Reconceptualizing Educational Research Methodology

ISSN: 1892-042X Vol 13, No 2 (2022)

https://doi.org/10.7577/rerm.4910

Regarding String: A Theory-Method-Praxis of/for Cocompos(t)ing Feminist Hope

Carol A. Taylor, University of Bath, England, ct770@bath.ac.uk, https://orcid.org/0000-0002-0914-8461

Karen Tobias-Green, Leeds Arts University, karen.tobias-green@leeds-art.ac.uk
Julia Sexton, Sheffield Hallam University, dsis3@exchange.shu.ac.uk
Joan Healey, Sheffield Hallam University, hscinh@exchange.shu.ac.uk

Abstract

This article explores string – what string does, makes possible, and makes happen –as lively matter in co-compos(t)ing human-nonhuman objects, bodies and space. Based on the happenings-doings-thinkings generated from a recent workshop, and taking a line of flight with-from Haraway's (2016) *Staying with the Trouble*, the article considers how string figuring co-compos(t)ings can work as a post-qualitative experimental feminist materialist/posthumanist research-creation practice which moves outside normative research methods. The article develops a stringly-thingly methodology to explore string figuring's temporal and spatial possibilities, and propose a theorisation of 'regard' which works as a feminist materialist enactment of response-ability which makes better futures in the here-and-now become do-able and thinkable. The theory-method-praxis we propose is an orientation of/for co-compos(t)ing feminist hope.

Keywords: String, regard, hope, feminism, posthumanism, feminist new materialism

Introducing: String doings, string makings, string happenings, string matteringsThis article is about string: about making and doing, playing and thinking, and making trouble with string in the co-creation of feminist praxis. We think-with string as a material feminist mattering

©2022 (The Authors). This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

which explores what occurred, what emerged, what happened, and what came to matter when four women got together in a workshop and worked, methodologically, theoretically and playfully, with string. The stringly doings discussed in the article were inspired by Donna Haraway's (2016) Staying with the Trouble in which she outlines the importance of string figuring as a mode of collaborative doing-and-thinking-together for building companionship and hope. In the string figuring workshop, and in the collaborative writing of this article which emerged from the workshop, string was an intra-actant in our research endeavours. In seeking out what string did, could do, what string enabled and made possible, how string provoked, produced and troubled, we spun our theory-praxis out from a shared desire to co-compose with string. String Figures, sometimes referred to as cat's cradle, are loops of string which are manipulated to form three dimensional patterns often in a sequence. They are both artefacts and representations; making them is a performative 'process of embodiment and enacted knowledge' (Eastop, 2014: 221). We worked with string's materiality to (try to) displace the normative centering of human agency so that we could engage different relationalities with institutional spaces and places. In working with string as matter-materiality, we sought to do and enact feminist research as an in situ embodied and sensorialist research-creation. We wanted to oppose the usual dis-regard of string; we wanted to give string due regard; we aimed to follow string's thingly scent (Bennett, 2010). We wanted to see the 'other directions' – the 'wandering[s] elsewhere' – that our collective thinkings-doings (Osgood et al., 2021, p. 8) made possible when string leads.

String

For tying packages

For lacing shoes

For binding separate things together

For fixing and holding things tight

For holding things up

String dangling and shimmering in the invisible moving air

Stringing joyous christmas decorations

Stringing kites in high winds

Stringing banners of protest and solidarity

String

For helping things to keep on doing the things they do so we don't have to throw them away

String

Necessary

Mundane

Taken for granted

Ignored in homes and lives

Resting in darkness in drawers and cupboards

String

Lost

And

Found

In what follows we discuss the multiple beginnings-happenings-doings-thinkings of our work. We explain how these beginnings-happenings-doings-thinkings entrain and entangle with our methodological approach, research doings, empirical materials and the theoretical orbits our work occurred in relation with. These beginnings-happenings-doings-thinkings contest the linearity and separation of stages that mark conventional research design and 'writing up' practices. Instead, they are entangled in and as practice-ings and research processes. The project and workshop had not one but multiple beginnings — below we outline three of them. Planning and doing were entangled together, not separate and sequential aspects of research 'design. 'Data' were not extracted, reduced and subsequently thematised and reflected on for their 'importance' but emerged in our stringly doings-happenings and the enactments-emplacements of our 'empirical materials'. Likewise, insights emerged in/through the unfolding of the working in the happening and doing and mattering. The project-process was a constellation of in situ matterings — a processual and looping practice of instantiations, insights, indications and intimations of how regard for string enabled new relationalities, materialities and response-able speculative fabulations for feminist hope to emerge.

Beginnings 1: What happens if?

One of us (Carol) had received a grant from a UK funding body for a project entitled: The little tactics of the habitat: Developing posthumanist methodologies to research how new educational spaces are claimed and made liveable. How thrilling and rare in a UK context: to be paid to do methodological experimentation! Carol invited three women whose entangled relationships as student-supervisor-colleagues prefigured their work in the project. The aim was to keep the project loose, open, flexible. The invitation was not about 'we will plan and do this', which is a constricting frame borne of conventional assumptions. The invitation was 'let's see what happens if ...'. This openness was an attempt to summon up research practice as an attempt to 'imagine forward' into a post-anthropocentric future for inquiry (Lather and St. Pierre, 2013, p. 631). This is a research practice in the act of developing research practice. Such research cannot be planned in advance, 'it may only be activated, enacted, instantiated' via bodies, objects, materialities, affects, sensations, movements, forces and relations which are often both uneasy and intense (Taylor, 2016, p. 19). As a 'practice of the plunge: letting go, diving, freefall, surfing, swimming, waving and drowning' (Taylor, 2016, p. 20) such research refuses pre-existing methodological handholds in favour of making it up as you go along in response to the forces that bubble up around you. The invitation was oriented to trying to create a space in which collaborative research could be done but what might actually be done (in terms of methods or outputs) was not known or tied down in advance.

However, to be clear, the workshops were situated within, and aligned with, the overall aim of the funded project as outlined above: to develop posthumanist research practices to investigate how staff and students claim and inhabit 'new' educational spaces. 'New' here referred to a new purpose-built award-winning building which housed a newly formed institutional entity, a university Institute of Education, which brought together two existing departments and two research centres. At the time, staff were both 'settling into' the new space and being unsettled by the move and the changes it produced in their spatial and temporal routines and their teaching and research rhythms. The purpose of the workshops were to orchestrate some happenings-doings-thinkings in relation to the building and its environs; to draw attention to space at the micro, mundane and quotidian level of everyday institutional practices; and to attend to how spatial occupation of the 'new' so quickly segues into habit and habituation. These purposes were the background to our collective goal in the workshops to make some 'trouble' with regard to things we shared and cared about – education, feminism, research, the production of knowledge through creative research practices, the power of space and the space of power. The 'new' building was a roaming space for our research doings.

Beginnings 2: Staying with the trouble – Whose trouble? What trouble? Why trouble?

Our work was inspired by Donna Haraway's book *Staying with the Trouble* (2016) in which she explores string figuring as speculative feminist praxis for composing better, more ecologically generative human-nonhuman ways of being. String figures are, she says, 'thinking as well as making practices' (p. 14); they are 'pedagogical practices and cosmological performances' (p. 14). String figuring is about forging partial connections through situated knowledges – string figuring is known in many cultures, times and places but each differs from others in their own local specificities. String figuring is a way of 'telling stories together ... fraught with the risks and joys of composing a more liveable cosmopolitics' (p.15). In our research workshop, we used string figuring to work with string for producing patterns together, for makings and doings which materialised modes of spatial play oriented to undoing (albeit in small ways) the large and controlled space of the university building we inhabited. This play was collaborative and co-relational: the doingshappenings were emplaced in public spaces to enable others – students, staff, passersby who were around – to meet with and engage with our stringly makings. Each string instance aimed to hail relationality into being and provoke thinking differently about the mattering of things in the spaces of the university: in corridors, café, reception area, walkways.

