The organisational impact of undertaking a professional doctorate: forming critical leaders

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**Abstract**

Research on the impact of professional doctorates on students and their organisations has reported contested outcomes. We undertook a study to develop a causal explanation of how organisational change may, or may not, result from participation in a Doctor of Education programme. Drawing on critical realist perspectives, the research found that all the doctoral students shared professional concerns with their work colleagues. In some cases, however, this sharing fostered social relations that supported both collective meta-reflexivity and a performative collective reflexivity, and that resulted in organisational change. Variation in the students’ impact on their organisations was further connected to their organisational roles, and to the extent to which their agency aligned to organisational agendas or other external regulatory and normative systems. Strictly limited, or no, organisational change was, however, evident where collective reflexivity was seen to be restricted or to involve contestation. The paper concludes that there is significant value to gain by conceiving learning on a professional doctorate not simply in terms of personal growth, but also in terms of both mastering a discourse that crosses both research and professional practice and developing the capacity to draw others into that discourse in an organisationally-relevant and yet critical fashion.

**Keywords**: critical realism, organisational change, professional doctorates, reflexivity

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**Introduction**

The professional doctorate is widely understood as a degree for experienced professionals, inducting them into research that is focused on professional practice and extending their professional knowledge base (Fenge, 2009). Indeed, previous research has established that professional doctorates have a clear impact on the personal and professional lives of the individual students who undertake them. The study by Scott, Brown, Lund and Thorne (2004) argued that a professional doctorate impacts students mainly in terms of their self-actualisation and self-construction. Research by Wellington and Sikes (2006), Burgess and Wellington (2010), and Burgess, Weller and Wellington (2011) all reported an increased capacity for self-reflection on existing professional practice. Costley and Stephenson (2007), Costley and Lester (2012), Davis and Frame (2016) and Scott (2014), meanwhile, reported that professional doctorates can have an impact on organisations through students undertaking projects linked to their doctoral thesis, a viewpoint also shared by Lee, Green and Brennan (2000) regarding the Doctor of Business Administration, more specifically. These latter studies point to a connection between learning on professional doctorates and the impact of that learning on organisations.

Nonetheless, other scholars have underlined the difficulty in identifying a direct connection between professional doctorate projects and their impact on the organisation. Brown (2011), for instance, posited that a link between learning and its organisational value is difficult to establish since the worth of a degree undertaken by an individual to an organisation can often be ascertained only many years after its completion. In addition, Fox and Slade (2014) argued that research undertaken by students on professional doctorates often has little or no direct relevance to the organisation. This concurred with earlier research by Scott et al. (2004) and Burgess et al. (2011) who highlighted the limited support that doctoral students receive from within their working environment. Such findings are supported by a study undertaken by Mellors-Bourne, Robinson and Metcalfe (2016) who emphasised that a direct connection between doctoral learning and its impact on the organisation remains questionable as employers appear disinterested in the scope for professional doctorates to foster organisational change, a viewpoint that has been also supported by Malloch (2010). More recently, research by Burnard, Dragovic, Ottewell and Lim (2018) emphasised that the impact of a professional doctorate remains difficult to predict due to the way that critical reflexive deliberations lead to shifts in the student’s perspectives on professional practice. Concomitantly, Hawkes and Yerrabati (2018) highlighted the scant evidence for any wider impact from professional doctorates on professional practice.

