

## BIROn - Birkbeck Institutional Research Online

Fitzgerald, D. and Callard, Felicity (2016) Entangling the medical humanities. In: Whitehead, A. and Woods, A. and Atkinson, S. and Macnaughton, J. and Richards, J. (eds.) *The Edinburgh Companion to the Critical Medical Humanities*. Edinburgh, UK: Edinburgh University Press, pp. 35-49. ISBN 9781474400046.

Downloaded from: <https://eprints.bbk.ac.uk/id/eprint/20393/>

*Usage Guidelines:*

Please refer to usage guidelines at <https://eprints.bbk.ac.uk/policies.html>

or alternatively

contact [lib-eprints@bbk.ac.uk](mailto:lib-eprints@bbk.ac.uk).

# ENTANGLING THE MEDICAL HUMANITIES

*Des Fitzgerald and Felicity Callard*

## Introduction

THE MEDICAL HUMANITIES are at a critical juncture. On the one hand, practitioners of this field can bask in their recent successes: in the UK, at least, what was once a loose set of intuitions – broadly about animating the clinical and research spaces of biomedicine with concepts and methods from the humanities – has become a visible and coherent set of interventions, with its own journals, conferences, centres, funding streams and students.<sup>1</sup> On the other hand, the growth, coherence and stratification of this heterogeneous domain have raised the spectre of just what, exactly, the medical humanities is growing *into*.<sup>2</sup> In particular, scholars have begun to worry that the success of the medical humanities is tied up with being *useful* to biomedicine, that the medical humanities has been able to establish itself only by appearing as the domain of pleasant (but more or less inconsequential) helpmeets – lurking hopefully, poetry books in hand, at the edges of the clinical encounter’s ‘primal scene’.<sup>3</sup> This is, we know, a caricature; still, it is not without its truth. Some, then, have begun to ask what a more *critical* medical humanities would look like: how might the methodological and intellectual legacies of the humanities intervene more *consequentially* in the clinical research practices of biomedicine – situating accounts of illness, suffering, intervention and cure in a much thicker<sup>4</sup> attention to the social, human and cultural contexts in which those accounts, as well as the bodies to which they attend, become both thinkable and visible?<sup>5</sup>

Our contribution to this space is to focus on the ‘medical humanities’ as an explicitly *interdisciplinary* endeavour – with a specifically integrationist intent. In what follows, we explore the contours of the methodological and conceptual space that crosses the humanities and the medical sciences; in particular, we open up the relationship that the medical humanities, including its many inheritances, has to the practices and apparatuses of the biomedical sciences. We are especially interested in whether the concerns, objects, methods and preoccupations of the medical humanities, not least the figure of the human at their centre, are, in fact, neatly separable or dissociable from the concerns, objects, methods and preoccupations of the medical and life sciences. And if these are – as we contend – actually not very separable at all; if the figures and preoccupations of the medical humanities are, in fact, deeply and irretrievably

*entangled* in the vital, corporeal and physiological commitments of biomedicine; then, beyond well-rehearsed concessions to inter- and trans-disciplinarity, how might we more critically imagine what, exactly, a medical humanities practice is going to look like in the present century?

This chapter is part of a wider set of interventions in which we are challenging some of the dominant ways in which interdisciplinary spaces are being conceptualised.<sup>6</sup> Our aim is to open up the topology, territory and traffic of the ‘medical humanities’ as it has lately emerged; in particular, we want to disrupt an intellectual economy in which all animating liveliness is accrued by the humanities, and all hard-nosed scientific expertise by the biomedical sciences. Our argument has four steps: firstly, we focus on how much of the conceptual and practical underpinning of the medical humanities is premised on a model of *integration*, and we ask whether much of the theoretically and biologically conservative stance of the medical humanities can be traced to this image; in the second and third sections, we introduce a counter-image – entanglement – drawn especially from the work of Karen Barad, and explore how this helps us to move beyond the integrationist account; finally, we focus on deployments of the ‘human’ in the medical humanities, to show how entanglement can reinscribe – and reanimate – some of the central preoccupations of this literature.

## Being Integrated

Over a decade ago, just before the 2004 annual meeting of the Association for Medical Humanities, Martyn Evans and Jane Macnaughton reflected on the field’s relationship to inter- and multi-disciplinarity. Arguing against a model that positions the medical humanities as a series of polite exchanges between a range of disciplines, Evans and Macnaughton called instead for a particular form of *interdisciplinarity* in the medical humanities – defined as ‘the engagement of disciplines one with another, and more particularly with subject matter that somehow both straddles the disciplines and falls between them’.<sup>7</sup> To make this case, Evans and Macnaughton distinguished between two modes in which the medical humanities are practised: in one, scholars from different disciplines gather around a shared preoccupation, but ‘with each discipline . . . essentially retaining its own unique viewpoint and writing from its own literature’.<sup>8</sup> In the other, more ‘radical’ model, scholars instead *depart* from their own discipline, and:

*integrate* the viewpoints of whichever disciplines seem most relevant to the questions they are asking . . . . [These scholars] will not be constrained within the viewpoint of historian, anthropologist or philosopher but will build a perspective that is unique to the discipline called ‘medical humanities’.<sup>9</sup>