Haraway describes trouble as

An interesting word. It derives from a thirteenth century French verb 'to stir up', 'to make cloudy', 'to disturb'. We – all of us on terra – live in disturbing times, mixed-up times, troubling and turbid times. The task is to become capable, with each other in all of our bumptious kinds, of response' (Haraway 2016, p. 1).

Making trouble is about stirring up 'potent response' (p. 1) not in relation to distantly imagined futures but in the here-and-now so that better futures become imaginable. This requires, Haraway

suggests, 'learning to be truly present' (p. 1) and learning to 'become-with each other' (p. 4). Staying with the trouble is a task that is both serious and lively. In an earlier text, Haraway (1988) talked about the god trick, which is the idea that by being farther away, higher up than and in charge of a global view – in being omniscient – we can see reality, facts, truth, knowledge, better and more clearly. However, this masculinist, scientistic, colonialist panopticism with its fallacious (phallacious) presumption of objectivity has served us poorly. A feminist materialist optics, which centres situated, emplaced and embodied knowledges, is a better way: the closer in we travel, the harder we look, downwards and sideways rather than upwards, the more we are likely to see.

Staying with *our* trouble, then, and adopting a Harawayan optics, meant we chose to inhabit our university building ('new' in its age but not new in its observation of the codes of university life) in a different way: inviting string to take over spaces usually used for more traditional lectures and seminars; wandering-with string along the corridors we and students and staff walk down on our way to refectory; placing string in the reception area. We invited string as a thingly participant to do things which might allow ourselves and those passing through to see things differently. We made string figures, we tied string figures to railings, staircases, door handles – interventions which trouble the university and its conventions. We are four women doing unclassified and unaccountable things in university space. We are bodies out of line; our doings do not 'fit; we pick apart university space-time. Our experimental happenings-doings-thinkings were 'beyond inherited categories and capacities, in homely and concrete ways' (Haraway, 2016, p. 7). This is making trouble; this is the trouble we were making.

Beginnings 3: Stringing-with the 'posts'

Our work knots and knits theoretically and methodologically with feminist new materialist, posthumanist and post-qualitative research approaches. It is aligned with Davis's (2021, p. 3) contention that such approaches offer new 'strategies for inventing' and that such inventions offer ways of working 'with concepts, with words and ideas, and with multiple art forms that mobilise the senses.' The broadly shared purpose of such work is to contest what Brinkmann (2015, p. 620) calls 'good old fashioned qualitative inquiry' (GOFQI), that is, normative ways of doing qualitative research which privilege humanist interpretive method/ologies which work with representationalist assumptions that the researcher's role is to 'capture and understand [participants'] perspectives, usually via dialogue (often framed as qualitative research interviews), and try to give them voice (especially those whose voices are rarely heard), with the researcher's display of empathy being an important virtue in this regard' (Brinkman, 2015, p. 620). Feminist new materialist, posthumanist and post-qualitative research approaches destabilize the representationalist modes of knowing the world that GOFQI relies on. Instead, they are oriented to radical modes of experimentation for producing knowledge otherwise. Koro-Ljungberg (2016, p. 6) characterises these approaches as 'methodologies without methodology' because 'researchers are simultaneously working within and against existing methodological structures, ideas, and established ... literature'.

Feminist new materialist, posthumanist and post-qualitative research approaches, thus, try to reenvision methodology, data, research design, findings, and research results; they shift traditional conceptions of what matters in inquiry, undermine accepted notions of what counts in research, and disturb conventional modes of knowledge production and its 'reporting' (Koro-Ljungberg et al., 2017; Handforth & Taylor, 2016). Such strategies are attempts to move beyond the individualism of performative neoliberalism and bring into play 'within us and outside us populations, multiplicities, territories, becomings, affects, events (Deleuze & Parnet, 1987, p. 51).

As activations of 'methodology without methodology', our stringly-thingly doings in the 'posts' are our attempts to unsettle usual uses of university spaces. As an escape from GOFQI, they attempt to disturb (Fairchild et al., 2022), disrupt (Nordstrom, 2017) or provoke (Koro-Ljungberg and MacLure, 2013). Our escape is shaped through string figuring co-compos(t)ings and is our way — which is just one way — of trying to grapple with the 'messy conceptual labor, difference, otherness and disparity' of doing qualitative research differently and in which 'incompleteness [is] a positive norm' (Lather, 2013, p. 642).

SEGUE

And the happenings-doings-thinkings sections below

Are artificial and linear

Conforming to a sequential numbering practice

Conforming to a sequential numbering practice

Conforming to a logic of writing conventions

Conforming to a 'laying out' of parts

In practice

The project, workshops, our multiple beginnings and happenings-doings-thinkings

Were temporally and spatially

Energetically

Enfolded

&

Emergent

Occurrences that were not prior to but

Occurrences alongside-and-with

Contingent possibilities that

Urged us to stay that

Held us and took hold

Segue

An uninterrupted transition

A move with ease between

A smooth shift

A proceeding without a pause

A continuous move

A felted weave

A knotting and knitting

Happenings-doings-thinkings 1: These in particular of many possibles materialise

So, what did we do? At the first String Figure workshop we didn't know what we were going to do or where we would get to. The task was to do things with string, to work with string, to create somethings with string, to stir up some trouble with string. What came from working hand-to-hand with the materiality of string were unforeseen and unbidden improvisations which looped, connected, and pulled many different things together. We prepared for the workshop by reading Haraway's book: we breathed it in, took big gulps of it, deliriously imbibed it, puzzled over words and phrases. We talked by email and face to face of how her words/thoughts/ideas touched and moved us, shoved us around, dis-comforted us, challenged us, made us laugh and cry, made us feel mad, bad, angry and joyful. Hubble, bubble. Haraway's words a web, caught us up, wound us in, entangled us. Soft, warm and tender. Silky, spidery, powerful.





Figure 1

At the workshop we had:

- Our own copy of Haraway's text: pages marked, folded, and tabbed; lines underlined, annotated, with notes scribbled in margins;
- String, of various colours, textures, thicknesses, waxed string from a Cat's Cradle guide, standard string, coated string;
- Scissors for cutting string;
- Small, personal objects brought from home;
- Coffee, tea, biscuits;
- Instruction guides on how to make string figures of varying levels of complexity;
- Paraphernalia recognisable to most academic research events: glasses and their cases, pens, a digital recorder; iPhone for taking photos.

We talk and make. String things materialise. We use the String Figure guide and attempt pair and group string figuring:

One of us: Right, so look straight down on the string in your friend's hand and you will

see two Xs. Pinch the Xs right where they cross. Keep pinching and pull them out past the side strings like picture shows. Turn your hands over and push

your fingers still pinching down outside the side strings.

Another one: What do they mean by over?

Another one: Sorry, like the picture shows. Ooh now, I think that there's a bit of string

missing there. Oh no, there it is, right down there.





Figure 2

A second String Figure Day took place six months later. Four became three and, on a sunny day in June, those three (Carol, Karen, Julia) came together and worked diffractively and collaboratively with the empirical materials generated from the first day in another and different go at cocompos(t)ing with string. We continued string figuring because we remained intrigued to discover where further string-ings might lead; because we had had fun the first time and wanted some more; and because by then we were the Order of the Red Knot – a phrase which came to one of us on the first day – and wanted to do more knotting and knitting together.

In our workshops, we followed the scent of the thing – the string (Bennett, 2010). We orientated ourselves to and with string as lively matter. We attended to string's thing-power. In Bennett's (2010, p. 4) vital materialist ontology things (string) are considered 'vital players in the world' which, as 'quasi agents or forces with trajectories, propensities, or tendencies of their own' (p. viii), produce effects in congregation with other things.





