



Made-to-Measure: In and Out of Touch with the Old-Growth Forest

Joonas Vola^{ORCID}, *Pasi Rautio*^{ORCID}, and *Outi Rantala*^{ORCID}

Staying proximate with:	Old forests, trees, beard lichens.
Methodological approach:	Considering different kinds of measurements.
Main concepts:	Touch, cutting-together-apart.
Tips for future research:	Stay in touch with different modes of measurement.

J. Vola (✉) · O. Rantala
Faculty of Social Sciences, University of Lapland, Rovaniemi, Finland
e-mail: joonas.vola@ulapland.fi

O. Rantala
e-mail: outi.rantala@ulapland.fi

P. Rautio
Natural Resources Institute Finland, Rovaniemi, Finland
e-mail: pasi.rautio@luke.fi

The work in hand touches upon the definition of age of forest areas in making them sensuous and sensible for environmental policies, forest economy and tourism research, through the indicators: diameter of tree trunks and lichen diversity. The approach utilises the intra-actions in analysing how managing the forests generate measurement, experience, and value in accordance with forest economy, ecology, and nature tourism. Intra-active measures take place both whilst being in touch of the forest as well as in preserving untouchedness of certain area through observations, where untouchedness both repel and attract different forms of engagements. Whilst biology offers vocabulary, entering to a deeper multispecies dialogue, micro-level ethnographic methods based on mobility and being-with are applied, moving the focus from experiments to experience, and from knowing to making of acquaintances.

This chapter has been written by cutting together the work of three different authors who have been in touch with and touched by the forest in different ways. The common and shared interest concerns the ecological sustainability and use of forest areas, with a specific focus on the Finnish Arctic. Pasi Rautio, besides his practical experience with forests, presents knowledge on the measurements conducted in field experiments and critical views on the definitions used in the management of natural resources, a category in which forests and timber are included. Outi Rantala brings in another footed and rooted standpoint from tourism research and multispecies ethnography wherein the forest is experienced rather than experimented with, utilising a variety of mobile and micro-ethnographic methods, such as walking- and skiing-with, photographing, and writing a diary. These different approaches, definitions, and agencies have been put together by Joonas Vola's posthumanist and new materialist theoretical reading to understand how the forest is either seen from the trees or with them.

A forest, with its ecology and biodiversity, is managed and sustained by defining it as belonging to a certain qualifying category. One of the ways to identify a forest is according to its age. Age, however, is not a simple matter. It is the outcome of various relations, an assemblage of multiple species and technologies, material and linguistic, driven by biology, different policies, and economic interests (see Kortelainen 2010; Vannini and Vannini 2016). Within this chapter, we first touch upon how the forest is made in the process of measuring—how the concepts, categorisations, standardisations, and calculations co-conduct the outcome

that differentiates one forest from another. Whilst such numericalisation and countability offer an approximate characterisation of the forest, they may substitute for proximity by abstracting the environment, thus being out of touch with the concrete forest in nature. Therefore, second, we have to question whether the age of the old-growth forest, rather than being defined by a mere number, is about how old one feels the forest is. Feeling requires coming into touch with the forest instead of leaving it untouched, a state that is often wrapped up in the description of an old forest. Instead of aiming to stabilise elusive conceptualisations of the types of forests, we feel our way towards intra-living, being observant of the multispecies world whilst also being alive to it and experiencing the characteristics of the forest—seeing the lichen for the trees and discussing how, on these occasions, we touch and are touched by the forest-becoming-an-age.

The methodological contribution of the chapter is its application of Karen Barad's concept of intra-actions to the practice of observations of the natural environment, both those made and recorded with standard measurements, which are used by biologists and applied in forestry, and those made as a visitor in situ with different methods of mobility, which are recorded by the tourism researcher. The measurements made in or out of touch depend on whether they are done in close proximity or from a distance. Proximity is therefore a crucial factor and variable in the setting, present in both ways of observation and differing mainly in the requirements for the stability or occasional appearances of the observed phenomenon. In relation to the Arctic, the question of forestry and its standards for various types of forests and their growth, the regionality, and the climate form an exception to the rule and present an obstacle for universal definition—moreover, arcticity is a significant matter due to seasonality and the expectations of nature-based tourism relying on the image of untouched nature.



