



# 6

## Ethics in Transdisciplinary Research: Reflections on the Implications of ‘Science with Society’

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There is growing recognition of the need for science to improve its contributions to solving urgent societal problems and for academia to critically question its contributions to improving human well-being (Perry, 2006; Seidl et al., 2013). One strategy which has been proposed in social-ecological systems and sustainability research is for researchers to take a transdisciplinary research (TDR) approach and to conduct ‘science with society’ (Seidl et al., 2013). TDR approaches have arisen as a critique of the narrow focus of positivist or realist approaches dominant in natural and (some) social sciences (Klein, 2014; Popa et al., 2015), and we consider a critical realist underpinning an important foundation for TDR (Bhaskar, 2016). By adopting a critical realist stance in a field of science mostly characterised by positivist or realist paradigms, we recognise the importance of critical research that foregrounds the subjective role of the researcher, emphasises reflexivity on assumptions and values (Popa et al., 2015), and goes beyond the conventional epistemological boundaries between research fields to address societal problems (Bhaskar, 2016). Thus, we consider a transdisciplinary approach in sustainability science to be well aligned with the shifts to critical research that are evident in the social sciences.

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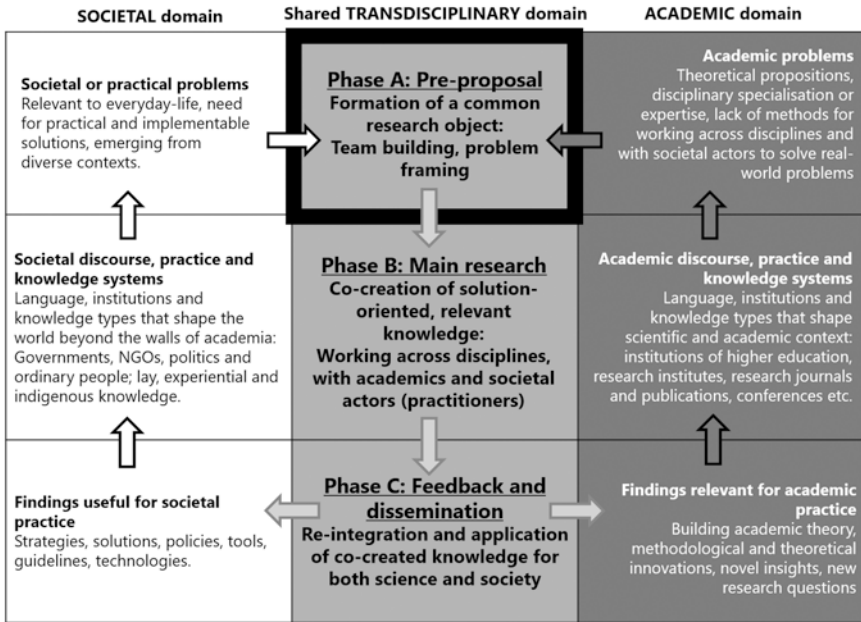
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We begin this chapter by describing TDR as defined in the sustainability sciences. We then consider the potential ethical implications of taking a TDR approach. This is followed by a reflective case study on the preliminary consultation processes of a PhD research project in which we are explicitly taking a transdisciplinary approach. Through this case study, we share our experiences of the ethical challenges involved in research not accounted for in current procedural ethics systems, since these primarily focus on minimising negative impacts on human participants during formal data collection activities. We explain the ethical clearance procedures which we encountered at the university and also how we went about adopting a transdisciplinary approach in this context. We reflect on lessons learnt while reading for this PhD on the ethical challenges of TDR and conclude with some recommendations, both for individual researchers and for institutions of higher learning, for addressing these challenges and building ethical practice in TDR.

