on, and it with ours. Importantly, in an ecologically dynamic world that is never quite the same from one moment to the next [33], a corresponsive scholarship does not reach a point of finality or completion. It carries on. Paradoxically, then, how are we to surmise where we currently find ourselves? Are we not writing what convention would refer to as a 'conclusion'? And if we conclude, are we not closing down opportunities for our correspondence to carry on?

In accord with our theorising, it is perhaps better to consider this not a conclusion – that is, a point in which we look back and retrace the ground covered to determine whether (or not) we achieved our

aim, or how closely we held the course – but as the continuation of a line in-becoming, that in joining with others, has formed a knot. This would make our paper a communal place bound by many differentiating lines in-becoming; (y)ours included. And as like all knots in a meshwork, the line woven through here is already on its way to somewhere else. So, while indeed this paper may be coming to a pause, we, the authors, and perhaps you, the reader, are already joining with the coming-into-being of other lines stretching out somewhere along the horizon. Hopefully, our lines will join together again somewhere along the way, moving toward ends un-defined, and form another knot in the meshwork of which we are all a part. Until then, we encourage you to join with what sparks your curiosity, opening up to what it has to share, such that you, in turn, can respond with care, sensitivity and sincerity. This, after all, is the gift of a corresponsive sport science.

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Authors' contributions

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Figure 1. The openly corresponsive meshwork, (re)formed by lines in-becoming knotting with others (above). The closed and unresponsive network connecting up points by straight lines of transport (below). In the meshwork, life is lived *along*, while in the network, life is lived *at*.