In the natural sciences, definitions are key to measurement, and forests and their components are no exception. Quantifying biological diversity and establishing conventions for its preservation are tasks that require a number of definitions, thus composing terminology for the different kinds of forests and the species they contain. The Food and Agriculture Organization of the United Nations (FAO 2002) considers a forest to be a ‘place that is more than 0.5 hectares and where the canopy cover (i.e. the area that leaves cover) is over 10% and trees are at least 5 meters tall in the mature stage.’ Whilst the definition relies on such factors as surface area and coverage, which are measures made and illustrated from an aerial perspective, it also mentions maturing and height—in other words, growing up and aging. These measurement are made in proximity with the trees by entering the forest floor. To concentrate rather on biographical state than appearances, the Convention of Biological Diversity provides the following definitions for different types of forests:

A primary forest is a forest that has never been logged and has developed following natural disturbances and under natural processes, regardless of its age. ‘Direct human disturbance’ is referred to as the intentional clearing of a forest by any means (including fire) to manage or alter it for human use. Also included as primary are forests that are used inconsequentially by indigenous and local communities living traditional lifestyles relevant for the conservation and sustainable use of biological diversity. [...] **A secondary forest** is a forest that has been logged and has recovered naturally or artificially. [...] **Old growth forest** stands are stands in primary or secondary forests that have developed the structures and species normally associated with old primary forests of that type and that have sufficiently accumulated to act as a forest ecosystem distinct from any younger age class. (CBD 2006)

According to this definition, old-growth forests stand in a primary or a secondary forest. Although they may be considered *untouched* pieces of nature, they are not isolated; they are *in touch* with their younger relatives surrounding them. To follow the work of Karen Barad on feminist new materialism and the philosophy of science, nothing really escapes or excludes the touch of others to remain untouched by intra-actions. A forest, as with any object or phenomenon, comes into being as something in accordance with intra-actions. The intra-active world does not consist of interacting, pre-existing, or previously identified parts. To be a part of, or apart from, an entity that is co-constituted through particular intra-actions is a process that makes, states, and defines the identity and character of its constituting units.

In methodology and practical experimenting, the apparatuses are the conditions of possibility, simultaneously fully material and discursive, producing determinate meanings and material beings whilst excluding the production of others (Barad 2007). The definitions separating a forest or a species from the total ecosystem are involved in the practice of ‘making a difference, of cutting together-apart’ (Barad 2012, 7). This issue, of making a difference, has multiple meanings in the presented context: it is not about simply telling things apart that are, by nature, already separated from each other, but rather about drawing things apart through different methodologies to measure, evaluate, and set them in relation with one another, first by cutting them apart as specimens, one and another, and then placing by them *together-apart*. By making these distinctions, scientists facilitate *making a difference* in the preservation of certain forest areas and, on a wider scale, the planet. These definitions are matters of not only ecological but also economic and political interest. Whilst scientific measurements and calculations, in ecology or economics, may present themselves as apolitical, such a claim of ‘[a]nti-politics, despite the name, is fully political’ (Vannini and Vannini 2016, 200). In the field of forests and forestry, besides the science of cutting together-apart, the definitions are *made-to-measure*.

If we are to understand that old-growth forests are, as a concept, ‘defined by the circumstances required for their measurement’ (Barad 2007, 109), we have to recognise their established and implemented measures, as well as the circumstances under which measuring is conducted. Here Barad draws from the work of physicist Nils Bohr: concepts, such as those defining the characteristics of a forest, are the outcomes of ‘specific physical arrangements’ and are ‘not ideational in

character' (ibid). Nevertheless, the aforementioned established measures and circumstances are not limited to material in a narrow sense, instead including all the factors involved before and after entering the measured forest area, both inside and outside it. For example, the definition of 'old' ought to indicate certain biological conditions; when narrowed down to a number of years, it is not only derived from the outcome of field tests but also requires a number of different metrics to evaluate, with economics and politics present as co-conducting conditions.

The wealth of the nation, for example, is presented in the definition. The concept of a forest is very much nationally described and measured, and the FAO's international definition is more or less artificially pasted on the top of the national designations from which it is cut. To be able to compare forest resources, the states of forests, and forest uses in different states, it is vital that the definitions used are commensurate with each other. Even when measuring, for example, the number of cuttings in cubic meters, without a common definition of a forest, the measurement loses its meaning, such as when it is unclear whether the amount was cut from an area of one or ten hectares.