Such opposing views emphasise the divide that exists among scholars on the impact that learning on a professional doctorate can have on organisations. Furthermore, much of the research that has suggested a connection between learning on a professional doctorate and organisational change seems to rely on the classical Humean model of causation. In this model, one event invariably follows on from another event, such that a cause and its effect are linked together in a constant conjunction. Costley and Lester (2012, p. 265), for instance, suggested that previous studies in this area have provided evidence for a “direct impact on the workplace of the investigation or project”, with relatively little work attempted at understanding the reasons for the identified organisational benefit. Clegg (2017) argued that the Humean view of causation replaces explanation with prediction, without exploring why one thing might follow on from another. Furthermore, it has been suggested that increased criticality leads to change-focused research projects, whereby the student is seen as the main actor, and the workplace and academia are relegated to a secondary role (Fox & Slade, 2014, Burgess & Wellington, 2010). Conversely, other studies have emphasised the importance of academia and the organisation as social structures that influence how people think and act, affecting how organisations can be changed. Malfroy (2004) argued that the university remains the central pivot for knowledge production and dissemination whereas the profession and the workplace are perceived as mere vehicles for such actions, a viewpoint also shared by McWilliam, Taylor, Thomson, Green, Maxwell, Wildy and Simons (2002, p. 25) who saw in “the conflation of profession, workplace and industry” little value for knowledge production relevant to the advancement of professional practice.

What stands out here is that there is a tendency to conflate human agency with structure or vice-versa. In other words, either the doctoral student is portrayed as being the main actor with the necessary properties and causal power to bring about change in the organisation and the profession or the workplace and academe are considered as the main influences on how people think and act. No specific consideration has been given in these studies to possible interplay between agency and social structures, despite the potential for consideration of such interplay to explain the varied conclusions reached by researchers.

***Critical realism as a framework for exploring mechanisms of organisational change***

In addressing these issues, there is potential for insight to result from drawing on the paradigm of critical realism. Critical realists claim that reality is divided into three different ontological domains: the empirical, the actual and the real. The empirical domain relates to what we can experience directly or indirectly; the actual is where events happen, regardless whether we are aware of them or not; and the real which relates to the underlying generative mechanisms that make things happen in the world (Bhaskar, 2008a). We need to understand what produces social phenomena by seeking out causes in the domain of the real. This understanding occurs through explanatory theorising that uses abductive and retroductive reasoning, enabling one to explore the causes that produce events (Danermark, Ekström, Jakobson, & Karlsson, 2002). Abduction is defined by critical realists as a form of reasoning which starts from the consequences of an event or experience to identify the causes that produced the occurrence. Retroduction, meanwhile, looks for the internal relations of an object or event to find their properties, given that social objects are characterised by their interrelationships with other objects. Moreover, it is important to understand the nature of the different causal mechanisms that operate in specific environments and how their interaction can generate events or phenomena (Danermark et al., 2002). While critical realism seeks explanations for how mechanisms cause particular results in given contexts, it nonetheless develops general theories that transcend particular contexts (Pawson, 2013).

It is helpful in seeking to establish causal interrelationships between human agency and social structure to turn more specifically to Archer’s morphogenetic approach (Archer, 1995). Her account represents the most substantive body of research available that translates the overarching account of critical realism into an explanatory framework that describes these interrelationships. For Archer (2003), agency occurs when people engage in individual reflexivity regarding their personal and professional concerns, followed by actions to tackle these concerns. Archer (2003) defined reflexivity as the normal mental process by which people deliberate on their social context. Structures, meanwhile, may principally be classed as either institutional or relational (Elder-Vass, 2010). Elder-Vass (2010) defined institutional structures as comprising cultural and normative patterns which influence organisational behaviours and organise the relations among related organisations. Institutional structures may be externally-related, including regulatory or other normative arrangements connected to the organisation. Alternatively, they may be internally-related, whether strategic plans linked to work settings, roles and hierarchical positions, or so on. Relational structures, meanwhile, refer to the social relations that agents create among themselves. For Elder-Vass (2010), such relations entail parts that are structured into a whole by their connections to each other. As such, social relations cannot be reduced to mere interactions among social agents (Donati & Archer, 2015). Although social relations have no material substance of their own, they are real in the sense that they have causal effects on material things or immaterial things such as social constructs (Hartwig, 2007). Indeed, relational structures possess configurational powers, as Vincent and Wapshott (2014) have argued. This is the case, for instance, where work colleagues have the power to change things as a collectivity based on their relationships with each other.