## The Process of Transdisciplinary Research

Transdisciplinarity is a reflexive research approach that addresses societal problems by means of interdisciplinary collaboration, and, by transcending the boundary between science and society through collaboration between researchers and societal actors, enables mutual learning and knowledge co-production (Jahn et al., 2012; Lang et al., 2012). TDR thus involves the engagement of non-academic societal actors throughout the research process, from question formulation through to the re-integration of results at the science–society interface (Fig. 6.1). This engagement requires effective, trust-based working relationships between academic and non-academic actors, which brings with it particular implications for ethical research practice, as will be illuminated below. Although primarily we draw on interpretations and practices of TDR in the sustainability sciences, there are alternative lineages of transdisciplinarity and various understandings of the approach and its implications for researchers (Hirsch Hadorn et al., 2006; Klein, 2014; Russell et al., 2008). Reflexivity in TDR comprises four aspects: (1) deliberation on the overall normative and epistemic orientation of the research; (2) deliberation on the socially relevant framing of research problems; (3) generation of reflexivity on values and understandings in concrete problem-solving and social experimentation processes; and (4) generation of reflexivity on normative commitments and ideological orientations in social transformation processes (Popa et al., 2015).



**Fig. 6.1** Conceptual model of a TDR process which bridges the gap between societal and academic domains and seeks to co-generate socially relevant, solution-oriented knowledge (modified from Lang et al. 2012; Jahn et al., 2012)

As shown in Fig. 6.1, the TDR process considers research problems and questions (top); discourses, practices, and knowledge systems (middle); and the context in which results of findings will find meaning (bottom) in both the societal (left) and academic (right) domains. These are brought together in the shared transdisciplinary domain (middle). The research process in the transdisciplinary domain can be divided into three phases, though these are not as distinct nor are they as linear as portrayed here. In Phase A, the team is formed and research questions are identified. Some applications of this model of TDR have suggested adding a ‘Phase 0’ before Phase A, in recognition of the time and resource-intensive nature of building meaningful research relationships, even before research questions can be jointly formulated (Cockburn et al., 2016). In Phase B, the research is conducted collaboratively by working across disciplines and including both societal and academic actors and knowledge systems to co-produce knowledge. In Phase C, research is re-integrated into both societal and academic domains, taking cognisance of the kinds of knowledge products most suited to each domain. This chapter is focused on the ethical challenges which we faced during Phase A of the TDR process: the pre-proposal phase.

## Ethical Considerations of Transdisciplinary Research

As more researchers take up the challenge of TDR, current research ethics clearance procedures (i.e. procedural ethics) in institutions of higher learning pose a challenge. Procedural ethics are often based on conventional, positivist research in which societal actors only become involved during the data collection phase as subjects of research rather than as participants. Therefore, these procedures do not account for ongoing engagement from the early stages of research (Fig. 6.1, Phase A). Current timelines, structures, and institutional arrangements which govern research ethics committees (RECs) do not allow for the kind of flexible, preliminary, and open-ended arrangements required for the pre-proposal research engagements which were necessary for a TDR process in our study. We reflect further on these limitations below.

Ideally, for PhD students to stay true to TDR principles, they would work collaboratively as part of a team which includes participants from diverse disciplines within academia and participants who are ‘societal actors’ (i.e. who are themselves not academics). In other applications of sustainability science, researchers may work in unidisciplinary teams and would not engage with societal actors at all; thus, TDR explicitly bridges the divides between disciplines, and between academic and non-academic actors (Lang et al., 2012). Not all PhD students, however, are embedded in such teams with existing working relationships, and it has been recommended that individual PhD students seeking to conduct TDR could consider building a ‘transdisciplinary epistemic community’ around themselves (van Breda et al., 2016). This means developing a team of people from different disciplines and from non-academic communities of practice in support of the PhD project (Cundill et al., 2015). The case study presented in this chapter is an individual transdisciplinary PhD project in which the student had to build new relationships and develop a ‘transdisciplinary epistemic community’ from the start of the project. The ethical concerns of working with and collecting information from human research participants or research partners during this early stage of research, before ethical clearance was received, are the focus of reflections in this chapter.

Limited literature exists on the ethics of TDR. However, with its focus on engaging with societal actors beyond academia, working collaboratively and encouraging participation, emphasising reflexivity, and taking a problem- and change-oriented approach, TDR has similarities with action research, participatory and collaborative action research, participatory community-based research, and other allied research approaches and methodologies. Researchers

working with these approaches, which are more well-established than is TDR, have begun to grapple with the ethical implications of engaged, dynamic research and the challenges that are faced with institutional ethical clearance procedures (Box 6.1).