The importance of clear definitions was demonstrated in international forest policy in 2020 when the Commission of the European Union published the EU Biodiversity Strategy for 2030 (European Commission 2020). In this document, the definition—or lack thereof—for old-growth forests caused heavy debates amongst forest owners, the forest industry, and environmental NGOs. The paper states that 'as part of this focus on strict protection, it will be crucial to define, map, monitor and strictly protect all the EU's remaining primary and old-growth forests.' The strategy itself does not define primary or old-growth forests, referring instead to the Convention on Biological Diversity issued by the UN quoted above. The processes leading to the UN's definitions of forest types are ultimately formed around political negotiations, a compromise that limits their ability to 'map, monitor, and protect forests,' as the EU strategy promised. Especially in Nordic and Baltic countries, the old-growth forest definition referring to secondary forests caused confusion amongst stakeholders, as essentially all managed forests can be considered secondary forests.

These definitions therefore provide poor tools for practical forestry or for ensuring environmental protection when trying to measure the area of old-growth forests or to avoid implementing overly intensive forestry methods within their bounds. They also leave a great deal of room for

interpretation, such that they have led to new conflicts between the environmental NGOs trying to protect these forests and the forest owners trying to manage their property and sell their timber. Perhaps these issues were acknowledged amongst the European Commission members, as the new forest strategy, accepted in 2021, states, ‘The Commission is working in cooperation with Member States and stakeholders to agree, by the end of 2021, on a common definition for primary and old-growth forests and the strict protection regime’ (European Commission 2021). At the current moment (March 2023), this process is still ongoing. It remains to be seen whether the discussions in the EU will lead to definitions that are more useful for practical forestry and nature protection than those that were the result of a long, political, UN-level procedure.



Whilst the measurements are a part of the definitions for different forest types, the act of measuring also generates value. The physicist Erwin Schrödinger argued that ‘a variable has no definite value before measuring it and therefore measuring does not mean ascertaining the value that it has’ (Barad 2007, 281). Value comes out of evaluation. What one measures is determined by what is considered valuable. It is not an involuntary appreciation—as in the case of the forest, trees are considered important, being necessary for the rest of the ecosystem and therefore their number and age render forests more or less valuable. Biodiversity estimates of a certain forest area speak to this point, with some areas becoming more valuable than others if they are richer in species variety. Nor does reality precede measurement: instead, the known world is co-conducted in the act, integrating and assimilating all the

present techniques, technologies, instruments, positions, and parties. To follow Schrödinger, if reality does not determine the measured value, the measured value may define reality (Barad 2007, 281), including the ways in which we record and register it. According to Michael Lynch's spatial grammars, the features of the physical locale in which research takes place exist in relation to the reach that particular instrumental complexes facilitate (Kelly and Lezaun 2013), meaning that the measuring instruments constitute what can be recorded and stated about a locale, such as a forest area. To take an example of spatial knowledge, a way to measure the vegetation in an area is to delineate it with a quadrat frame. Multiple quadrats in turn allow us to extrapolate measurements for the whole community (Krebs 2014, 126). Here quadrats are the spatial grammar, the set of structural constraints. Contact with a frame does not leave permanent marks on physical entities, whether the plants or the landscape itself, yet it is nevertheless the scaffolding structure of knowledge in this intra-action: you cannot take the rectilinear out of the vegetation measurement (Vola 2022, 89). The recording device is therefore entangled with the measured phenomenon (Barad 2007, 283).

Bohr argues that the measurement of specifically embodied concepts requires the simultaneous employment of mutually exclusive experimental arrangements—however, that concurrent exclusivity is an impossibility by definition (Barad 2007, 109). How, then, is the concept of old-growth forest to account for the use of forests by, for example, indigenous peoples? Such cultures, by definition, are not to be separated from the land. Their special relation to the land is very much defined by its traditional use. Nevertheless, a living culture is never to be considered in practice an artefact carved in stone: instead, it flexibly meets the challenges presented by shifting circumstances. The use of the forest may never be reducible to fully fixed values, given that it is very much co-conducted with the shifting particles and units of which the forest consists. Furthermore, indigeneity may not be considered, in all parts of the globe and in all societies, a static factor, but highly political and situational, varying in its identification and recognition and including or excluding certain individuals as a part of its collective group.