Figure 3

We enfolded Bennett-with-Haraway (2016, p. 2) whose concern is SF: 'science fiction, speculative fabulation, string figures, speculative feminism, science fact, so far'. We felted Barad's agential realism into the mix with its appreciation that phenomena emerge as specific ongoing reconfigurations of spacetimemattering in/through/around their entanglements with other bodies, spaces and materialities. These enfolding text(ur)ings were invitations to situate ourselves in stringly relationalities, to linger in stringly moments in attunement with nonhuman things, materialities, spaces and affects. The following questions animated our two workshops:

- What happens when we pay heed to string's matterings?
- What does string make possible for post-qualitative, feminist materialist, posthumanist research and inquiry?
- How can string's happenings-doings-thinkings materialize and make trouble in Haraway's sense?
- What happens when string, as matter, 'spool[s] out without a predetermined destination' (MacLure, 2013, p. 662)?

These questions moved us. They did not frame or guide us. They shifted, shoved and strung us along, eluding and reappearing, thrumming in the atmosphere, calling further questions up as we went about our doings.

Happenings-doings-thinkings 2: Developing a stringly-thingly methodology

As indicated previously, we were committed to stringing multiple lines to undo monocularity and linearity, to work with/in the 'posts' to contest normative research methods, and to engage in knowledge-makings that looped, knotted, curled and unfurled in open ways. For these reasons, our doings and becomings with string were enacted as nomadic rhizomatics, which Deleuze & Guattari (1987) explain as non-linear, heterogeneous and multiple modes of knowledge-creation that favour adventitious growths and fortuitous and unforeseen connections. These modes of knowledge-making resonate with methodologies without methodologies which, Koro-Ljungberg (2016) argues, work against singularity and fixedness and in favour of fluidity, exploration and the discovery of unanticipated paths, connections and resonances. Linking these orientations to

Haraway's insights that string figuring is about acts that forge partial connections through situated knowledges and local specificities, pushed us to devise/enact a stringly-thingly methodology for our spatial play of undoing. Another question thrums: What and how is a 'stringly-thingly methodology'? Process-practice-knowing-knowledge. Segue.

We were/are together: four women desiring to make and stay with the trouble, following a thread in the dark, plying/playing with string's actualities and materialities – thickness, texture, colour – passing and receiving string in 'pattern and assembly' (Haraway, 2016, p, 3), in reciprocity and relationality, threads picked up, dropped and figures emerging with multiple hands, playing/working collaboratively in relays and rhythms, telling stories with hands, feet, bodies, voices, spaces, in 'spontaneous, unpredictable and pleasurable acts' (Lester & Russell, 2014, p.248) of co-creative uncertainty. String figuring as a modest, open-ended technique of experimentation functioned as a research-creation practice which invited 'opportunities for creative participation [which] take on their own shape, direction and momentum in the course of the event' (Manning & Massumi, 2014, p. 92). Our string-figuring research-creation was a 'commotion of co-activity' (Manning & Massumi, 2014, p. 14) that produced its own shape, direction and momentum.





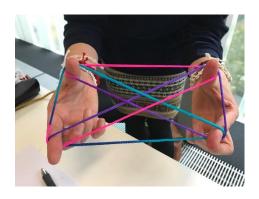


Figure 4

Each of us held still a pattern for our partners in order for them to change the pattern – the pattern was received, passed on and changed in the giving – a rhythm of accepting and giving was created and flowed between hands and bodies. We encountered difficulties, dropping loops, picking them up, making and unmaking, often failing to achieve the patterns pictured in the books:

One of us: Hmm. I don't think that's quite working. No

Another one: No, I think -

Another one: Something's gone wrong there.

Another one: Because it should, it's got this sort of tangly bit there.

One of us: And for once we haven't got a tangly bit.

We improvised, hands-and-string taking mutual shape as 'mindful matter' (Haraway, 2016, p. 4), producing mongrel forms as stringing-fingers failed to make the shape of the diagram but made something else together instead.

This, we think, is what enacting a thingly-stringly methodology enables: Com(p)osting unexpected combinations as string figures folded and enfolded, connived and collapsed into each other. Compost is warm, inviting, soft, full of aromas, generative of life. Compos(t)ing is a human-nonhuman material-semiotic thinking-feeling-doing (Haraway, 2016). Our string-figurings were precariously compos(t)ed netbags of tentative, collective makings. Com(p)osting opposes 'composing'. Composing is a method that foregrounds planning, deliberation, precise control, conducting and orchestration; historically composing has been aligned with masculine creativity; it can often be self-centred and grandly arrogant. In contrast, com(p)osting is conceptually and practically oriented to undoing the individual intentionality and control of 'composing'. Cocompos(t)ing is an in-between, processual and indeterminate activity; it is a making as segue within which some unknown-in-advance and unforeseen stringly-thing emerges; an unexpected human-nonhuman choreography.

This, we think, is what enacting a thingly-stringly methodology enables: Compos(t)ing research-creation as feminist praxis occurs 'at the ... boundary between experiencing and imagining' (Manning & Massumi, 2014, p. 5). We are co-present, caught up together-with, and making emerges as theory-concept-practice. An experience-imagining mode is both 'an act of thought' (Deleuze & Guattari, (1991, p. 21) and an 'experimental relationship with the real' (Deleuze & Guattari, 1987, p. 12). Our enactment of a thingly-stringly methodology hailed into being feminist praxis akin as a form of posthuman co-production (Renold & Ivinson, 2021) where the human is decentred in favour of becoming-with objects, places, things, and research is moved 'into a more direct and ethical engagement with the multiple worldings that we become entangled in'.

This, we think, is what enacting a thingly-stringly methodology enables: The research is the doing, the making, the holding in relational hand-string-space-body patternings. Processual stringly-thingly-methodology activates experimentation within an emergent ethics of relation. It is an activation of thought, rhythms and affects from inside the act, always contingent, situated and emergent (Manning & Massumi, 2014, p. ix).

Happenings-doings-thinkings 3: Time, attention and methodological experimental justice

Becoming together-with-string involved matters of time and place. Another question thrums: How can string figuring as feminist praxis be a little collaborative push against the punishing rhythms of academic and capitalist clock time?

The two workshops occurred in the 'thick present' (Haraway, 2016, p. 1) of cold December and warm June days; the writing and revising of this article occurred in the thick and extended presents of the years since those workshop days. Conceptualising time as a 'think present' enfolds many thens and nows (because time is not linear), and many spatialities and materialities. Times-spaces-matterings. The project workshops opened (up) time to find new ways to inhabit *this* place, to momentarily dwell in *this* space differently. They opened temporalities of/for learning to be 'truly present' (Haraway, 2016, p. 1) – to be attentive to – the situated someplace of that particular university seminar room, these corridors, those stairways, café and reception area it led

to. The December workshop occurred in a building uninhabited by students (as term-time teaching had finished) but in which others (lecturers, admin staff, café staff, cleaners) were still coming and going, and in freer rhythms than term-time demanded. As Haraway (2016, p. 31) notes, 'nobody lives everywhere; everybody lives somewhere ... The spider is in place, has a place' and yet spiders are also known for travelling elsewhere. The temporal particularities – the Sheffield wintry coldness and grey skies gloominess, and the cold, artificially lit and bare, grey seminar room – made one of us think of the lines from a Thomas Hardy poem: 'Winter's dregs made desolate/ The weakening eye of day' and reinforced the sense of our liminality. Our string figurings occurred at the edges of 'what normally counts' as educational research and at the hinge of the year.