Similar concerns have been raised by researchers working in the social sciences using qualitative research methods such as ethnography and narrative (Israel, 2015; Parsell et al., 2014), longitudinal research studies exploring individuals, groups, and phenomena over time (Miller, 2013), and creative and transformative research methodologies (Kara, 2015). Many of these concerns are linked to the historical origins of ethical review procedures in the biomedical and clinical disciplines and their underlying positivist research paradigm (Parsell et al., 2014). Critical researchers share similar concerns, as is evident in the contributions to this handbook. Our case study thus contributes to a growing body of research on the ethical challenges of engaging societal actors as partners in the research process, whether this be in an explicitly transdisciplinary approach or in the allied approaches with similar foundations that are mentioned above.

#### **Box 6.1 Procedural ethics challenges faced by researchers who adopt engaged, dynamic research approaches allied to transdisciplinary research**

- Lack of experience of research ethics committees in dealing with and reviewing unconventional research projects (Locke et al., 2013; Parsell et al., 2014).
- The nuanced and complex relationship between the researcher and the 'researched' is not often appreciated (Locke et al., 2013; Smith, 2008).
- The key role of good relationships and trust between researchers and research participants as a means of mediating ethical practice is not recognised (International Institute for Environment and Development, 2014; Locke et al., 2013; Smith, 2008).
- Overemphasis on individual autonomy whereby informed consent is seen as an individual, one-off activity, rather than a collective, negotiated, ongoing process (Locke et al., 2013; Smith, 2008; Williamson & Prosser, 2002).
- 'Informed consent', 'beneficence', and other principles of procedural ethics cannot be clarified at the start (Locke et al., 2013; Parsell et al., 2014; Smith, 2008) because the focus and nature of the research often only emerge over time through interaction between researcher and research participants.
- There are unclear boundaries around the 'ownership' of research data and findings (Locke et al., 2013; Smith, 2008), and difficulties are faced in guaranteeing confidentiality of data in collaborative research processes (Parsell et al., 2014).

## Case Study of a PhD Doing ‘Science with Society’

### Overview of the PhD Research Project

The project which is the focus of this case study is currently under way. The authors of this chapter are the PhD student (Jessica) and her supervisor (Georgina). The aim of the research is to explore enablers and barriers of collaboration for environmental stewardship in agricultural landscapes, through the lenses of social-ecological systems and sustainability science. A transdisciplinary framing was chosen for the research as it is based on collaborative relationships with practitioners, such as local non-governmental organisations (NGOs), who are working with local farming communities to facilitate improved environmental stewardship. Furthermore, the research is interdisciplinary, working across the social and ecological disciplines. Through this engagement with environmental stewardship practitioners, we aim to facilitate mutual learning between researchers and practitioners to co-produce new knowledge on the theory and practice of environmental stewardship.

### Engagement with Societal Actors in the ‘Pre-proposal’ Phase

This PhD research project differs from conventional research processes in which research questions are defined by researchers prior to engaging with research participants, particularly in the pre-proposal phase (Phase A, Fig. 6.1). During this phase, we sought to co-develop the research questions for the PhD in partnership with environmental stewardship practitioners. The intention was to draw research questions not only from the academic literature, but also to include the research needs, interests, and questions from practitioners actively working with local farming communities to facilitate stewardship. This included six months of informal discussions and meetings with practitioners whilst Jessica was still working as a stewardship practitioner before beginning full-time PhD studies, as well as continued engagement once the PhD had officially started in January 2015.