Evans and Macnaughton, while acknowledging the risks of this endeavour (not least to the job prospects of junior pioneers), advocated strongly for the integrationist mode: ‘medical humanities is by nature an interdisciplinary study’, they pointed out, ‘and in this way it can make its most effective contributions to knowledge and to teaching.’<sup>10</sup> Rather than simply developing a series of interesting conversations across boundaries,

the medical humanities must, Evans and Macnaughton argued, bring different disciplines *together*: ‘we need to encourage young academics into the field’, they insisted, ‘whose doctoral studies will make them into interdisciplinarians.’<sup>11</sup>

Some of what is at stake here can be traced to the pragmatics of intellectual entrepreneurship. But we also suggest that this contribution forms a careful and succinct distillation of a vital debate – between the singular and the plural, or the additive and the integrative – that surrounds discussions of just what kind of field the medical humanities might or should be. A few years earlier, Evans and Greaves,<sup>12</sup> in promoting the launch of the journal *Medical Humanities*, and in offering another equally self-conscious ‘foundational’ moment for the constitution of the field, committed their endeavour to an ‘integrated’ and thus more ‘ambitious’ vision for the medical humanities – ‘whereby the nature, goals, and knowledge base of clinical medicine *itself* are seen as shaped by the understanding and relief of human bodily suffering.’<sup>13</sup> Or, as Arnott et al. put it in their ‘Proposal for an Academic Association for Medical Humanities’:

The medical humanities should be viewed as *integral* to medicine (i.e. as constitutive of our understanding of medicine’s nature and goals, alongside the medical sciences rather than as a series of optional extras to an essentially scientific conception of medicine.<sup>14</sup>

Similar images can be discerned elsewhere – in desires, for example, that the medical humanities ‘overcome the separation’ of clinical and humanistic inquiry,<sup>15</sup> or in hopes that the humanities will be ‘incorporated into educational activities to help students examine and, at times, contest the process, values, and goals of medical practice’.<sup>16</sup> Of course, tropes of ‘integration’ or ‘unification’ are far from limited to the medical humanities; other recent interdisciplinary endeavours have also been gripped by such language of integration.<sup>17</sup> Given the current pull that interdisciplinarity exerts on the academy today, we treat the domain of the medical humanities as an exemplary – though far from unique – site through which to explore and challenge the dominant topologies, abstractions and utopian endpoints that govern the terrain of interdisciplinarity.

Many of the clarion calls that have been made on behalf of the medical humanities rely implicitly or explicitly on a particular kind of medical holism. This is the ‘perception’, as Brian Hurwitz and Paul Dakin put it:

that science alone (or science with additive glances that take in ethics and the social sciences) provides insufficient overall foundation for holistic understandings of the interaction between health, illness and disease.<sup>18</sup>

Such a holism, in its turn, justifies and requires some more *integral* conception of medical education and research involving the humanities, broadly interpreted – a view of the ‘medical endeavour’ that is ‘part science, part craft and part art’.<sup>19</sup> Or, as Gillie Bolton puts it:

Medical and healthcare practice, education and research primarily concern individual people, each of whom, made up of inextricably linked psychological, emotional, spiritual and physical elements, is also inevitably impinged upon by cultural and social forces.<sup>20</sup>

In this view, holistic understandings of the body, as well as its illnesses, require much richer conceptions of both doctoring and healing – the medical humanities must thus be integral to, or incorporated in, medical education and research.

There are two things to pay attention to here: one is an imaginary of what the medical humanities must be – integrative, holistic, rounded, ambitious and so on. The other is a metaphorical repertoire – a set of received images, terms and likenesses – that works to license this imaginary, and more precisely, to *spatialise* the territory between, across and/or through humanistic and clinical thought. Our interest is thus in what precisely is intended by – and what is mobilised through – an insistence that the medical humanities must proceed according to a spatial logic of *integration*. Because it seems to us that if this integrated, singular medical humanities is preferable to a multi-disciplinary commitment to polite (yet determinedly insular) exchange, still it contains its *own* commitment to a particular ‘regime of the inter-’. If the commitment to an integrated medical humanities has indeed, in recent years, been an important and even radical move for the emergence of this field, we want to claim that it none the less mobilises a very particular account (let us say: a decidedly conservative account) of what kinds of things disciplines are; about what forms of spatial arrangement position them against one another; about what relations of exchange are appropriate across them; and about what must thereby constitute the, variously, human, cultural, biological and embodied agencies to which they attend. To be blunt: we are not sure whether any serious ambition to comprehend, and to intervene in, the density, complexity, directionality and *capacity* of traffic across this space can be at all moved by a desire for ‘integration’ – including the very space of ‘the inter-’ in which this desire operates.

We argue that a more critical conception of the medical humanities needs to bring into question the ‘inter-’ of the ‘interdisciplinary’ medical humanities. Can the intellectual space of the medical humanities more radically reconfigure the objects, agencies and practices of clinical attention, beyond the now rather sterile distinction between a multi- and inter-disciplinarity? Beyond the territory of the ‘inter-’, can we imagine a more risky and experimental medical humanities? Can we mobilise a medical humanities that is not only a novel interdiscipline, gathering up different things into an institutionally significant whole, but also a much more ambiguous and risky intellectual space – one willing to navigate the deep entanglements of subjectivity, experience, pathology, incorporation, and so on, which cut *across* the ways in which we understand both the human and her medicine today?