Academic time is geared to the measurability and linearity of modern Western time, and is bound up with the imperatives of domination and destruction that shaped the imperial, colonial enterprise. Griffiths (1999, p. vii) argues that such 'time [is] highly political' in its tyrannical alignment to 'progress', science, and the 'benefits' of civilization. Time's measurability and linearity underpin racist, colonialist, elitist, patriarchal, extractive enterprises and it is more painfully apparent each year that the 'onward' march of Western time displaces other more cyclical, mythic, spiritual and Indigenous ways of figuring, knowing and feeling time. In the contemporary neoliberal university, time's tyrannies dominate research, pedagogy and academic writing which are marked and measured by Research Excellence Frameworks, or Teaching Excellence Framework, H-Index, citations, how many articles you publish per year or how many external grants and how much income you 'win'. This is academic time spent, measured, marked and staked as individual and institutional productivity and performance.

Another question thrums: How can string-figuring contest this corrosive and destructive temporal academic system which depletes hearts, bodies and relations? Our workshops and their beginnings-happenings-doings-thinkings worked with the slower time of co-creation in attentive duration. We tried to 'localise' academic time through the specificities of our stringly matterings, to unlink time from its capitalist moorings, to dis/assemble its deadly configurations. Our string figuring dis/arrangements aimed at inquiry which slowed time – which worked in slow time so that attention could be strengthened, deepened, lengthened. Our inquiry was shaped as intensive temporal counterpoint to the speeding, accelerationist surface of performative academic life. String-doings opened a gap in which to do some quiet, fun-filled, collaborative work together, figuring research and scholarship as a relational 'passing on in twists and skeins that require passion and action, holding still and moving on, anchoring and launching' (Haraway, 2016, p. 10). Rather than feel depressed about losing time to the performativity of academic life, we crafted an opportunity to work in the temporal interstices, in the small and slow gaps that open and come to matter when working relationally with hands-bodies-spaces-string-figures. As Bozalek (2017) notes, slow research offers possibilities for making connections and enacting care in ways which have the potential to reinvigorate academic life; slow research creates a generative space in which heterogeneous partners are rendered capable.







Figure 5

In our workshops, the temporal rhythms of slow research made generous connections possible, enabling new forms of 'we' to emerge. We make and get on together. We make and delve. We make and find we do not need to agree or disagree on things. We make and stay alert. We make and move. We make and listen. We make and question traditional hierarchical knowledge and how universities are social and political locations for White male heterosexist knowledge reproduction. We make and discuss how hierarchy equals knowledge equals power. We make in a slower and more intensive time, in a materially experienced 'meanwhile' as times, spaces and matterings are 'superimposed on one another' (Deleuze & Guattari, 1991, p. 158). Our pasts-presents-futures are enfolded in the present of becoming. This is the slow time of ethico-onto-epistemology (Barad, 2007) in which 'each moment is made up of a superimposition of all moments (differently weighted and combined in their specific material entanglement)' (Barad, 2014, p. 528). This is slow time as intra-active agent in posthuman co-production.

How lucky we were in getting together and then getting on together, so that we could string together 'a possible thread in a pattern' by the 'small, practical enactments' oriented to 'less denial and more experimental justice' which aims not at reconciliation or restoration but at 'more modest possibilities of partial recuperation and getting on together. Call that staying with the trouble' (Haraway, 2016: 28 – 29). Bhattacharya (2021, p. 157) talks of those things in education that are 'urgently in need to address but frustratingly difficult to definitively represent' and urges us to 'dare to commit'. Another question thrums: What would it mean to dare to commit to methodological experimental justice? Bhattacharya (2021, p. 158) suggests the need to respond as 'embodied socially and historically located scholar[s], to act in ways that have beneficial consequence, however contingent the grounds are for that action'. Methodological experimental justice is a daring to commit to modes of slow research and quiet activism as a minor art of un/doing and subversion from within (Taylor, 2022).

Happenings-doings-thinkings 4: Regard – feminist in/discipline for undisciplining perspective

Regard

Pay attention to and have concern for

Send greetings and best wishes

Hold in high esteem, admiration, respect, affection

Look with consideration at

Study contemplatively

Take heed of

Deepen time for care

Respect particularities, idiosyncrasies, singularities.

If we commit to enacting experimental methodological justice, another question thrums: what happens to researcher positionality? Research conducted via a stance of regard refuses the devouring eye of the researcher's gaze. Regard aims to displace a one-way directionality whereby looking is always a looking 'at' and thereby taking possession 'of' something or someone: God looking at 'his' world; the male gaze turning women into objects; the racist classifying on skin colour; the colonialist positioning Indigenous peoples as 'others'. Regard opposes the methodologies that give rise to visual (material) acts of appropriation and the violence of their classificatory, coding and knowledge systems. How about beginning instead by giving the world and nonhumans their due? Regard invites the eye to rove relationally, to attend to without possessing, to look with rather than at, to try to unfix looking from its customary labelling practices. Regarding string in our String Figure Days aimed to partake of what Ulmer (2017, p. 206) refers to as a 'slower ontology [attuned to] more sustainable rhythms of inquiry'. Regarding string was an invitation to work improvisationally to attend to here-and-now human-nonhuman materiality; it was about co-compos(t)ing with string in order to ponder and foster 'healthy, sustainable, productive, balanced, meaningful ... approaches to inquiry' (Ulmer, 2017, p. 221).

In the June workshop, one of us tells a story of when she looked at a raffia woven coffee table.

From where I am I can see one pattern. Clearly. And only one. From where he is he can see another pattern. Clearly and only that pattern. When I stand by him I see his, when he stands by me he sees mine. When I stand and look down on the table from above I see something altogether different. With Haraway we could think of how, from our own perspective we learn another perspective, and from another's perspective we learn something else. Perspective plays a part in knowledge, and in the interpretation of knowledge. This isn't about who is right or wrong, whose knowledge is better. It's about realising there are many knowledges, many ways to be. What if we only ever saw one thing, and 'knew' we were 'right'?

Perspectives are about looking at, about having a lens for looking at. Lenses can shape looking by defining, classifying, constraining. But looking can also be generous and situated. We can see from below, from amongst, as well as from above. String helps. String tied to table legs as we crawl on the floor. String tied to light fixtures we have to wobble on tables to reach. String invites a multi-

perspectival optics as we hold and weave it and talk about what we see and realise the multiplicities and the attachments, the continuous weaving. Placing, knotting and tying string high, low, under, between befuddles sight and scale and depth, as we zoom in and out. These doings-thinkings-makings is inquiry practiced on a small and local scale, low budget, simply resourced, full of promise.

Regarding string was our way of thumbing the nose to those who have belittled string figuring, seen it as a bit of a joke (Sillitoe, 1975) or dismissed it as simplistic and childish (Hill, 2008). In shifting from the mono-ocularity of The Gaze to a multiplicitous optics of regard, our string-figuring argued back against and unmoors those supposedly authoritative accounts. One of us says:

I just wanted to shake my fist and go to all those people who say 'why do you do this?' People who spend money and time and expend power and energy on destructive, repetitive, singular things about truths with a capital T, to be able to say just stop ... that's not how you have to do it. This is another way, this is entirely valid. This bunch of women sitting around a table with string.

Haraway (1988, p. 585) argues for situated knowledges as 'a practice ... that privileges contestation, deconstruction, passionate construction, webbed connection and hoped for transformation of systems of knowledge and ways of seeing'. Doctoral students are always asked: so what is your theoretical framing? This question implies there must be one and only one! Framings and perspectives can bully us and our inquiries into submission! What happens if ... we unframe frame and refuse the mono-ocularity of perspective? Speculative string figuring in a mode of regard is an invitation to experiment in the development of research accounts which are multilogical, multifarious and relational, and in which the 'knowing-doings' are constitutive and consequential (Taylor & Gannon, 2018). Research positionality matters. Regard matters. Both are about response-ability — of knowing-doing with care, concern, kindness, respect and admiration. Research as regard promises possibilities for deepening research relations and expanding feminist indiscipline, not flattening our research and ourselves into pre-formed and disciplinary grids of knowledge. Making trouble with perspective is a way to enact feminist materialist ethics — to make ethics matter in new ways.