As we define the concept of an old-growth forest, we also determine the destiny of a certain forest. Furthermore, in doing so, we define or defy not only the destiny of one forest but also the destiny of all forests. By delineating *a part* of an ecosystem, we also affect other forest areas

and ecosystems; they are not apart from each other conceptually or materially, but they are *a-part* of the same intra-active ecosystem in this era of global warming and climate crisis. Whilst government policies influence the definition of ‘old,’ they also function within the parameters set by the ‘old.’ This prospect may be further elaborated by using the term ‘rare.’ Any individual specimen or species is not rare per se; it rather becomes rare due to its circumstances. Therefore, a rare species might become a pest due to its sheer number in a number of years if the circumstances change to favour it. Furthermore, if a certain area is protected due to the fact that a rare species occupies or inhabits it occasionally, this change in status from rare to common—or even its complete extinction—also influences the evaluated status of the complete ecosystem of that area. The disappearance or disqualification of a protected animal leaves the forest or biotope unprotected, out of touch, and out of time. These shifts mean that environmental ethics seem highly situational.

Barad’s understanding of ethics does not consider acting ethically to be a targeted response to an exteriorised other; she rather emphasises the relationalities of becoming and the responsibility and accountability inherent in them (Barad 2007, 393). Intra-actively, what we do to others, we do for ourselves.

It is therefore crucial for us to recognise the necessity of understanding forests not as separate specimens or protected locales but as in situ parts of the planetary ecosystem both affecting and being affected by the climate and its disastrous changes. They are an intra-active part, altering what is left cut off outside and nevertheless inevitably defining what is inside—the regulated, separated, defined, and protected distinct entity. To think intra-ethically, we must see the forest for the trees.



What if age, rather than a number, is about how old one *feels*? Such feeling requires one to be *in touch with*. Barad writes that ‘a form of experimenting is about being *in touch* [keeping] theories alive and lively [...], responsible and responsive’ (Barad 2015, 153, emphasis added). This understanding is brought into perspective, literally, by anthropologist Michael Jackson, who writes: ‘[I] climbed the hill overlooking the village to get things into perspective by distancing myself from them [...] believing that my superior position would help me gain insights into the organization of the village when, in fact, it was making me lose *touch* with it.’ He thus moves against the idea of radical empiricism requiring ‘working through all five senses and reflecting inwardly as well as observing outwardly, suspending the sense of separateness between self and other and evok[ing] the primordial meaning of knowledge as a mode of being-together-with’ (Jackson 1989, 8, emphasis original). Such an approach requires to move in proximity with the studied phenomenon to be literally able to touch it, and furthermore to be touched by it. The forest should not be simply subjected to senses to make sense of it outwardly, but to become sensitive to the sensations taking place inwardly in the encounter. One must enter the forest and to be enveloped by it. In the intra-actions, one does not simply move oneself and move others, but is simultaneously moved by others, whilst moving along together.

When considering planetary responsibility and responsiveness, we must reconsider the fundamentals of ethical consideration, and move towards intra-ethics. Following Barad, rejecting individualism as a foundation for traditional approaches to ethics, and recognising the agency of others do not relieve human from responsibility, rather such understanding of ethics requires heightened attentiveness to surrounding power asymmetries. To intra-act responsibly entails a reworking of the notions of causation concerned with distinct sequential events, which do not occupy fixed positions in space and time, but the time and space themselves are coproduced and performed, where a single moment does not exist on its own and ethics concern the becomings that we are a part of (Barad 2007, 218, 219, 393, 396). Intra-ethics requires radically being-together-with the other rather than othering oneself from it, insisting that we relate to and negotiate with sensitive and sensible being, which also works as an indicator of the ecological state of affairs. Here ‘[t]he idea is to do collaborative research, to be in touch, in ways that enable response-ability’

(Barad 2012, 2). Whilst the definitions of forests are decided at roundtables, measurement takes place amidst the measured units, afoot amongst the trees, experimenting and inevitably experiencing them in situ. Field experiment measures are therefore very much corporeal and in contact with the other, wherein the diameter of the trees is measured at chest height, necessarily including the size of the human body in their practice. The tree individual's life is identified at the level of the heart.

Besides measuring trees, there are other alternative indicators for the age of the forest. In evaluating old-growth forests, the presence of beard lichens has been recognised as an important sign of conservation value (Canadian Museum of Nature 2019). This evaluation is not based on the measuring of conservation value based on the same units that also have direct economic value for forestry and industry, as is the case for trees. This alternative indicator for age also brings the question of old-growth into closer proximity with the special characteristics of Arctic forests. In the Arctic area, tree growth is inhibited by low temperatures and a short growing season due to the lack of sunlight during the winter season. Therefore, the diameter measurement is misleading when it comes to the actual age of the individual tree, a circumstance that yet again problematises a standard definition for old-growth forests. Whilst the trees in the Arctic forests do grow old, they may not grow up. Beard lichen growth may thus be a more accurate indicator of age than the actual size of the trees in this specific climatic and geophysical constitution.