Archer’s account explains how human action is conditioned by existing social structures, which in turn influence agency and the outcome of their interactions. The interplay between structure and agency contributes to the emergence of mechanisms that lead to either structural elaboration (morphogenesis) or structural reproduction (morphostasis) (Archer, 2003). Archer’s morphogenetic theory is based on the notion that how people make choices constitutes an integral aspect of the generative mechanisms that determine whether their actions impact on their environment. Archer (2003), furthermore, identified four different modes of reflexivity. She characterised communicative reflexives as people who characteristically engage in a reflexive process that seeks external confirmation of actions undertaken to tackle these concerns. Communicative reflexives quite typically share their concerns with others and partake in projects situated within the existing structural context. Autonomous reflexives are self-confident people who know what they want to achieve in their personal and professional life but are less inclined to share their internal deliberations with others. They engage in projects to change existing social structures to accommodate their personal interests, and thus they are more likely to be driven by performativity. Meta-reflexives routinely reflect on their own thought process to gain a higher level of awareness about themselves, their organisational context, and the impact these actions have on the wider society. Finally, fractured reflexives manifest anxious internal conversations about themselves and their social environment that are characterised by passivity and an absence of a sense of purpose.

Critical realism offers an explanatory framework regarding social reality that enables one to consider generative mechanisms which, when triggered, give rise to actual events and our experience of them (Bhaskar, 2008b). As such, critical realism potentially offers a way forward in coming to understand why the literature on professional doctorates has reported contested outcomes on the organisational impact of professional learning. This paper reports on a study that used critical realist perspectives on the interplay between structure and agency to investigate the mechanisms that enable or constrain doctoral learning in terms of its impact on individuals and their organisations.

**Methodology to support a search for causal explanation**

The study adopted an interpretative qualitative approach informed by the critical realist paradigm to explore causal mechanisms in play and how they came to exist in a specific environment. Vincent & Wapshott (2014) argued that realists use organisational case studies to find causal explanations in terms of the social mechanisms operating in different contextual conditions. The aim of critical realist research is to find in relationships between similar experiences and events the necessary arguments for theory building, which can occur within a limited number of cases (Steinmetz, 2004). This led to the decision to consider a set of organisational cases linked to a single professional doctorate programme (EdD) in Higher Education Studies at a UK research-intensive university.

Research entails trusting and respectful relationships between researchers and participants. Both researchers were linked to the higher education institution that hosted the professional doctorate, one as a doctoral student and the other as programme Director: our insider status allowed us access to the research population. However, such a status inevitably raises questions about the increased potential for bias during data collection and analysis, threatening the study’s trustworthiness and credibility (Dwyer & Buckle, 2009). The study’s credibility and legitimacy were, nonetheless, supported by the fact that we had strictly limited, if any, contact with the candidates’ own change agendas or immediate contexts, leading to a detached stance towards the phenomena under study.

The study thus addressed the following research question: ‘By what mechanism(s), if any, did learning on the given professional doctorate lead to impact on the students’ own workplaces?’ As part of this research question, the study was specifically interested in understanding whether the elaboration or reproduction of organisational structures resulted. This would further enable a consideration of the extent to which the change might be considered emancipatory in nature, allowing for a human flourishing that supports people in realising their true interests, another core critical realist focus (Bhaskar, 2008a). As argued by Archer (1995, p. 165), “society is never what anyone wants”. This implies that every society is flawed in some way and in need of change. Bhaskar (2008a) similarly argued that people will always have unmet needs, and that there is thus some obligation on society to address those needs through adequate actions. As a result one is able to move from a factual explanation of a given situation to conclusions about values. Moreover, social scientists seek to identify errors in the beliefs that people hold about their social lives, and to understand why false beliefs are held. This enables a negative evaluation of beliefs and of actions that are informed by false beliefs, evaluation that is termed explanatory critique. Given, furthermore, that social beliefs about social objects are themselves social objects, one is able to link analysis of casual mechanisms with an obligation to act for the flourishing of people in society. Indeed, it is the case that one can subvert causal mechanisms that rely on the presence of falsely-held beliefs if one shares an explanatory critique. These methodological strategies were intended to illuminate the qualities that learning on a professional doctorate should have if students are to become self-conscious social agents with the capacity to promote emancipation within their work environments.