The aim of this engagement was to capture insights and questions emerging from the practice of stewardship in South Africa to frame the research. This was done through participation at a practitioners’ conference, through key informant interviews, and, where possible, a site visit, to gain an understanding of the local contexts of potential case studies. An integral consideration in the process of case study selection was a recognition of the social, economic, and political contexts in which this TDR was unfolding. In a South African

context, Swilling (2014) has warned of the ‘dramaturgy’ of co-production in a context wherein research participants have unequal capacity and opportunity to contribute. Since this study focused on the rural South African contexts where race, class, and power find expression in land ownership and tenure security, it was decided early on that case study selection would specifically include both private and communal land. This decision was made in order to pursue inclusive conversations about stewardship that would not privilege the voices of wealthy and predominately white private land owners. Indeed, it was noted early on that most NGOs were pursuing stewardship on privately owned land, and therefore additional effort was expended by Jessica to identify and engage NGOs that were explicitly breaking this mould and working with black communal farmers.

During this time, it was also crucial to emphasise the preliminary and scoping nature of the discussions and visits so as not to raise expectations. It was also important to clarify what the implications would be of joining in the TDR process. Jessica also had to make assessments of the suitability of practitioners as research partners based on their willingness to participate, their availability, and their openness to mutual learning. For example, one practitioner who seemed exceptionally supportive of the research was eventually deemed an unsuitable research partner, as he was never available for meetings to discuss the next steps. Similarly, in another potential case study, the overall approach and design of the case study seemed like a good fit for the project. The case study leader, however, felt that there had been too much research conducted in the area already and that there might be resistance to participation in yet another research process. Thus, Jessica carefully had to navigate the various possible case studies, in order not to jeopardise relationships while making the best decisions for the research project and ensuring the inclusion of marginalised voices which might otherwise not find their way into stewardship research. In the six-month period from January to June 2015, this information gathering was complemented with a literature review on stewardship, and in this way, the research questions and framing was a combination of societal and academic discourses and knowledge systems (Fig. 6.1).

## Ethical Approval Process at the University

The ethical approval process at our university is governed by an ethical standards committee and a university policy on ethics. This policy dictates that all university research involving human participants must have prior approval of the committee or one of its authorised sub-committees. This PhD research project does involve human participants as it includes social science research

methods, primarily qualitative interviews, and participant observation. In the case of this project, a departmental sub-committee (Department of Environmental Science) is the authorised committee for ethical clearance procedures. According to this sub-committee, doctoral students are to prepare a research proposal in which they outline the potential ethical concerns of their proposed research, along with suitable strategies to address such concerns. The research proposal, including a specific section outlining research ethics which is in effect the ethical clearance application, is submitted to the sub-committee for consideration (as a written proposal supported by an oral presentation). The sub-committee can then give ethical approval for the research project, or if there are ethical concerns which cannot be dealt with at the departmental sub-committee level, the proposal and the ethical clearance application are then forwarded to the ethical standards committee of the university for further consideration. It is recommended that the development of a research proposal (including the ethical clearance application) at PhD level should take approximately six months in the case of full-time studies. During these six months, the student is expected to spend time reviewing the literature and developing research questions, methods, and a detailed research plan. Once the proposal and ethical clearance application have been accepted, the student may then begin data collection.

In our case, however, we did not follow this procedure, as Jessica spent the first 12 months of her PhD gathering information, generating knowledge, and building relationships with societal actors (environmental stewardship practitioners in South Africa) to co-develop the research questions and frame the research project collaboratively. This was done outside the bounds of the university's policy on ethics. The question now arises: how did we ensure that we followed appropriate ethical principles during this pre-proposal stage of the research? What lessons have we learnt from this unintended experiment of researching beyond the conventional rules of procedural ethics and working closely with societal actors in a research project which took place beyond the boundaries of formal, institutionalised rules, and guidelines for ethical conduct?