## Getting Entangled

In recent years, ‘entanglement’, a term central to twentieth-century quantum physics,<sup>21</sup> has been widely used across a host of literatures in the humanities and social sciences – often to nuance accounts of how different agencies may or may not be separable from one another. ‘Entanglement’ has been used, for example, to characterise the affective relations and discontinuities between human bodies and other entities;<sup>22</sup> to make sense of settler identities in colonial and postcolonial contexts;<sup>23</sup> and to open

up the relationships, similarities and intersections between human and non-human things.<sup>24</sup> But it is especially in science and technology studies (STS), and most particularly in feminist STS, that ‘entanglement’ has been put to work in the last decade or so. STS scholars have invoked the term to help parse, for example, human culture in an age of ecological crisis;<sup>25</sup> to think the space between language and databases in science fiction<sup>26</sup>; to open up the relationship between persons and species in North Atlantic societies;<sup>27</sup> and to make visible the rationalities and continuities between scholarly registers of science, ethics and justice.<sup>28</sup> Much of this prominence can be traced to the potent work of Karen Barad, and especially to the carefully wrought metaphysics that Barad names as ‘agential realism’.<sup>29</sup> Among the many things at stake in this coinage, for Barad, is firstly a shift from thinking relationality as process of interaction (in which more or less bounded things engage with one another) to one of ‘intra-action’ – a neologism that refuses *prior* wholeness as the condition of intersection. Barad’s ‘agential realism’ takes the existence of discrete agencies very seriously, but it takes these forms as *secondary* to the intersection of those agencies – and indeed it is precisely the ‘dividual’ nature of agencies (to borrow a term from anthropologist Marilyn Strathern)<sup>30</sup> that Barad holds to be the ‘primary ontological units’ of the world.<sup>31</sup> Secondly, what this means for Barad is that we cannot easily divide the practices (or objects) of ‘science’ and ‘medicine’ from the practices (or objects) of social and humanistic inquiry that are interested in understanding (and maybe contributing to) scientific medical domains. We do not, as scholars from various disciplines, bring our objects and practices to another through a kind of free-trade agreement; rather we re-enter a long history of binding, tangling and cutting, within which current moves towards integration are much more weighted than they might at first seem.<sup>32</sup>

What holds together much of the research employing ‘entanglement’ is an intuition that some set of things, commonly held to be separate from one another (indeed, that define themselves precisely with reference to their separability) – science and justice, humans and non-humans, settlers and natives – not only might have something in common, but also, in fact, may be quite *inseparable* from one another. ‘What often appear as separate entities (and separate sets of concerns) with sharp edges’, remarks Barad, ‘does not actually entail a relation of absolute exteriority at all.’<sup>33</sup> In this chapter, we contend that working with a dynamics of entanglement – rather than a telos of integration – sets in motion a more experimental and capacious future for the medical humanities.<sup>34</sup> Elsewhere, we have set out our own programmatic vision for a broader sense of ‘experimental entanglements’ across the humanities, the social sciences and the life sciences.<sup>35</sup> There, we attempt to mobilise a different set of epistemological commitments vis-à-vis how the self-proclaimed humanist or interpretive social scientist might approach matters commonly considered the province of the life sciences. We have also tried to conjure a different palette of affective dispositions through which we might both characterise and live in interdisciplinary spaces. Those dispositions (eddy around ambivalence, awkwardness, frustration, failure, and so on) depart from the most common affective registers (critique, adulation, disinterested rigour) through which humanists have tended to approach the terrain of the medical, clinical

or biomedical.<sup>36</sup> We want resolutely to claim the stance of interestedness. But we also see interest as a stance that can be (indeed, usually is) taken up without someone quite knowing the place at which they stand, *or* the entwinements through which they are always-already bound with/in other interested agencies. So it is to be entangled.

In short, we are committed to arguing, in current and future work, that a turn to entanglement – as epistemology, ontology and phenomenological-affective disposition – might herald a more interesting future for scholars learning to live ‘between’ disciplines; in this chapter, specifically, we want to suggest that such a stance might allow for a more critical engagement with the sets of material, bodily, affective, linguistic and disciplinary configurations within which both the medical humanities, and those phenomena that they draw within their purview, are endlessly bound. To do so, we fix attention on what Barad intends by entanglement, and here we draw on one of the lesser-known iterations of her argument: the essay ‘Living in a Post-humanist Material World’,<sup>37</sup> in which Barad turns to think about one of the most central objects of the medical humanities – that is, *life*. Barad begins her account with perhaps the best-known intersection of quantum dynamics and life: the paradox of Schrödinger’s cat. In this thought experiment, Schrödinger asks us to consider a cat in a box that also contains a nuclear atom with a fifty per cent chance of decaying in one hour, as well as a flask of hydrocyanic acid. If the atom *does* decay, a series of reactions will break the flask of acid, thus killing the cat. After one hour, then, the cat might be alive, and it might be dead; in any event, all we can do to express the state of the cat, at that moment, is generate an equation that superposes the two states – that smears the dead cat across the living. Barad reminds us that the issue here is not, as it is often taken to be, that the cat is therefore *either* alive or dead (and that therefore we just do not know yet); nor is it that the cat is *neither* alive nor dead; similarly, the issue is neither that the cat is *both* alive and dead, nor that it is a little bit alive, and also a little bit dead (the latter likely describes the metaphysical condition of many cats, just not this one).<sup>38</sup> The issue is that the equation describes a state in which:

the cat and the atom do not *have* separately determinate states of existence . . . indeed [what the story demonstrates is that] there is no determinately bounded and propertied entity that we normally identify with the word ‘cat’ independently of some measurement that resolves the indeterminacy and specifies the appropriate referents for the concepts of ‘cat’ and ‘life state’.<sup>39</sup>