***Data collection methods and participant selection***

The study focused on the experience of 16 participants (see Table 1), five of whom were doctoral students or recent graduates on the given professional doctorate. (The pseudonyms provided, and the personal pronouns used subsequently in the text do not necessarily reflect the gender of the doctoral student). These five participants were all professionals working within higher education organisations. The remaining 11 participants were work colleagues of these students, holding either senior, peer or more junior positions. These colleagues were well placed to comment on organisational change within their given professional setting. Systems of 360-degree feedback are typically employed for multi-source evaluation in human resources or in industrial psychology to assess personnel’s performance (Reissig, 2011). Although in our study there was no intention to evaluate either efficiency or performance at either an individual or an organisational level, it was nevertheless proposed as a research mechanism to include different viewpoints on the phenomenon under study, further supporting the trustworthiness of the study. It was essential that the students trusted the researchers if they were to offer such access to their own work environments.

The sample size in our study was chosen to facilitate the development of a set of in-depth organisational case studies based on the doctoral students and their respective work colleagues. Individual semi-directed interviews with these participants explored perceptions of the impact (or its absence) of the doctoral learning on their work environment.

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| --- | --- | --- | --- |
| Regional location of university | Type of university | Participant | Functional Role |
| Europe | Research-intensive | Alex, doctoral student | Reader and Director of Studies |
| Senior colleague to Alex | Former Director of Studies |
| Junior colleague to Alex | Researcher and Senior tutor |
| Europe | Research-intensive | Bert, doctoral student | Senior executive, Human Resources |
| Senior colleague to Bert | Senior executive |
| Junior colleague to Bert | Senior executive, Human Resources |
| Caribbean | Teaching-oriented | Chris, doctoral student | Manager and tutor |
| Senior colleague | Assistant Dean |
| Junior colleague | Project coordinator |
| Oceania | Ex-Polytechnic, research-oriented | Dominique, doctoral student | Head of Department |
| Senior colleague to Dominique | Associate Dean (Academic) |
| Peer colleague to Dominique | Deputy Head of Department |
| Junior colleague to Dominique | Manager, undergraduate students |
| North America | Rural Community College | Jamie, doctoral student | Tutor |
| Senior colleague to Jamie | Dean |
| Peer colleague to Jamie | Tutor |

**Table 1.** Profile of participants and their institutions

***Approach to data analysis: building casual explanations***

Data analysis represents a key stage of research within a critical realist framing. The decision was made to draw techniques for data analysis from what has been termed critical grounded theory (Oliver, 2012; Belfrage & Hauf, 2017). Indeed, the combination of grounded theory with critical realism offers not only a means to describe social events, but also an approach to developing new knowledge about social reality through abduction and retroduction reasoning to find causal explanations about a phenomenon for theory building. This helps to achieve a level of abstraction generating explanatory theory for the phenomenon under study (Danermark et al., 2002). As argued by Kempster and Parry (2011, p. 107), reaching a level of abstraction for theory building requires reaching “beyond surface-level data” and therefore Danermark et al.’s (2002) critical realist six-step explanatory analytic framework was used to explore emerging analytical concepts and to research conceptual abstraction for theory building. These steps are not always to be followed chronologically and some of them can occur simultaneously.

This analytic procedure relies firstly on initial coding, often using *in vivo* codes as short expressions derived directly from participants’ narratives to create provisional categories for further coding (Flick, 2014), to describe analytic concepts derived directly from data (step 1) and to separate these concepts into possible causal components (step 2). Focused coding is then used in a second coding cycle to create key-categories which relies on abduction to describe and interpret these aspects using extant theory and conceptual frameworks (step 3) and on retroduction to identify possible underlying mechanisms with their causal powers that help explain and understand data (step 4). Results are then compared with extant theory to create theorisation (step 5). The selective coding process is the last step (step 6) through which abstraction is reached by elaborating analytic concepts. The initial coding, constant comparison, and the questioning process of critical grounded theory develops thus explanations by exploring variations within different contexts (Danermark et al., 2002).