## **Reflections and Lessons: 'Science with Society' Requires Everyday Ethics, Reflexivity, and a Relational Approach**

By taking personal responsibility for the day-to-day decisions on the ethics of engaging with societal actors in this research, we recognised an important lesson: making a clear distinction between 'procedural ethics' (i.e. the ethics which are codified in institutional ethical clearance procedures (Guillemin &

Gillam, 2004)) and ‘everyday ethics’ (Rossman & Rallis, 2010), also called ethics in practice (Guillemin & Gillam, 2004). This means that as researchers we recognise the role that procedural ethics play in formalising ethical practice and in keeping both researchers and institutions accountable and responsible (Israel, 2015), but we appreciate that ethical research practice actually takes place outside the bounds of the procedural ethics system and that researchers must bear the ultimate responsibility for ethical research decisions so that they need to ‘think ethically on their feet’ (Guillemin & Gillam, 2004; Rossman & Rallis, 2010) and actively develop an ‘ethical sense’ (Farrimond, 2013). This means being conscious, aware of, and reflecting on the key ethical principles as outlined in procedural ethics and applying them in practice. The following guiding principles of ethical research practice which we considered as informing our practice of everyday ethics were drawn from the university’s policy on ethics:

- Respect and dignity of research participants
- Transparency and honesty in all aspects of research
- Accountability and responsibility of the researcher
- Integrity and academic professionalism of the researcher

The principles of respect and dignity were applied, for example, when we co-developed the research questions in partnership with stewardship practitioners and presented some of these initial themes and findings at a conference. We kept the identity of the practitioners confidential, even though no formal commitment had been made to them in a formal informed consent process. When Jessica started developing a ‘transdisciplinary epistemic community’ (van Breda et al., 2016) in the early stages of her PhD, the importance of the principles of transparency and honesty became apparent: she made it very clear that although she was scoping for case studies for later in the research process, the early engagements with practitioners did not guarantee that their project would be selected. This was particularly difficult to do in cases in which practitioners showed great enthusiasm for the research and a keen interest in participating in a case study. The primary example of applying the principles of accountability and responsibility is the fact that we recognised that the pre-proposal engagements with societal actors were taking place outside the bounds of procedural ethics and that we needed to take full responsibility for everyday ethics decisions at this stage of the process. This applied to both of us in our capacity as student and supervisor, respectively. Jessica had a vested interest in one of the NGOs that were engaged early in the PhD process, which required paying attention to the principles of integrity and academic professionalism. This vested interest was a result of having

previously worked with that NGO and of having pre-existing relationships with the staff. In selecting case studies for the PhD, Jessica had to ensure that these existing relationships did not influence selection of case studies unduly by unfairly favouring one case study over another. The selection of case studies was based on several criteria, including the social, ecological, and agricultural features of the cases in relation to the research questions and framing, and the tenure arrangements of the land in question; we recognised up front that an entirely objective selection of cases (which would have been required in a positivist research methodology) would not suit our TDR principles. In order for the transdisciplinary knowledge co-production process to be of value to both parties, the willingness of participants to join in, and the ease of working relationships between researchers and partners, also had to be taken into account. Acknowledging and reflecting on this vested interest upfront is an example of integrity and academic professionalism. These examples illustrate that although there is a distinction between procedural ethics and everyday ethics, there is in fact a continuum between them whereby the guiding ethical principles as set out in procedural ethics documentation can and should be used to inform everyday ethics (Rossman & Rallis, 2010), and this becomes especially important in TDR.

Jessica also committed to taking responsibility for and considering any additional ethical concerns which may arise because of a transdisciplinary approach in which social engagement with human participants is more intense than in conventional research, which is also recognised as a challenge in participatory action research (Smith, 2008). This brings with it, for example, the need to manage research fatigue (Clark, 2008): Jessica was committed to building trusting relationships and good communication with research partners and participants wherever possible to allow for open communication channels and feedback, so that she could track research fatigue and respond accordingly. Furthermore, in taking an explicit transdisciplinary approach, her role as a researcher was slightly different from that of more conventional research in that she was both a researcher and a 'change agent'. This means that she has a value standpoint regarding the kind of transformative social change she would like to see (Parsell et al., 2014). She was committed to being open and honest with research participants about this and took a reflexive stance in her dual role. Another important strategy here was continually to reflect on and discuss these challenges with supervisors and others with similar experiences, as described in the next section.