Happenings-doings-thinkings 5: Storying space differently – heterotopian curiosities

We string. We read. We talk. One of us reads out a quote from Haraway where she aligns herself with feminist environmentalist Eileen Crist, writing against 'the managerial, technocratic, market and profit-besotted, modernising and human-exceptionalist business-as-usual commitments of so much Anthropocene discourse' which, she says, is not just 'wrong-hearted' but 'also saps our capacity for imagining and caring for other worlds' (Haraway, 2016, p. 49). Sat in our so very square and masculinely constructed 'new' university building in the Northern once-steel-producing city of Sheffield we are having no trouble at all imagining other worlds. String helps us make them, bring them into being in the here and now.

We move. We weave. We make. We string figure. String takes us for a walk to provoke the university building. String figure experimentations, decorations, trails and games were created with windowsills, floors, stairwells, banisters, desks, tables and a Christmas tree. Staff in the building became involved through investigating and exploring the provocations and being invited to join in with their ongoing co-creation.

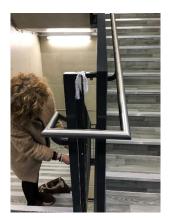






Figure 6

Spiders are architects, engineers, designers and weavers. They make their webs from silk strands, five times stronger than steel of the same diameter. The exact qualities of the proteins which give spiders' silk its strength and elasticity have so far eluded scientists (Ault, 2015). Spiders make wet silk, dry silk, smooth silk, bumpy silk, sticky and non-sticky silk – all threads for moving around with, doing things with, threads for creating and inhabiting webs. They wait patiently for wind so that they can throw out their first line, and they feel in their bodies when it snags on something. Like Haraway (2016), we invited spiders to be our demons, to inspire our work with string to make new connections possible. String, like spiders' silky lines, is about attaching and detaching, making knots, throwing out threads, catching at things, entwining and binding, all the while keeping an openness to the meshwork. And so, we wove, frayed, matted and tatted in and around the building, and in this work brought into becomings new alliances, assemblages and collectivities.

One of us puts a string ring in a display case: an original and prized artefact, it runs rings round and resonates with the rings that define women as belonging to men, that confine women within circumscribed private and public space. One of us hangs a huge frayed red string tassel in the stairwell, flowing down from floor four to three and two, a materialisation of menstrual flow: red the colour of blood, valour, danger. One of us ties string to steel staircase rivets: string rivulets a temporary softening of hard lines and a fugitive smoothing of unforgiving surfaces.



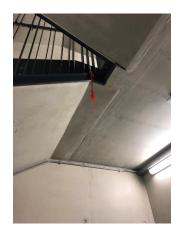




Figure 7

Such playful doings bring together a thingly-stringly methodology with somatechnics of bodily movements with spatial inhabitations as 'an emergent co-production of entangled bodies, affects, objects, space and histories in ways that make life better for the time of playing' (Lester & Russell, 2014, p. 241). Our happenings-doings-thinkings became a 'powerful and diverse activity for rearranging old things and proposing new things, new patterns of feeling and action' (Haraway, 2016, p. 150). Entangled space-bodies co-produced and connected in making and unmaking with the materiality of string. Our doings shifted the spatial dialectics (Lefebvre, 1991) which presumed how the space of a newly built building should be used. Those we encountered had their expectations disrupted as our body-space-building-string creations disrupted, temporarily, the 'proper' use of staircase, stairwell, reception area, display cabinets and seminar rooms. String attached and connected bits of the building usually un-attached. String figure somatechnics enacted moving lines and fluid boundaries, shifting known and proper spaces into elsewhere. Multiple human-nonhuman bodies in motion in play. Perry (2011, p. 5) says: 'The body is always in a state of becoming [as] a site of experience, sensation and affect ... embodiment is a state that is always contingent upon the environment and the context.' Hands faltering and fiddling with string and materials, we played, practising cat's cradles, getting it gloriously wrong and gloriously right. There are, after all, many ways to cradle a cat. Haraway (2016) teaches how to play cat's cradle: let it happen, trust hands and eyes, work together whilst slipping into each other's and others' spaces, hands crossing, threads rssssssing, new shapes being made, ongoingness of bodies-spacestimes. Were we doing art? Or craft? Or play? Or perhaps a combination of all three (and more)? Does it matter how we name it? We were not fussed by categorising, by reducing things to an 'it is/was this'. Like Hickey-Moody & Page (2016) the purpose was to make a little trouble and thereby expand the research inquiry repertoire and challenge conventional methodologies. No need to stratify, segment and hierarchize our research doings. Segue.

Haraway (2016, p 12) cites Marylin Starthern's comment that 'it matters what ideas we use to think other ideas (with)'. A question thrums: Is the idea of heterotopia a useful idea to engage in thinking about our somatechnics of embodied string space-ing in a university building? In developing the concept-theory of heterotopia, Foucault (1984) pondered various things: the givens of spatial binaries (public/private; family/social; cultural/useful; work/leisure); the 'fantasmatic' phenomenal space that Bachelard intuited and described; and the unreal and/or

perfected spaces of Utopias. To these he counterposed heterotopias, which he designated as:

'Counter-sites, a kind of effectively enacted utopia in which the real sites ... are simultaneously represented, contested, and inverted. Places of this kind are outside of all places, even though it may be possible to indicate their location in reality' (Foucault, 1984, n.p.).

Foucault used the metaphor of the mirror to explain heterotopias: the mirror reflects and visualises the 'real you' and the reality of the world you inhabit; it also connects the real with the virtual. He says: 'The heterotopia is capable of juxtaposing in a single real place several spaces, several sites that are in themselves incompatible' (n.p.).

Pursuing heterotopia, we string-figured hegemonic university space into an other space, into multiple other spaces. Our string-bodies created imagined-real space(s) which interrogated, contested and upended the university space container we worked within; we 'enacted utopia' via the playful-art-craft-making which opened virtual potentialities to move and re-situate materialities, bodies, spaces. A large frayed red string tassel in the university stairwell might be okay in a different space but not here: this simultaneously in-and-out-of-placeness of our happenings-doings both exposed and exploded normative social uses of university space, revealing the organisational politics that control them. We string-figured and entangled heterotopic space with institutional space. In contrast to the Foucauldian category of heterotopias of compensation, and Gourlay's (2015) category of heterotopias of desire, the heterotopic space our string figuring summoned into becoming is a praxis imagined and achieved in the doing. Like Charteris et al. (2017) ours was a 'heterotopia that ruptures the taken for granted conventions of academy territories' and 'destabilise[s] neoliberal structures of audit and surveillance'. Were we string figuring a feminist materialist heterotopia of methodological curiosity in which unexplored possibilities and new relations of/for institutional space come to matter? In which case, we agree with Strathern: it matters what ideas we think other ideas with, and what different stories we craft with those ideas.

Happenings-doings-thinkings 6: Becoming-spiral; becoming-'we' – stringing feminist materialist praxis

Hands and fingers moving busily between string and twine and wool and other stuff. Talk turns to middle-aged women in universities, menopause, hot sweats and uncomfortableness.

Another one: It seems to go on for ages

Another one: Forever

One of us: Yes

Another one: I'm in that space as well

We agree it's never a conversation, unless it's a conversation with another middle-aged woman: shared stories of menopause offer a storytelling of 'the patterning of possible worlds' (Haraway, 2016, p. 31).