The cat, in this circumstance, ‘simply has no determinate life state . . . there is no determinate fact of the matter about whether it is dead or alive’.<sup>40</sup> The point, for Barad, is that ‘things do not have inherently determinate boundaries and properties . . . words do not have inherently determinate meanings.’<sup>41</sup> The key point for us, similarly, is that determinacy – ‘wholeness’, we might say in another context – is only a function of specific material arrangements; things, people, concepts, ideas and so on, are cut clear of their interdependencies *only as a function* of those interdependencies themselves. Being intersected is a *condition of* agency; intersecting is neither a function, nor a use, of those agencies’ prior completeness.

For Barad, as for Schrödinger, what is precisely at stake here is how to account for *life*. Confronted with the smeared cat, the fact is, says Barad, ‘life just ain’t what it used to be, if it ever was.’<sup>42</sup> Life-conditions are definable only through specific ‘measurement intra-actions’.<sup>43</sup> In this sense, the referent of measurement for Barad is not a bounded ‘object’ – ‘life’, the patient, an unfeeling doctor, a consoling poem – but what Barad calls *phenomena*: what we are always in pursuit of, when we measure, are ‘entangled and enfolded sets of apparatuses of bodily production of all the beings and devices relevant to this specific example’.<sup>44</sup> Our methodological task is thus one of ‘accountability to and for differences that matter’.<sup>45</sup> And our investigations, as well as the devices and apparatus that make them possible, are ‘not mere static arrangements in the world’ – rather, they are themselves ‘material-discursive configurations of the world . . . through which specific boundaries are enacted’.<sup>46</sup> Boundaries, whether between different ways of measuring things or between the act of measuring and the thing measured, *do not mark differences to be overcome in the act of integration*. Boundaries are instead things we produce – that we have to produce – through specific intra-active configurations and performances. Practices of *making* boundaries are fully implicated in the dynamics of intra-activity through which phenomena come to matter: ‘discursive practices and material phenomena do not stand in a relationship of externality to one another,’ Barad remarks: ‘rather, the material and the discursive are mutually implicated in the dynamics of intra-activity.’<sup>47</sup>

### Differences That Matter

This is, we are aware, perhaps an obscure account of how one might disrupt the ‘inter-’ and/or ‘multi-’disciplinary nature of the medical humanities. Our theoretical-rhetorical arguments are intended to open a space for future, empirically fine-grained analyses of practices of boundary-making in the medical humanities terrain. What we want to insist on here is that when we talk about ‘entangling the medical humanities’, we are not simply introducing a new metaphor, or asking our colleagues to rearrange the disciplinary deckchairs. Instead, we are drawing attention to the fact that the preoccupations of the medical humanities are *always* going to be particular kinds of, or moments in, sets of as yet undetermined material-semiotic configurations and alignments (bodily, pathological, cultural, human, and so on) – whether this is acknowledged institutionally or not. This implies that we need to see the current favoured topoi of medical humanities scholarship, and the differentiations that those topoi bring into being – a quickly assembled list would surely include the suffering patient, a doctor’s practice of clinical care, the exemplary site of the clinic, and cancer – as congealed, and overly resonant configurations that constitute but one particular way of making phenomena come to matter. But what if the task of the medical humanities were to encourage the emergence of different topoi, or the limning of different topologies through which illness and care are constituted? What if illness were not imagined, for example, as co-located with or coincidental to a body?<sup>48</sup>

Within such an imaginary, one could argue that the most pressing sites of the bio-political redistribution of bodily potencies (with all that they connote in relation to questions of medicine and health) might not include the bioethically over-invested scene of the prone figure hooked up to a life support machine; one might then explore, instead, assemblages of welfare policies, psychometric tests, affective dispositions and algorithmic predictions that are in the process of redistributing categories and manifestations of productive labour and idleness under practices of ‘workfare’.<sup>49</sup> Or, to take another example, one might approach a healthcare ‘institution’ not as a conceptual and physical edifice whose histories we have become used to tracing (the National Health Service, the World Health Organisation, the hospital), but as something that gives form or order precisely by ‘cutting’ or ‘disentangling’ entities from a heterogeneous field. Tiago Moreira, for example, has examined how the emergence of the systematic review in healthcare is an entity brought into the world by ‘disentangl[ing] data from the milieus in which they are commonly found’, and endowing these data with new qualities that are enabled by their collection and dissemination through new techno-political means.<sup>50</sup>

We might go on. But the point here is not to introduce a new range of topics that will ‘count’ as ‘medical humanities’. The point is, rather, to break open the two halves of that term, such that the complex of human life and medical science becomes – to borrow from an analysis of interspecies health – a series of:

repeated crossings, an ongoing conversation – a repetitive material semiotics, or a working out of a new reality. Contagion, then, is more than contact and viruses don’t simply diffuse across space, or extend across a plane through simple transmission. They are configured in relation.<sup>51</sup>

An *integrated* medical humanities, by contrast, is always going to presuppose boundaries that obscure these differences – and, indeed, render them invisible. Thus the issue is not that illness and healing are multi-faceted phenomena that cannot be understood from a clinical perspective only, and that require a new, interdisciplinary perspective to be appreciated in their wholeness. The issue is that what get enacted, positioned and understood as moments of suffering, sickness, care, and so on are always in the process of being cut from particular sets of relations.<sup>52</sup> What we need methodologically, then, is a way of thinking, writing and measuring life-states that ‘stays with the trouble’<sup>53</sup> of these relations and differences.