In developing an ethical sense, one of the most important practices is reflexivity, and we consider this an important lesson learnt. Reflexivity is considered a tool for ethical research practice, particularly in the field, where

researchers do not have access to procedural ethics committees or experts (Guillemin & Gillam, 2004; Parsell et al., 2014). Reflexivity is recognised as a cornerstone of effective qualitative research, but it is usually considered a tool for ensuring rigour in research rather than a practice for ethical research (Guillemin & Gillam, 2004). Guillemin and Gillam (2004, p. 274) provide a brief review of the concept of reflexivity in qualitative research and draw together various definitions in their interpretation of the concept as: 'a process of critical reflection both on the kind of knowledge produced from research and how that knowledge is generated'. This requires a continuous practice of critical scrutiny and interpretation of the research process, not just of the methods and the data but also of oneself as the researcher and of one's research partners and participants, and one's relationship to them (Guillemin & Gillam, 2004; Rossman & Rallis, 2010). Jessica brought reflexivity into her research practice through frequent journaling, joint reflections with other researchers in the communities of practice described next, and through regular discussions with her supervisory team about not only *what* she was researching, but *how* she was researching, *why* she was interested in particular case studies, and *whether* she was achieving the kinds of inclusion she had hoped to achieve.

Recognising research, and in particular ethical research, as reflexive practice puts relational matters into the foreground, and trustworthiness becomes far more important than technical or procedural ethical matters (Locke et al., 2013; Rossman & Rallis, 2010). In fact, procedural ethics is founded on the premise that research is being done on participants with whom we have no prior relationships, and plan no future engagement (Ellis, 2007). However, a relational approach to research ethics is crucial in TDR because of the importance of the relationships between researchers and their researcher partners whilst doing 'science with society' (van Breda et al., 2016). By taking a relational approach to ethics, open and honest communication and negotiation with research participants become crucial skills and practices for researchers (Guillemin & Heggen, 2009). Merely 'ticking the boxes' of procedural ethics is insufficient (Israel, 2015): '[R]elational ethics requires researchers to act from our hearts and minds, acknowledge our interpersonal bonds to others, and take responsibility for actions and their consequences' (Ellis, 2007, p. 3). In Jessica's PhD, we found this to be particularly important in the early pre-proposal stages. At this stage, the research activities were not focused on data collection, but rather on getting to know the stewardship practitioners, understanding their projects and the context they work in, and getting a better sense of the questions emerging from their practice. This was the beginning of Jessica's building of a 'transdisciplinary epistemic community' (van Breda

et al., 2016) premised on shared research interests, relationships of trust, and open channels of communication. This relied both on existing work which Jessica had developed whilst working as a stewardship practitioner and on her ability to build new relationships along the way. Building such new relationships takes time and is not always successful; without the existing relationships which helped the pre-proposal phase gain momentum, it would have been difficult to develop an effective transdisciplinary epistemic community within the timeframes of a PhD (van Breda et al., 2016).

## Lessons from Participating in Transdisciplinary Research Communities of Practice

One of the ways in which we managed the ethical challenges faced during this TDR project, was through conversations arranged to share insights and lessons with researchers experiencing similar challenges in their work. Jessica is involved in two such ‘communities of practice’: (1) an international network of young scholars called the Social-Ecological Systems Scholars and (2) a local, university-based group called the Rhodes University Transdisciplinary Research Group (TDR Group). Participation in these groups provided valuable opportunities for joint reflection and discussion about ethical challenges, and about how best to engage in and build relationships with research participants and stakeholders in diverse contexts.

Discussions with other researchers in the TDR Group revealed that many other TDR scholars have also had pre-proposal engagements with societal actors outside the bounds of procedural ethics. The strategies they employed to deal with the everyday ethics challenges they faced during these engagements included open communication with research participants about purpose and intent of research, request for feedback and consent from research participants, and ongoing reflection and discussion with the research supervisor and peers on ethical issues. These insights illustrate that TDR does indeed bring with it distinct ethical challenges, and that strategies are required to guide and inform ethical practice in this field. Among the most important of these is fostering conversation: both between transdisciplinary researchers grappling with these ethical challenges and between researchers and research participants. We also consider it important to foster conversations between researchers working in TDR projects and the institutional RECs, which could aid in broadening the community of practice of ethics for TDR (Wolf, 2010).