Another one: It's just yet another aspect of women's experience that is shameful,

embarrassing, not to be talked about in polite company

One of us: Laughable

Another one: Laughable

Another one: Yes laughable; yes absolutely

No one is laughing. A moment of clarity, string folds into string, knotting our conversations with 'a host of companions in sympoietic threading, felting, tangling, tracking and sorting' (Haraway, 2016, p. 31). It becomes evident that the earth is stirred by this conversation, 'worms turn in their wormy pile' (Haraway, 2016, p. 32). We continue compos(t)ing. We discuss a meeting that two women were unable to attend. One had family commitments; another was recovering from a hysterectomy. A (male) manager says 'Well, I didn't ask you to breed.' When a male manger cites the distance he has to travel as a reason for not attending a meeting, the response is quite different. Distance travelled along motorways in fast cars is okay. Bodily production, excretions, body desires, bodily re/formations, changes, not so. Public, institutional, university space is still, somehow, either universal and/or masculine space. Stringing figuring with the physiology of human bodies, hormones, oestrogen, progesterone, and with nonhuman companions in the room with us, dust mites, spiders, bacteria colonies in the air, on us, in the skin, hair and eyelashes, staphylococcus, corynebacterium and Propionibacterium, and in our gut. There's a hierarchy of what's accepted, what's unseen, unknown and out of bounds. Women's bodies so often pose problems when we enter and inhabit institutional spaces, and make our differences felt. We string figure the 'feminist killjoy' (Ahmed, 2017), the one who dares to articulate and bring the unacceptable into social, public spaces – at dinner parties, in meetings, in the bathroom, in the university. Do we want to be that woman? If we remain silent, we 'surrender the capacity to think' (Haraway, 2016, p. 35). This matters, because as Haraway (2016, p. 39) says, thought is about 'telling the stuff of living'.

We string figure and discuss menstruation: the need for privacy; remembering sitting in a cubicle ripping sanitary towels out of plastic packets and whacking them in knickers; sanitary towels and tampons infused with perfume.

One of us: Because you smell bad

Another one: And perfume you can use 'down below' to make you smell acceptable.

Another one: Oh, I'd forgotten about that

One of us: And the litany of horrible words

Another one: *Oh, yes*

Another one: Words and words and words.

Unclean. Shame. Women's bodies as dirt – as matter out of place (Douglas, 1966). It takes us back to school and things that boys used to say about girls. We discuss these words and we don't all agree. Swear words. Dirty words. Unacceptable words. Words used to offend, joke, challenge.

Using the c word. A woman -hating word? Here we are again, in the mulch. We have had this conversation before, says one to another one. She, like the rest of us, is staying with the trouble. The trouble in this instance is how institutions regulate, control, cleanse and obliterate women's dirty bodies through material-discursive practices which maintain unequal patterns of gendering within our everyday lives within higher education institutions (Shildrick. 1997; Taylor & Fairchild, 2020). Haraway (2106, p. 40) says we must 'change the story, to learn somehow to narrate – to think – outside the prick tale of Humans in History, when the knowledge of how to murder ... is not scarce.' Feminist scholarship has talked of how patriarchy, in collusion with colonialism and capitalism, has used words and weapons to dis/member women's bodies, stories and lives; it has explored how women's accounts have been discounted as gossip, chit-chat, small talk, mere background noise to His Master's Voice; and it has charted how violence, war, torture and rape have been used to silence women unto death (Grosz, 1994; Hill Collins, 1991, Young, 1990). And not only women: all the nonhuman and human 'uncountable multitudes of the living earth' (Haraway, 2016, p. 40) who, right now, are dying from poverty, disease, extinction, and loss of habitat. What to do? String figuring in the face of material annihilation?

One of us: I like your spiral

Another one: The spiral is lovely

Another one: It is really lovely

We have not spiralled out of control

We have spiralled into 'we'

We don't know what we're doing with this

Yet we could

Sit here all day and continue to do it

Unafraid of where it takes us.

One of us: I'm getting completely lost in this now. I don't know what I'm doing. It's the finishing off that's quite hard.

Another of us: Do you want to finish it off?

One of us: Mmm, that's the thing ...

We do what we can, here and now. This is the feminist theory-method-praxis we seek and enact. String figuring ways of living together – making bringing something into existence that wasn't there before – and dying together – as they fall from the hands and vanish into inexistence.









Figure 8

Our multi-coloured threads and skeins braided us up and into the Order of the Red Knot. As we moved around together string/ing our research-creations we remember Barad's words (2007, p. 55): 'to theorize is not to leave the material world behind and enter the domain of pure ideas where the lofty space of the mind makes objective reflection possible. Theorizing, like experimenting, is a material practice.' We knot these words with Sara Ahmed's (2017: 7) question: 'what is this thing called feminist theory?' Ahmed says feminist theory is not something which can be bracketed out, something emanating from the academy, something that is work of a specific, or perhaps 'higher' kind, than the other work we do. Feminist theory, she suggests, is a sort of 'homework', that is, it is work we do which brings feminist theory home. Feminist theory is work which refuses the false separation of 'theory' and 'politics', it is located in everyday, particular experiences of being-feeling-knowing that 'you' are not at home here, that 'you' inhabit a world that does not accommodate you, that 'you' are expected not to be there. Such embodied knowings, Ahmed (2017, p. 7) suggests, urges us to 'bring feminist theory home' by making feminism work in the places we live, the places we work. This is what we tried to.

Continuing. Talking. Making. Thoughts. Beliefs. Scraps. Fabric. String. Paper. Tape. Scissors. Discussing. Pondering. Thinking. Troublesomeness. Networks. Forces. Events. Contexts. Rendering each other capable – as feminists, as women, as educators. We tried to bring feminist theory, praxis and research home, into the room, into our university building, to try to change things in some way: change ourselves, those we came into contact with, the materialities, the building, our pedagogy. Feminist praxis as particular, specific, and local. It matters because, as Barad (2007) says, every intra-action matters and because, if there is no theory separable from practice, then all we have to work with are the possibilities for stringing together webby feminist entanglements in the here-and-now.

Happenings-doings-thinkings 7: String's tentacularities —the trouble of hope; the hope of trouble

In sunny June one of us can't come so three meet for a second String Figure Day. The Order of the Red Knot. Three women (with the fourth im/materially present, entangled and becoming-with us becoming-with string) again intervene in the sterile, clean and uniform space of the aforementioned Man-designed university. This time we are on a fifth floor walkway suspended and connecting different parts of the building. We are in the way. We are high as kites. Photocopied

transcripts and materials from our first SF encounter were re-used, reappropriated, re-purposed. Cut up, stapled, buttoned and stitched; pegged and hung, coloured over and coloured in; shredded, ripped, torn; stapled, glued, and sewn together.

One of us constructs a rhizomic cat's cradle, adult sized, across the walkway, made from tape and rounders posts – weighted down so as not to fall and injure/capture/prevent passers-by/passersthrough. It has no door. To enter it you are required to step in over or crawl through. Its open spaces are porous for nonhumans and yet we wonder are we being exclusive? What if your human body won't permit you to do those things today? One of us makes a washing line of provocations, and hangs it in a zig-zag, knotted in place from the walkway suspended above an atrium. High up, at the top of the building, surrounded by light, space and air. A wavering line over the (non)emptiness below. Sounds float up and around. Sheets of transcript paper pegged on it. A hand-drawn block of flats with the word criminal scrawled over it, representing the horrendous Grenfell tower block fire where many lives of the poor were lost. A photograph of a beautiful dog, who resides with one of us and is most beloved. A cancerous bowel, reminder of a parent's recent operation. An end terraced house mural 'the Dove of Peace' from Belfast, white, gold, blue, green. A length of white toilet roll. Transcripts are commonly treated as data. But what is data? Data dies. Data kills. Data lives. Data-fiction/fraction/friction/faction. Data-in-the-posts. One of us establishes a Cut Up Book book-club, with fragments of transcript text in pocket size booklets. Their beauty is binding. She fell in love with them and wanted to claim them, to own them as their maker, before remembering that, after all 'what a vapid idea, the book as the image of the world' is (Deleuze & Guattari, 1987, p.7). She left them on the table to compost further becomings.