Instead of the othering or numericalisation of the forest, an alternative approach for observing it may be referred to as familiarising-with. It derives from walking-with methods and moves towards being-together-with methodology, which is connected to posthuman inquiries into the Anthropocene that aim to think-with objects, things, animals, elements, and theories (see Springgay and Truman 2018; Edensor 2008; Ingold and Vergunst 2008; Thrift 2008; Vannini 2015). The being-together-with method integrates corporeal, sensory, and affective measures, not so much experimenting with as experiencing, over several visits to forests, features such as the use of hiking and skiing as a means of travel. In intra-living, agency is about being in the world whilst simultaneously being alive to it: 'A being that moves, knows, and describes must be observant,' which 'means being alive to the world' (Ingold 2011, xii). Being-with emphasises the method's aim to practice and develop more-than-human ethnography, described as follows in the *ILA: Envisioning proximity tourism with new materialism* research manifesto:

[We] use a variety of qualitative research methods to sensitize to the processes of intra-living and to find ways to express these processes. All these methods are characterized by simplicity and humbleness towards the more-than-human agents with which researchers share their space. These methods include ‘still’ observation by sitting, meditating, and sleeping in nature with the presence of deadwood, rocks, beard lichen, and bilberries; writing of research diaries of these experiences; photographing; and slow hiking in the premises of the nature park (Springgay and Truman 2018). For the researchers, being with deadwood, rocks, beard lichen, and bilberries is itself a practical feature of caring in a research process. This also opens up the researchers to the variable responsiveness of the world (Barad 2007; Rosiek and Snyder 2018)—to situations of surprise and of not knowing (Ulmer 2017)—necessitating space for change and improvisation.

In order to get in touch with the intra-living, an example of more-than-human ethnography is presented in the following short summary from fieldnotes. The fieldnotes touch upon a series of visits (4.1.2020–31.1.2021) to a protected forest area located in the Arctic region, and they pay careful attention to the beard lichens growing in the location:

Contrary to the expectation of the observant visitor, the area did not consist of huge, old trees, but the strong atmospheric change was made evident by the grey-green lichen hanging from the trees, where the sensation could be best described by the word ‘magical.’ Other depictions of experiencing a forest with lichen growth include the phrase ‘softer air,’ which makes breathing easier. Although scientific experimentation requires its results to be verified through repetition and the achievement of the same outcome, the experience of magic did not reoccur in the visitor’s following visits to the same forest. The experiences and sensitivities that cannot be repeated may be recorded by writing a journal and keeping a photograph diary. This method, of recording one’s encounters with lichens—especially the beard lichens growing down from the tree branches—made the area more easily noticeable and recognizable, almost providing a friendly gesture towards the visitor. In one word, it began to become familiar: familiar with oneself.

This familiarising—the making of an acquaintance—raises a series of questions: How does one relate or establish a relation to someone or something? How do (post-qualitative) social scientists do so? Is it

part of a regular encounter or is it done whilst passing by? Philosopher Toivo Salonen says that we need to spend time in nature to start seeing nuances, the differences in colours, and to understand them. Take, for example, photographing. Whilst, as a method of inquiry, photography has its problems with the ‘ethics of seeing’ (Sontag 2005 [1973], 3) by defining what is to be seen and therefore worth of noticing, it also requires and allows one to stop and pay attention. The camera’s shutter cuts off a moment from the stream of events and draws out the object that it isolates from the background and brings into focus. The act of photographing is a clipping-together-apart whilst, for example, documenting the growth of beard lichens. Methodologically, this micro-level ethnographic work means becoming more-than-acquainted with the forest: it means paying attention, starting to notice and understand its nuances, and foregrounding establishing friendships.