**Interplay between structure and agency in the organisational impact of a professional doctorate**

***Reflexivity as a generative mechanism underlying human agency***

The abductive analysis of participants’ narratives revealed repeated *in vivo* codes such as “confidence”,” credibility” “understanding” and “self-awareness” as key aspects emerging from doctoral studies (step 1). Such codes were then regrouped as causal components of a larger category named personal development to express the concept of personal growth generated from doctoral learning, a category that was evident for all doctoral candidates in the study (step 2). Alex, for instance, indicated that the doctorate:

… has actually given me real confidence to say that I actually know what the literature is, and to be able to use it. … It gave me more credibility … and individual maturity and development.

By comparing our concept with existing conceptual frameworks as expressed in Costley and Stephenson (2007) (step 3), our findings were corroborated as they highlighted how self-confidence, credibility and recognition from clients and colleagues stem from professional doctorate learning, impacting on the student’s development, and leading to the emergence of an emancipated social self.

Retroductive reasoning (step 4), relied on the use of Archer’s morphogenetic theory based on different modes of reflexivity for reinterpretation and recontextualisation of empirical data for theory building. This led us to identify enhanced reflexivity stemming from doctoral learning as the underlying mechanism behind this personal development. Indeed, personal growth led in this study to improved individual agency through an increased awareness of the self and the student’s work environment which triggered in the student professional concerns that had to be addressed accordingly, as evident for Jamie:

It has just given me more confidence in the choices I make in terms of pedagogy. I feel a little bit more in control of how students learn and how I can facilitate that learning. ... It has given me self-awareness of what my values are and have been.

When comparing the reflexivity that is evident here with Archer’s morphogenetic theory we can characterise it as meta-reflexive as it is focusing on the social ideals at stake and on an awareness of how one’s deliberations are positioned in relation to those ideals (step 5). Finally, by comparing the cases among themselves (step 6), variation in the reflexive process became evident as four out of the five doctoral students were seen to engage in concrete courses of action that were shaped both by these individual meta-reflexive deliberations and by at least one other type of individual reflexivity, as reported in Table 2.

|  |  |  |  |
| --- | --- | --- | --- |
| **Doctoral student** | **Projects undertaken to tackle concerns** | **Dominant modes of individual reflexivity** | **Quotation from student** |
| Alex | New EdD course for medical students | Autonomous reflexivity, meta-reflexivity | I have been lucky, because they've always seen me as somebody they respected for doing the job. I think now they see me as somebody who does the job but actually knows what they're doing in the job. So they are more likely to ask me questions about the next way forward. |
| Bert | Enhanced academic career paths for women | Meta-reflexivity, autonomous reflexivity and communicative reflexivity | I've developed the people strategy to align it with the organisation’s strategy. …. I am going to do my thesis around disparity in women's promotion. That is a very key focus for me and also for the Vice-Chancellor. |
| Chris | Sessions to motivate faculty to undertake research projects | Meta-reflexivity, fractured reflexivity | We have been trying to have sessions to motivate faculty to do research. At the moment, we still can’t require of them to do it. But we have had sessions just to motivate them, to show them why we need faculty to engage in research. |
| Dominique | Improving student success through enhanced advice to students | Meta-reflexivity, communicative reflexivity | I guess it's just really caused me to look at what my values are … because we did that thing about, "Do your values align with your institution?", and I’ve realised that mine do and so I think I'm quite happy with that. |
| Jamie | Promoting academic integrity on college committees | Meta-reflexivity, fractured reflexivity | I have the support, there is just one person on the Dean’s and Chair’s committee who is very vocal against even trying Turnitin….It’s just one vocal person that can stop it. |