The medical humanities does not need to break down boundaries, but rather to understand how practices of making, breaking and shifting boundaries *constitute* illness and healing. Accordingly, we call for closer attention to the political as well as to the ontological consequences of installing boundaries that constitute some scenes, rather than others. By the same token, the medical humanities does not need to integrate different perspectives into a unified whole in order to appreciate an entity in its complexity; it needs to understand how perspectives themselves are already – and this is no shame – moments of relation, both with one another, and with what they take to be their objects. The point is that integration is *layered on* configurations of relations;

it is not *generative of* them. An entangled medical humanities does not ask for differences to be overcome; it asks how differences have come to matter in sickness and health; it tries to think how their mattering might be brought into richer understanding through specific moments of intervention.

## The Figure of the Human

If the task is to think how practices of making, breaking and shifting boundaries constitute moments of illness and healing, then we need to displace, if not significantly reimagine, how medical humanities has tended to figure the ‘human’ – an entity whose boundaries have commonly been understood to end at her skin. In the same move, we need to displace a model in which empathic or caring humanism is positioned as ready to tame the clinical coldness of the biomedical – or in which the inventiveness of the ‘human spirit’ is imagined as ready to combat the deadening and reductive effects of scientific rationalism.<sup>54</sup> Such a cathexis is at odds with much of the terrain beyond the medical humanities, which has long placed the categories that we fantasise as more or less solid – the ‘natural’, the ‘cultural’, the ‘social’, the ‘human’ – under pressure. The suturing together of ‘nature’ and ‘culture’ in the composite term ‘natureculture’<sup>55</sup> points, at least in part, to the need to grapple with the biosocial complexity of life-states. Such complexity has been explicitly or implicitly avoided by many humanistic and interpretative social-scientific scholars – not least in the medical humanities – who have frequently wielded the adjectives ‘biological’ or ‘biomedical’ as indicators of distaste or condemnation.<sup>56</sup> Concomitant with the rise of terms such as ‘natureculture’, a growing number of researchers have been challenging the singularity of the human (along with all her commonly privileged qualities of creativity, intentionality, wilfulness and agency) by tracing the inventiveness and motility of the non-human.<sup>57</sup>

Indeed, such inventiveness is increasingly understood to be found *beyond* ‘living’ entities – ‘human’ and ‘non-human’ – and to encompass, for example, the energetics of the geologic.<sup>58</sup> If we remain ambivalent about the neo-vitalist optimism that can spring forth, untethered, in some of this work, we are also struck by its dark undertow.<sup>59</sup> And if such preoccupations seem to be at some distance from the usual concerns of the medical humanities, we none the less invoke them to displace the common calculus within medical humanities whereby the ‘biomedical’ registers as the cold and deadening engine of facts, and the ‘humanities’ as the non-reductive and life-affirming context-expert. Of course, for many, the biomedical retains both an historiographical and a territorial resonance – and tracing the contours of this domain (not least in postcolonial contexts<sup>60</sup>) remains both a potent and a lively scholarly activity. Our wish is not to displace the category of the biomedical as such but – and, indeed, in league with historical and postcolonial scholarship – to open up to its liveliness, its idiosyncrasy, its sense of internal contest and its *strangeness*. We are in search of a different set of dynamics for the medical humanities – one in which both the generative and the inert are properties of an entangled field of bio/social/cultural life: one

that would not establish at its heart those wearily familiar encomia – an ‘ethical life’ and a ‘good death’.

In previous work,<sup>61</sup> we have explored such dynamics in the space of the cognitive neuroscientific experiment, a space whose uncanny generativity has not been fully recognised by its many, often critical, humanist onlookers. We used our own encounters with the experiment to redirect the rhythms of stale humanities-versus-sciences debates, and the familiar stagings of the subjective/objective and the human/non-human that coagulate around them. We are interested in setting into motion rich archives of experimentation within the arts, humanities and interpretive social sciences by braiding them through the framework of laboratory science – not to ‘reduce’ the former, but to reshape and reimagine the conceptual and empirical contours of the latter.<sup>62</sup> In particular, we want to insert (at least) two humans – the experimenter and her ‘subject’ – into a complex experimental apparatus comprising other instruments and entities, and thereby to remain agnostic about the role that each part within this assemblage might play. We refuse to take for granted who or what probes whom or what in an experiment; when the human subject becomes an object and when she might remain a speaking subject; which other entities might ‘speak’ within the experimental set-up; and what the possibilities of influence and suggestion might hold for torquing paradigms and resulting data within the cognitive neuroscientific experiment.