Whilst photography is an artistic practice applied in science for documentation and recording, it is also very much a touristic practice—it is part of the experience, defining how the location is perceived through the lens and simultaneously prepared for representation after leaving the location behind. There is a risk of looking only through the lens and only seeing what objects co-present themselves through the objective. Besides the highly specified and automatised viewfinder of a camera, a practiced guide in the context of Lapland nature tourism may pay attention to the experiences of the tourists and thus also guide their attention to co-conduct a ‘natural’ environment appropriate for tourism (Rantala 2011). Here, the guiding derives from being-together-with both the surrounding environment and the visiting tourists instead of the standardised and automatic function of a camera. To further study and develop the possibilities of using a camera to assist with the micro-ethnographic method may require the redefining of its objectives as well. Instead of drawing an object out of the background, the camera could be utilised to show how things and beings are embedded in the ground, in the soil, and instead of objectivising and immobilising them, it can set things into movement or record the trails of mobile beings. For example, instead of a focus on the beard lichen involving taking it from tree trunk or branches, its immersive nature and inseparability could be recorded in photographs. By changing the objectives, the ‘being that is originally fully immersed in the world’ may not ‘become closed in upon itself’ (Vannini and Vannini 2016, 203).

In the being-together-with method, I touch, and I am being touched—so too for the forest. Old-growth forests are often depicted

as unmanaged. Untouchedness in this methodological context does not refer so much to forestry as it does to people and leisure activities in the Arctic climate, from leaving traces and making tracks in the forest to machines moving and pressing down the snow according to the needs of cross-country and downhill skiers. A fresh snowfall covers the ground, leaving an impression of untouchedness for a moment before someone or something leaves tracks with their paws, feet, skis, or snowmobile. Especially for a tourist inexperienced with snow brought by seasonal changes, the first impression of this heavily managed land may be that it is untouched, with a lake appearing to be a field or clear-cut patch. Under the snow, nature seems untouched. This untouchedness can change overnight depending on how much snow falls, how quickly the track and slope maintenance is done, or how many people are touring the forest. Moving in the forest is partially enabled by paths of cut trees, which form accessible tracks. In wintertime, skiing retraces those cuts by leaving linear tracks in the snow. The moving method, bringing one amongst one's acquaintances, also cuts-together-apart, and old growth is cut fresh.



The chapter touches upon a request to be more careful and considerate towards the defining concepts used in making sense of the world, which concerns the sensitive question of age, specifically that of forest areas, and how defining the maturity of a forest plays a key role in its actualising futures, whether it is conserved or harvested. It must also be acknowledged that the future of the forest is inseparable from the future of the planet as we know it, alongside the human societies occupying it. It is vital to recognise how the sensitive forests are made sensuous and sensible for environmental policies and economy. The chapter exemplifies how Barad's intra-actions, as untouchedness and being in touch with, generate

measurement, identification, concepts, value, and experience. In other words, they de/generate the forest, make it to measure, and identified it as a forest somewhere along the conceptual axis of ‘secondary-old-growth,’ generating value in accordance with forest economy, ecology, and nature tourism. Untouchedness is not only about being passive. Preservation requires active measures in the location and beyond it, if by nothing else besides observing its condition. When it comes to tourism, untouchedness attracts becoming in touch with what may be considered an authentic nature experience before it is out of reach.

The analysis in the chapter extends from experimenting with age to experiencing it through methods of mobility, such as walking-with, being-together-with, familiarising-with, and the making of an acquaintance. Familiarising relates to those dis/appearing moments co-conducted in forms of micro-level ethnography, where moving along and stopping by make things and beings come-together-apart. Such constant changes in making multispecies acquaintances are what the methods of intra-living are about. One cannot take the forest out of the planetary ecosystem, or the beard lichen out of the tree trunk, or the human out of the observations. Measuring the age of a tree not only displays the diameter of the trunk but also records the measure of a man, chest high, two measure(d) organisms counted as the same figure, as close *proximates*. Also, observing the lichen or being-together-with-lichen has not been a question of considering a singular organism, a lichen, but lichens, always in the plural, and ‘us’ as a plural, connecting with one aspect of the ecosystem, not a detail that one can separate and cut apart. The ‘opposite sides of a boundary between the mind and the physical world,’ in this case beings and concepts, the measured and the measurements, are falsely cut apart, since whilst we take measures and make acquaintances ‘we do not see light, we do see in light’ (Ingold 2011, 96). Whilst experiencing rather than experimenting on the forest as a methodological approach to intra-living, we ought not to *see lichen*—we ought to *see in lichen*. Biology thus gives us a certain vocabulary with which to come into terms with the forest, where the being-together-with-oriented observer is to abandon any one-sidedness and engage in a lively dialogue with the forest. Instead of investing in an observer–observed relation where the grammar is based solely on measurement, dialogical familiarising may help to identify which measures to take to preserve planetary ecology and stay *in touch* with the forest-in-the-becoming-of-an-age.

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