These transcripts do not erase our earlier words but put them back to work as palimpsest. As materialisations of the 'then' of our previous SF happenings-doings-thinkings, they are turned and re-turned, situated anew, pegged onto a new string, strung out anew. They resonated past-present-future, with the light and air circulating at height in the building, with the people passing by here and below, and with us three. New string-body-matter-space-data-becomings in quiet proximity. String figuring's curious alchemy an experiment-in-the-making. All afternoon we slip between multiple personal and professional identities:







Figure 9

researchers, mothers, daughters, sisters, lovers, partners, friends, secret sharers, members of the

Order of the Red Knot. People pass by. Some look. Some ask questions. Some become entangled with us and our doings. With each new encounter a temporary and provisional 'we' emerges and then disappears. Flux. Segue.

Feminists have, for obvious reasons, always been partly in love with hope as a means to leaven the despair of the patriarchal necro-politics of late capitalism. Hope is propulsive, positive and forward looking, a promise that depression can be overcome. Hughes's (2013, p. 154) words, written about women working in the jewellery quarter in Birmingham UK, could just as easily refer to many of us working in higher education today:

'Hope ... can structure the present to make it palatable, liveable and keep us going when all seems impossible. In this way hope provides a mediational structuring for the affects that arise when caught within a conundrum of enjoyable work and exploitative and precarious working conditions.'

A question thrums and troubles: Is that what our string/figure/ing is doing — making the exploitations of academic life palatable? This question brings with it an intimate anxiety. Prevailing academic conditions are shaped by performativity, precarity and obeisance to 'following the money', and the systemic effects of 'accountability, competition, efficiency, individualism and managerialism' produce profound 'disadvantages of women and ethnic minority academics in pursuing research, as well as those in small universities or in countries on the periphery' (Acker and Wagner, 2019, p. 64). And we could perhaps add 'and those working in the posts' to this list, given the bias towards methodological conservatism and disciplinary hegemony in mainstream knowledge production within universities. In such conditions, academic careers suffer when one's citation rates, grant income and networks of influence are compared and accounted as wanting.

Further questions trouble and thrum: Are we complicit in our own marginalisation? Do we put too much feminist faith into hope? Do we (those of us working in the 'posts') get too caught up by the possibilities of hope? Certainly, Colebrook (2010) warns against getting carried away by hope, of putting too much feminist faith into hope, and worries that the 'intoxicating' capacity of hope may delude us into thinking that difficulties have already been overcome. Berlant (2010), likewise, highlights the 'cruelty' of optimism which enables us to survive in conditions malign to our flourishing. Hughes (2013, p. 163 - 4), also, wonders if hope is a 'trick ... in the way that Marx talks of the trick of the capitalist. It provides as much as one needs to survive but laughs behind one's back because its rewards will always be less than the worth of one's hope.'

However. But. And.

Ahmed (2017, p. 2) says that where there is hope there is difficulty. Methodology without methodology is difficult. It requires time, care, patience, response-ability, effort, intuition, trust in each other, and the courage of awareness that some thing will emerge but we cannot know or predict in advance what it will be. Research in the 'posts' requires us to make, produce, form and hold open a shared space for human-nonhuman co-creation in the hope that knowledge will emerge. Such hope in processual happenings-thinkings-doings shapes the knowledge(s) that do

emerge in particular, located ways but this does not do away with the trepidation! So, we could say with Ahmed that hope is difficult and methodologically risky.

Haraway (2016, p. 4) comments that 'neither hope nor despair knows how to teach us to "play string figures with companion species". This, she suggests, is because neither despair nor hope adequately attend to 'the senses, to mindful matter, to material semiotics' which is what is necessary if we are to go on as 'mortal earthlings' in the thick, hot, compost that constitute our daily lives. In our workshops, we wanted to compost hope through stringly matterings, that help constitute and connect our hope here-now with tough, durable and flexible materials, like the spider's silk. Hope as guy lines tethered in the earth waiting for the wind to catch them and take them somewhere (who knows where?) so that new webby connections can be forged. String-figuring can, we suggest, be deployed as an experimental practice of regard, care and hope – the hope of modest possibilities that will problematise knowledge, trouble education, and disturb the business-as-usual of institutional university space. Hope-full string figuring combines theory, method and praxis to invent new approaches to research, new matterings for knowledge, and is attentive to the creation of possibilities and connections, unforeseen and unknown.

Concluding

This article has explored the happenings-thinkings-doings that become possible when string figuring is enacted as a mode of becoming capable together with. It extends modest hope – hope that is embodied, situated, partial, emergent and connective – for homely tentacularities to enhance creative capacities for entanglement across human-nonhuman differences. We began our string figuring with a number of questions. In the happenings-doings-thinkings that ensued these questions were answered and/or not answered, and more questions arose and thrummed along with our research-creations. Hubble bubble. Our string figuring is not about nailing down, or being definitive. Rather it is about encounters, unfoldings, practices-in-the-making. It is about feminist materialist/posthuman research praxis as a methodological call for hospitality – for opening doors, windows and institutional spaces to thinking and doing otherwise that masculinist authority and spaces have so far abjured. Co-composting string figuring co-creations are slow, careful spatialmaterial-matterings. In illuminating the unforeseen liveliness of research in the 'posts' they demonstrate how 'small, practical enactments' can be oriented to 'less denial and more experimental justice' (Haraway, 2016: 28 – 29). A question thrums: what becomes possible when we allow ourselves to follow the scent of string, the lure of the tentacular ones? String figuring as an instantiation of 'modest possibilities of partial recuperation and getting on together' (Haraway, 2016, p. 10) poses questions about how to live life in shared vulnerability: catch someone's line, hold it gently in your hand, craft something together, lay it quietly down again. Such lines are silky, enduring and light: such lines affect, connect, hold, and sustain, so that better futures become thinkable and even, perhaps, possible in the alter temporalities of university heterotopian spaces.

Acknowledgements

Thank you to the British Academy/ Leverhulme Trust for funding the Small Grants project out of which these experiments and article emerged. Thank you to the two reviewers who engaged with

our first draft with generosity and in detail. Your comments were a lesson in response-able, feminist reviewing and provoked us to produce a much better paper. You are both entangled in this work and with us.