Let us, in closing, propose an equivalent manoeuvre for the critical medical humanities. What difference would it make for us to remain agnostic about what does and does not count as a medical intervention or apparatus? What would happen if we remained open about where (or what, or who) the thinking, feeling subject is within medical *mise-en-scènes*? What if disease were not a bodily fact that needed finer interpretation, but a way of describing a relation between a body, a history and an environment? What if, across such interpretive labours, we could think more radically about the role that everyone (practitioners, writers, experimenters and patients of different stripes) might play? What possibilities might open up for the medical humanities, for example, if we discerned a world of awkward, lachrymose, over-involved clinicians, on the one hand, and cold, pragmatic, resolutely scalpellic poets on the other? Indeed, it is precisely in the opening up of such questions that we see the promise of the critical medical humanities.

## Conclusion

We have tried to sketch here, in abbreviated and gestural form, an outline for what we call an entangled medical humanities. By invoking entanglement, we wish to turn the attention of medical humanities practitioners and theorists from the problematic of ‘integration’ to one of ‘differences’ – in other words, from a need to come together, to a recognition that both medicine and life itself are constituted precisely through relations, and through practices of bordering, cutting and exchange through which those relations come to matter. There is thus neither an additive nor an integrative ‘human’

at the heart of the medical humanities; there are, rather, animacies,<sup>63</sup> vitalities and pathologies, which flow across different practices and preoccupations that then come to be ascribed to the ‘humanities’ and the ‘biosciences’.

If our chapter has offered a largely theoretical account of those flows and forces, at its heart is, none the less, a significantly reanimated research programme for the medical humanities. Entanglement eschews what we see as the frequently defensive apparatus of the field – one that has tended, despite its investment in plurality, to prescribe compelling sites of animation and analysis. An entangled medical humanities claims, in contrast, no privileged access to ‘narratives’ of illness and healing, to the ‘experience’ of illness, to ‘reflections’ on doctoring, to insights on ‘care’, to normative or ‘ethical’ analysis and so on. But it also rejects any claim from a conservatively defined, narrowly bioscientific laboratory science to have unique access to the body and its ailments, to be the only interpreter and preserver of the vital capacities of that body, or to be uniquely intimate with its corporeal malfunctions. What would happen, for and to the medical humanities, if we set aside our usual allegiances and identifications to think more experimentally about the constitution and dynamics of the medical-humanistic domain? Tracing such trajectories of entanglement is what we have tried to begin in this chapter.

## Acknowledgements

This research is supported by the Wellcome Trust 103817/Z/14/Z.

## Further Reading

- Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007).
- Karen Barad, ‘Living in a Posthumanist Material World: Lessons from Schrödinger’s Cat’, in Anneke Smelik and Nina Lykke (eds), *Bits of Life: Feminism at the Intersections of Media, Bioscience, and Technology* (Seattle: University of Washington Press, 2008), pp. 165–76.
- Lisa Blackman, ‘Affect and Automaticity: Towards an Analytics of Experimentation’, *Subjectivity* 7 (2014), 362–84.
- Des Fitzgerald and Felicity Callard, ‘Social Science and Neuroscience beyond Interdisciplinarity: Experimental Entanglements’, *Theory, Culture & Society* 32.1 (2015), 3–32.
- Des Fitzgerald, Svenja Matusall, Joshua Skewes and Andreas Roepstorff, ‘What’s so Critical About Critical Neuroscience? Rethinking Experiment, Enacting Critique’, *Frontiers in Human Neuroscience* 8 (2014), p. 365.
- Monica Greco, ‘Logics of Interdisciplinarity: The Case of Medical Humanities’, in Georgina Born and Andrew Barry (eds), *Interdisciplinarity: Reconfigurations of the Social and Natural Sciences* (London and New York: Routledge, 2013), pp. 226–46.
- Donna J. Haraway, *Modest\_Witness@Second\_Millennium.FemaleMan\_Meets\_OncoMouse: Feminism and Technoscience* (London: Routledge, 1997).

- Andreas Roepstorff and Chris Frith, 'Neuroanthropology or Simply Anthropology? Going Experimental as Method, as Object of Study, and as Research Aesthetic', *Anthropological Theory* 12.1 (2012), 101–11.
- Nikolas Rose, 'The Human Sciences in a Biological Age', *Theory, Culture and Society* 30.1 (2014), pp. 3–34.