**Table 2.** Modes of reflexivity triggered through doctoral learning

Alex’s most immediate concern was to enhance students’ medical education by offering them an additional qualification. This action was promoted by Alex’s personal concern about professional performance typical of autonomous reflexivity, as evident in the quotation offered in the table. Bert addressed a professional concern about gender inequality by promoting women’s professorial career paths through equality groups and grading criteria that raised the awareness of staff of this issue, manifesting several modes of reflexivity. Communicative reflexivity was in evidence, for instance, given his engagement with senior colleagues on the issues at stake before taking actions forward. Chris promoted faculty workshops to increase staff interest in research activities as this was one of the main concerns raised in the university’s strategic plan, but he was frustrated by the limited action that followed. Dominique addressed the concern of linking student support staff with faculty to make students’ learning journey more coherent and less disruptive. This concern was developed in dialogue with others around the values promoted by the institution, in a fashion that entailed both meta-reflexivity and communicative reflexivity. Finally, Jamie’s deliberations about his professional concern were fractured in part due to work colleagues’ different views on the issue, with constructive actions not taken forward.

A more detailed analysis on the different modes of reflexivity is not the purpose of this study. However, what is of particular interest is to analyse and understand through retroductive reasoning how these modes of individual reflexivity were seen to connect to collective action in pursuit of organisational change, which is explained in the following section.

***The role of collective reflexivity in supporting organisational change***

Data analysis revealed that doctoral candidates shared their professional concerns with work colleagues and organised themselves into interest groups which would engage in collective deliberations and purposeful actions with the intention to operate within their work context while changing it according to their shared concerns and interests (steps 1-2). Archer (2013) used the term ‘collective reflexivity’ to refer to the internal (and thus individual) deliberations that subjects use *together* to navigate their social relationships, highlighting such reflexivity as a key aspect of the mechanism by which social relations have emergent effects on the social world (step 4). At an organisational level, professional concerns that can change practice need to take on a collective aspect to be implemented successfully.

Different outcomes were, however, present for each of the doctoral candidates (step 5). For Bert, discussions with work colleagues were followed by gender equality groups that sought to ‘raise awareness’ of inequities in professorial promotions. As we move to this collective dimension, the value of including the colleagues of the doctoral students within the study is particularly apparent. Bert’s junior colleague highlighted ways in which the deliberative basis for their conversations had been enhanced:

What I would say is that the understanding of the issues of female academics is better understood and therefore when there is greater understanding its more likely to be like a more constructive conversation. You are getting over that barrier of not really understanding where people are coming from so the quality of the conversation has improved.

The constructive dimension to these conversations is important. Archer (2003) referred to the agential power that can emerge from collective reflexivity as corporate agency. Corporate agency entails work groups operating as change actorsthat give rise to organisational elaboration. Corporate agency was realised by Alex, Bert and Dominique as a mediatory stage in realising organisational elaboration. These doctoral students became involved in individual and collective reflexive deliberations to monitor themselves as individuals and, as a work group, and to engage in projects that mediated the impact of social structures on their agential power (Archer, 2003). This analysis overlaps with Burnard et al. (2018) who posited that doctoral learning sits at the intersection of professional practice, the work setting, personal development and change (step 4).

Furthermore, it is evident that autonomous and communicative reflexivity on the individual level was connected to what can be termed a collective performative reflexivity. Collective performative reflexivity in our account retains the performative emphasis that is present within autonomous reflexivity but linked to shared professional concerns. In this case the performative dimension was itself influenced by dominant social structures (an issue that we will revisit in due course). It is evident, for instance, that Alex and his senior colleague shared a common set of concerns:

[Alex] is operating obviously within the framework of the existing establishment. So, for instance, there's the educational side, which is what we consider is most appropriate educationally, what's best for the students. But we also have pressures of finance in that while, for instance, we might think that a better staff to student ratio would lead to better education. … There's also the university functioning as a whole. For instance, they might like us to make more offers of medical positions than we can actually fill, on the basis that when people fail to get them, they will be in a system and can be offered as science places for which there's effectively an unlimited access.

Equally, though, there is scope for an individual’s meta-reflexivity to manifest itself at the collective level, with Bert’s senior colleague, for instance, specifically mentioning the placing of Bert’s work within a theme on equality and diversity:

Certainly, Bert’s work and research undertaken around equality and diversity has resulted in a renewed focus in the university to improve in our performance in respective to equality and diversity.