References

- Acker, S. & Wagner, A. (2019). Feminist scholars working around the neoliberal university. *Gender and Education*, 31(1), 62–81. https://doi.org/10.1080/09540253.2017.1296117
- Ahmed, S. (2017). *Living a feminist life*. London: Duke University Press. https://doi.org/10.1215/9780822373377
- Ault, A. (2015). How do spiders make their webs?
- https://www.smithsonianmag.com/smithsonian-institution/ask-smithsonian-how-do-spiders-make-webs-180957426/, accessed 1 January 2018.
- Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham, NC: Duke University Press. https://doi.org/10.2307/j.ctv12101zq
- Barad, K. (2014). Diffracting diffraction: Cutting together-apart. *Parallax*, 20(3), 168–187.
- Bennett, J. (2010). *Vibrant matter: A political ecology of things*. Durham, N.C.: Duke University Press. https://doi.org/10.2307/j.ctv111jh6w.7
- Berlant, L. (2010). Cruel optimism. In M. Gregg & G. Seigworth (Eds.), *The affect theory reader*. Duke University Press, Durham, NC (93–117). https://doi.org/10.1215/9780822393047-004
- Bhattacharya, K. (2021). Rejecting labels and colonization: In exile from post-qualitative approaches. *Qualitative Inquiry*, 27(2), 179–184. https://doi.org/10.1177/1077800420941049
- Bozalek, V. (2017). Slow scholarship in writing retreats: A diffractive methodology for responseable pedagogies. *Society for Research in Higher Education Annual Conference*, Newport, South Wales, UK. https://doi.org/10.20853/31-2-1344
- Brinkmann, S. (2015). GOFQI and the phoenix of qualitative inquiry. *Qualitative Inquiry*, 21 (7), 620–622. https://doi.org/10.1177/1077800414554376
- Charteris, J., Jones, M., Nye, A. & Reyes, V. (2017) A heterotopology of the academy: mapping assemblages as possibilised heterotopias. *International Journal of Qualitative Studies in Education*, 30(4), 340–353. https://doi.org/10.1080/09518398.2016.1250178
- Colebrook, C. (2010). Toxic feminism. *Journal for Cultural Research*, 14(4), 323–335. https://doi.org/10.1080/14797581003765291
- Davis, B. (2021). Entanglement in the world's becoming and the doing of new materialist inquiry. London: Routledge. https://doi.org/10.4324/9781003037477
- Deleuze, G. & Parnet, C. (1987). Dialogues II: Revised edition. New York: Columbia University press.
- Deleuze, G., and Guattari. F. (1987). *A thousand plateaus: Capitalism and schizophrenia*. London: Continuum.
- Deleuze, G. and Guattari, F. (1991) What is philosophy? London, Verso.
- Douglas, M. (1966). *Purity and danger: An analysis of the concepts of pollution and taboo*. Henleyon-Thames: Routledge and Kegan Paul Limited.
- Eastop, D. (2014). String figures matter: Embodied knowledge in action. *Craft Research*, 5(2), 221–229. https://doi.org/10.1386/crre.5.2.221_1
- Fairchild, N., Taylor, C.A., Benozzo, A., Carey, N., Koro, M., & Elmenhorst, C. (2022). *Knowledge production in material spaces: Disturbing conferences and composing events*. London: Routledge. https://doi.org/10.4324/9781003029007
- Foucault, M. (1984). *Of other spaces (1967), Heterotopias*. https://foucault.info/documents/heterotopia/foucault.heteroTopia.en/
- Gourlay, L. (2015). Open education as a 'heterotopia of desire', *Learning, Media and Technology*, 40(3), 310–327. https://doi.org/10.1080/17439884.2015.1029941

- Griffiths, J. (1999). Pip, pip: A sideways look at time. London: Flamingo.
- Grosz, E. (1994). *Volatile bodies: Toward a corporeal feminism*. Bloomington and Indianapolis: Indiana University Press.
- Handforth, R. & Taylor, C. A. (2016). Doing academic writing differently: A feminist bricolage. *Gender and Education*. 28(5), 627–643. https://doi.org/10.1080/09540253.2015.1115470
- Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14, 575–599. https://doi.org/10.2307/3178066
- Haraway, D. (2016). *Staying with the trouble*. Durham: Duke University Press. https://doi.org/10.2307/j.ctv11cw25q.8
- Hickey-Moody, A. & Page, T. (2016). *Arts, pedagogy and cultural resistance*. Rowman and Littlefield International.
- Hill, S. (2008). The vows of silence. London: Vintage Books.
- Hill Collins, P. (1991). *Black feminist thought: Knowledge, consciousness and the politics of empowerment*. New York: Routledge. https://doi.org/10.1086/229850
- Hughes, C. (2013). I draw the line at stringing pearls. *Journal of Cultural Economy*, 6(2), 153–167. https://doi.org/10.1080/17530350.2012.741531
- Koro-Ljungberg, M. (2016). Reconceptualizing qualitative research. London: Sage.
- Koro-Ljungberg, M. and MacLure, M. (2013). Provocations, re-un-visions, death, and other possibilities of 'Data.' *Cultural Studies <=> Critical Methodologies*, 13(4), 219–222. https://doi.org/10.1177/1532708613487861
- Koro-Ljungberg, M., Löytönen, T. & Tesar, M. (2017) (Eds.), Disrupting data in qualitative inquiry. Entanglements with the post-critical and post-anthropocentric. New York, Peter Lang. https://doi.org/10.3726/b11070
- Lather, P. (2013). Methodology-21: what do we do in the afterward? *International Journal of Qualitative Studies in Education*, 26(6), 634–645. https://doi.org/10.1080/09518398.2013.788753
- Lather, P. and St. Pierre, E. (2013). Post-qualitative research. *International Journal of Qualitative Studies in Education*, 26(6), 629–633. https://doi.org/10.1080/09518398.2013.788752
- Lefebvre, H. (1991). The production of space. Oxford: Blackwell.
- Lester, S. and Russell, W. (2014). Turning the world upside down: Playing as the deliberate creation of uncertainty. *Children*, 1(2), 241–260. https://doi.org/10.3390/children1020241
- MacLure, M. (2013). Researching without representation? Language and materiality in post-qualitative methodology. *International Journal of Qualitative Studies in Education*, 26(6), 658–667. https://doi.org/10.1080/09518398.2013.788755
- Manning, E. & Massumi, B. (2014). *Thought in the act: Passages in the ecology of experience*. Minneapolis: University of Minnesota Press. https://doi.org/10.5749/minnesota/9780816679669.001.0001
- Nordstrom, S. N. (2017). Antimethodology: postqualitative generative conventions. *Qualitative Inquiry*. Onlinefirst. https://doi.org/10.1177/1077800417704469
- Osgood, J., Andersen, C. & Otterstad, A.M. (2022). Portal-time and wanderlines: What does virusing-with make possible in childhood research? *Reconceptualizing Educational Research Methodology (RERM)*. Vol. 13(3).
- Perry, M. (2011). 'Article 3 devising in the rhizome: The 'sensational' body in drama.' Education Research. Applied Theatre Researcher. Griffith University (Australia): pp. 1443-1726 [Online] [Accessed 26th August 2015] https://www.griffith.edu.au/ data/assets/pdf.
- Renold, EJ & Ivinson, G. (2021). Posthuman co-production: Bbecoming response-able with what matters. *Qualitative Research Journal*, 22(1), 108–128. https://doi.org/10.1108/QRJ-01-2021-0005

- Shildrick, M. (1997). *Leaky bodies and boundaries: Feminism, postmodernism and (bio)ethics*. London: Routledge. https://doi.org/10.1136/bmj.315.7117.1243a
- Sillitoe, P. (1975). Why string figures? Cambridge Anthropology, 3(1), 13–26.
- Taylor, C. A. (2016). Edu-crafting a cacophonous ecology: Posthuman research practices for education. In C. A. Taylor and C. Hughes (Eds.) *Posthuman Research Practices in Education*. London: Palgrave Macmillan. pp. 7–36. https://doi.org/10.1057/9781137453082
- Taylor, C. A. (2022) Feminisms and the posts: quiet activism as interconnection across difference. Paper in double symposium 'Feminisms and the posts'. *European Congress of Qualitative Inquiry*. Online. 2nd February 2022.
- Taylor, C. A. & Fairchild, N. (2020). Towards a posthumanist institutional ethnography: Viscous matterings and gendered bodies. *Ethnography and Education*. 15 (4): 509–527. https://doi.org/10.1080/17457823.2020.1735469
- Taylor, C. A. & Gannon, S. (2018). Doing time and motion diffractively: Academic life everywhere and all the time. *Qualitative Studies in Education*. 31 (6): 465–486. https://doi.org/10.1080/09518398.2017.1422286
- Ulmer, J. (2017). Writing slow ontology. *Qualitative Inquiry*, 23(3), 201–211. https://doi.org/10.1177/1077800416643994
- Young I. M. (1990). *Justice and the politics of difference*. Princeton: Princeton University Press.