## Notes

1. See, for example, the Wellcome Trust's recent embrace of 'medical humanities' as one of its major funding streams <<http://www.wellcome.ac.uk/funding/medical-humanities/index.htm>> (accessed 31 May 2015). See also the journals *Medical Humanities* (BMJ) and *Journal of Medical Humanities* (Springer). For an interesting account of medical humanities as an interdisciplinary field, see Monica Greco, 'Logics of Interdisciplinarity: The Case of Medical Humanities', in Georgina Born and Andrew Barry (eds), *Interdisciplinarity: Reconfigurations of the Social and Natural Sciences* (London and New York: Routledge, 2013), pp. 226–46.
2. See Anne Whitehead and Angela Woods, 'Introduction', in this volume, pp. 2–3.
3. Ibid.
4. Our use of the adjective 'thick' draws inspiration from Clifford Geertz's famous formulations on 'thick description'— which draw, in turn, on Gilbert Ryle's work. Geertz argues that the ethnographer is faced with 'a multiplicity of complex conceptual structures, many of them superimposed upon or knotted into one another, which are at once strange, irregular, and inexplicit, and which he must contribute somehow first to grasp and then to render' (Clifford Geertz, 'Thick Description: Towards an Interpretive Theory of Cultures', in *The Interpretation of Cultures* (New York: Basic Books, 1973), p.10). Our essay is, likewise, preoccupied with the difficulty of both grasping and rendering a knotted conceptual and empirical field.
5. Two calls for a 'critical medical humanities' comprise: Sarah Atkinson, Bethan Evans, Angela Woods and Robin Kearns, "'The Medical" and "Health" in a Critical Medical Humanities', *Medical Humanities* 36.1 (2015), 71–81; and William Viney, Felicity Callard and Angela Woods, 'Critical Medical Humanities: Embracing Entanglement, Taking Risks', *Medical Humanities* 41 (2015), pp. 2–7.
6. Other interventions include: Des Fitzgerald and Felicity Callard, 'Social Science and Neuroscience beyond Interdisciplinarity: Experimental Entanglements', *Theory, Culture and Society* 32.1 (2015), pp. 3–32; Des Fitzgerald and Felicity Callard, 'Entangled in the Collaborative Turn: Observations from the Field', *Somatosphere* 3 (November 2014) <<http://somatosphere.net/2014/11/entangled.html>>; Felicity Callard and Des Fitzgerald, *Rethinking Interdisciplinarity across the Social Sciences and Neurosciences* (London: Palgrave, 2015).
7. H. Martyn Evans and Jane Macnaughton, 'Should Medical Humanities Be a Multidisciplinary or an Interdisciplinary Study?' *Medical Humanities* 30.1 (2004), pp. 1–4.
8. Ibid., p. 3.
9. Ibid., p. 3; our emphasis.
10. Ibid., p. 3.
11. Ibid., p. 3.
12. Martyn Evans and David Greaves, 'Exploring the Medical Humanities', *British Medical Journal*, 319.7219 (1999), p. 1216; cf. Luca Chiapperino and Giovanni Boniolo, 'Rethinking Medical Humanities', *Journal of Medical Humanities* 35.4 (2014), pp. 377–87.

13. Evans and Greaves, 'Exploring the Medical Humanities', p. 1216.
14. Robert Arnott, Gillie Bolton, Martyn Evans, Ilora Finlay, Jane Macnaughton, Richard Meakin and William Reid, 'Proposal for an Academic Association for Medical Humanities', *Medical Humanities* 27.2 (2001), p. 105; our emphasis.
15. Jill Gordon, 'Medical Humanities: To Cure Sometimes, to Relieve Often, to Comfort Always', *Medical Journal of Australia* 182.1 (2005), pp. 5–8.
16. Johanna Shapiro, Jack Coulehan, Delese Wear and Martha Montello, 'Medical Humanities and Their Discontents: Definitions, Critiques, and Implications', *Academic Medicine* 84.2 (2009), pp. 192–8.
17. Eric Kandel, for example, in presaging the arrival of the interdisciplinary field of neuropsychanalysis, noted that 'One would hope that the excitement and success of current biology would rekindle the investigative curiosities of the psychoanalytic community and that a unified discipline of neurobiology, cognitive psychology, and psychoanalysis would forge a new and deeper understanding of mind' (Eric R. Kandel, 'Biology and the Future of Psychoanalysis: A New Intellectual Framework for Psychiatry Revisited', *American Journal of Psychiatry* 156.4 (1999), pp. 505–24).
18. Brian Hurwitz and Paul Dakin, 'Welcome Developments in UK Medical Humanities', *Journal of the Royal Society of Medicine* 1023 (2009), p. 84.
19. *Ibid.*, p. 85.
20. Gillie Bolton, 'Boundaries of Humanities: Writing Medical Humanities', *Arts and Humanities in Higher Education* 7.2 (2008), p. 132; for a critique, see Angela Woods, 'The Limits of Narrative: Provocations for the Medical Humanities', *Medical Humanities* 27 (2011), pp. 73–8.
21. For a useful account, see Vlatko Vedral, 'Quantum Physics: Entanglement Hits the Big Time', *Nature [News and Views]* 425 (2003), pp. 28–9.
22. Sean Watson, 'Bodily Entanglement: Bergson and Thresholds in the Sociology of Affect', *Culture and Organization* 9.1 (2003), pp. 27–41.
23. Avril Bell, 'Bifurcation or Entanglement? Settler Identity and Biculturalism in Aotearoa New Zealand', *Continuum* 20.2 (2006), pp. 253–68.
24. Ian Hodder, 'Human–Thing Entanglement: Towards an Integrated Archaeological Perspective', *Journal of the Royal Anthropological Institute* 17.1 (2011), pp. 154–77.
25. Katrina Dodson, 'Introduction: Eco/Critical Entanglements', *Qui Parle: Critical Humanities and Social Sciences* 19.2 (2011), pp. 5–21.
26. N. Katherine Hayles, 'Material Entanglements: Steven Hall's *The Raw Shark Texts* as Slipstream Novel', *Science Fiction Studies* 38.1 (2011), pp. 115–33.
27. Michael Carrithers, Louise J. Bracken and Steven Emery, 'Can a Species Be a Person?: A Trope and its Entanglements in the Anthropocene Era', *Current Anthropology* 52.5 (2011), pp. 661–85.
28. Laura Mamo and Jennifer R. Fishman, 'Why Justice? Introduction to the Special Issue on Entanglements of Science, Ethics, and Justice', *Science, Technology & Human Values* 38.2 (2013), pp. 159–75.
29. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007); Karen Barad, 'Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter', in Stacy Alaimo and Susan Hekman (eds), *Material Feminisms* (Bloomington: Indiana University Press, 2008).
30. Marilyn Strathern, 'The Self in Self Decoration', *Oceania* 49.3 (1979), pp. 241–57.
31. Barad, 'Posthumanist Performativity', pp. 139–41.