## Recommendations and Conclusion

Through reflection on our experience, and through discussions with other transdisciplinary scholars, we have identified several strategies that transdisciplinary researchers can employ to deal with the challenges of procedural ethics outlined in this chapter. First, we propose that individual researchers take responsibility for working towards the development of an 'ethical sense'. This means internalising the guiding principles of ethical research and making them part of everyday ethics practice, and taking responsibility for relationships developed during engaged research processes (see the earlier section 'reflections and lessons'). This could aid in shifting the responsibility for considering the consequences of research actions from a distant ethics review committee to the researcher in the field, and thereby moving ethics from procedure to practice. Second, we encourage researchers to identify and to participate in a community of practice grappling with similar ethical concerns which can facilitate collective reflection and discussion with peers. This is an important part of developing the ethical sense described above and of ensuring accountability as a researcher, whilst contributing to scholarly debate not only on the content of research, but also on the process. Third, we believe it is crucial for scholars to develop a practice of reflexivity in all aspects of research, but particularly in the ethical aspects of research. This means continually asking questions not only about what is being researched, but also about how it is being researched, as well as reflecting on our own personal assumptions and value standpoints. Without such reflexivity, researchers may risk over-reliance on procedural ethics, may take insufficient responsibility for their actions in relation to others, and may not cultivate the open-mindedness necessary for meaningful knowledge co-production. Finally, we argue that taking a relational approach to ethics may be important in building ethical practice competency in individual researchers. We recommend that researchers pay attention to the importance of open and honest communication and negotiation with research partners and participants around issues of ethical concern, and to the role of relationships of trust and respect in developing truly ethical research practice.

Based on our experience, several changes can be identified that could enable institutions of higher learning to develop research ethics clearance procedures that align with the emergent field of TDR and similar research approaches. It is important that institutional ethics committees recognise that most research ethics decision-making takes place beyond the bounds of procedural ethics (Farrimond, 2013; Rossman & Rallis, 2010). Therefore, there is a need to

assist researchers who are 'thinking ethically on their feet' in the field. This is true both in the early stages of TDR when researchers engage with societal actors before receiving ethical clearance, and also once the formal, ethically approved field work begins (Miller, 2013).

We suggest the following four recommendations for institutional RECs to address. First, we recommend that RECs recognise everyday ethics as the primary location in which research ethics decisions are made. The power of ethical decision-making lies in the hands of researchers in the field, not with ethics committees. Second, we suggest that both students and their supervisors take responsibility for developing an ethical sense to guide their everyday decision-making. Training can play an important role in laying the foundations for this, and RECs could facilitate this training. Third, potentially, RECs can play a role in facilitating collective reflection and discussion on the challenges of everyday ethics faced by researchers, for example, by setting up 'communities of practice' for reflecting on ethical challenges. Fourth, we recommend that institutions consider piloting a pre-proposal ethical clearance procedure or 'everyday ethics preparation' process. A complementary approach may be for ethics committees to be open to ongoing engagement with transdisciplinary researchers, both before and after formal ethical clearance is given for proposals. This kind of process may be valuable also in providing opportunities for dialogue to increase mutual understanding between researchers working in TDR projects and members of RECs, something which is often lacking (Wolf, 2010). However, there are also potential drawbacks to formalising ethics in the early stages of TDR, for example, RECs may not be comfortable with approving research proposals that include engagement methods which allow for flexibility, because these may be open to abuse and result in unintended negative consequences for participants. It is important to remember that the ultimate purpose of RECs is to protect human participants in research (Wolf, 2010).

In conclusion, the balance of responsibility for ethical research practice lies as much with institutions as with individual researchers. What we propose is that individual researchers take more responsibility for their own everyday ethical decisions and work towards developing an ethical sense, while higher education institutions position themselves to better support transdisciplinary researchers as they navigate these challenging ethical research processes. The role of researchers in society is shifting, and, in order to remain relevant, institutional RECs themselves may need to adopt an engagement-oriented approach in order to ensure that research continues to be conducted ethically and responsibly.

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