32. Barad, *Meeting the Universe Halfway*, p. 247.
33. *Ibid.*, p. 93.
34. See also Annamaria Carusi, 'Modelling Systems Biomedicine: Intertwinement and the "Real"', in this volume, pp. 59–60, who, in another mode of pressing for non-dualism, argues that our central critical challenge:

is not to deconstruct ideas about faithfulness and accuracy of representation. Rather, we need to understand how the enterprise of rendering the world, knowing, and acting in it, in its intertwinement of bodies, technologies, expressivities, forms ourselves and our world, and what may be the forms of responsibility that flow from that.

35. Fitzgerald and Callard, 'Experimental Entanglements'.
36. *Ibid.* for lengthy discussions of these interventions.
37. Karen Barad, 'Living in a Posthumanist Material World: Lessons from Schrödinger's Cat', in Anneke Smelik and Nina Lykke (eds), *Bits of Life: Feminism at the Intersections of Media, Bioscience, and Technology* (Seattle: University of Washington Press, 2008), pp. 165–76.
38. *Ibid.*, pp. 169–70.
39. *Ibid.*, pp. 169–70.
40. *Ibid.*, p. 170.
41. *Ibid.*, p. 170.
42. *Ibid.*, p. 171.
43. *Ibid.*, p. 171.
44. *Ibid.*, p. 171.
45. *Ibid.*, p. 173.
46. *Ibid.*, p. 173.
47. *Ibid.*, pp. 173–4.
48. One powerful articulation of this can be found in Veena Das, *Affliction: Health, Disease, Poverty* (New York: Fordham University Press, 2015).
49. Lynne Friedli and Robert Stearn, 'Positive Affect as Coercive Strategy: Conditionality, Activation and the Role of Psychology in UK Government Workfare Programmes', *Medical Humanities*, 41 (2015), pp. 40–7.
50. Tiago Moreira, 'Entangled Evidence: Knowledge Making in Systematic Reviews in Healthcare', *Sociology of Health and Illness* 29.2 (2007), pp. 180–97.
51. Steve Hinchliffe, 'More than One World, More than One Health: Re-Configuring Interspecies Health', *Social Science & Medicine* 129 (2015), pp. 28–35.
52. See also Annemarie Mol, *The Body Multiple: Ontology in Medical Practice* (Durham, NC: Duke University Press, 2002).
53. Donna Haraway, 'Staying with the Trouble: Xenocologies of Home for Companions in the Contested Zones', in *Fieldsights – From the Editorial Office, Cultural Anthropology Online* <<http://www.culanth.org/fieldsights/289-staying-with-the-trouble-xenocologies-of-home-for-companions-in-the-contested-zones>> (accessed 15 July 2015).
54. For an exemplary instance of this juxtaposition of the empathic and the reductive, see Philip Thomas and Eleanor Longden, 'Madness, Childhood Adversity and Narrative Psychiatry: Caring and the Moral Imagination', *Medical Humanities* 39.2 (2013), pp. 119–25.
55. See Donna J. Haraway, *Modest\_Witness@Second\_Millennium.FemaleMan\_Meets\_Onco-Mouse: Feminism and Technoscience* (London: Routledge, 1997). See also Stuart Murray, *Autism* (New York: Routledge, 2011).

56. See, for example, Alan Bleakley's claim about 'critical medical humanities': 'taking a more critical approach allows us to see meaning in illness and provides a point of resistance to reductive biomedical science' (Alan Bleakley, 'Towards a Critical Medical Humanities', in Victoria Bates, Alan Bleakley and Sam Goodman (eds), *Medicine, Health and the Arts: Approaches to the Medical Humanities* (Abingdon: Routledge, 2014), p. 24).
57. Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013); Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010).
58. Kathryn Yusoff, 'Antarctic Exposure: Archives of the Feeling Body', *Cultural Geographies* 14.2 (2007), 211–33; Myra J. Hird and Celia Roberts, 'Feminism Theorises the Nonhuman', *Feminist Theory* 12.2 (2011), pp. 109–17.
59. For example, Kathryn Yusoff, 'Biopolitical Economies and the Political Aesthetics of Climate Change', *Theory, Culture & Society* 27.2–3 (2010), pp. 73–99.
60. See Warwick Anderson, 'Making Global Health History: The Postcolonial Worldliness of Biomedicine', *Social History of Medicine* 27.2 (2014), pp. 372–84.
61. Fitzgerald and Callard, 'Experimental Entanglements'.
62. See also Lisa Blackman, 'Affect and Automaticity: Towards an Analytics of Experimentation', *Subjectivity* 7 (2014), pp. 362–84.
63. Mel Y. Chen, *Animacies: Biopolitics, Racial Mattering and Queer Affect* (Durham, NC: Duke University Press, 2012).