There was also evidence for two of the work colleagues that they had become more aware of their own reflexive deliberations:

I personally am using Dominique as my mentor, or as a guide on how to think strategically. I've actually, watched [his] thinking processes to [see] how I should do it. Because I feel, that he has a good way of approaching strategic thinking. (Dominique’s peer colleague)

Such collective reflexivity constituted a key part of the mechanism that allowed the doctoral students to influence professional preoccupations, resulting in action leading to organisational elaboration. This stands as a counterpart for staff to the collective reflexivity that Kahn, Everington, Kelm, Reid & Watkins (2017) identified as a key element in effective student learning.

Conversely, in situations where the doctoral student could not engage in freely-chosen activities or could not engage work colleagues in collective reflective deliberations about professional concerns, either a restricted collective reflexivity or a collective reflexivity of contestation ensued. For Chris and Jamie, organisational reproduction resulted given an absence of purposive deliberations and actions affecting the structural level. Chris’ project was in some ways imposed by a quality assurance organisation, limiting the extent to which collective reflexivity was triggered and further action followed. Indeed, it was clear that not all of the Faculty in his setting were willing adhering to the requirement to engage in research, contesting the imposition. Frustration is evident, meanwhile, in the fractured reflexivity displayed by Jamie in the quotation given in Table 2, linked as this is to an inability to take the project forward in a collective fashion. The antagonism, evidently, was shared by other colleagues:

… we don't really actually sit down and talk about philosophy of education and pedagogical views… Individual faculty members are very individualistic. They are used to being the best and when you get a bunch of those kinds of people in the same room it doesn't actually lend itself to a good exchange of information because there is such high competition and strong egos in the room. (Jamie)

***Social relations as a part of the generative mechanism***

The analysis further indicated that professional relationships between doctoral students and their work colleagues were generated through the sharing of the students’ concerns with their work colleagues. Initial coding revealed *in vivo* codes such as “working together”, “network”, “collaboration” and “connection” as components of a larger core-category named initially “building relationships”, given that they implied an ongoing set of activities between work colleagues and other institutional stakeholders that underpinned durable social relations (step 1). However, focused coding identified these codes as instances of the analytic concept of “social relations”, since it constitutes a key element for engaging in reflexive deliberations at the collective level (step 2).

Further analysis showed that in some cases (step 6) where the doctoral candidates shared their professional concerns with work colleagues, relations were triggered that generated new activities which in turn impacted on existing structures. In Alex’s case the EdD allowed the doctoral candidate to gain new technological understanding, triggering relations with learning technologists who adapted the educational strategies on programmes of medical education. Likewise, Bert gained theoretical knowledge concerning faculty needs which led to the establishment of mentoring networks for female academics to enhance their capacity to put themselves forward for professorial positions, thus supporting organisational elaboration. He indicated: “I have now a hugely expanded network of academic work colleagues that I never had before. … I would probably not would have had that, if I had not done this doctorate.” In Chris’s case, undertaking the doctorate allowed him to gain the necessary knowledge to take advantage of accrediting bodies to enhance research activity. In Dominique’s case, his doctoral status allowed him to bond with influential people who could act as catalysers for organisational change: ‘Within the university there’s one woman who's the Head of the School of Education and she is doing the EdD, and I went up to her and said, "I’m doing the EdD. … We’ve made quite a good connection.”’ Dominique’s peer colleague noted the way that Dominique cultivated relations with a range of people:

Often when trying to do these programs there is not a lot of funding for it. And this involves a lot of persuasion and convincing for people to get involved. And [he] had to use that... [his] skills …to work with the academics, and [he] had to work with the administration and the students.

The seniority of their roles particularly seemed to have assisted both Dominique and Bert in cultivating relationships with (other) senior managers. By contrast there was no specific evidence that the doctoral studies led Jamie to develop new relations with others:

People knew beforehand that I was trying to champion this Turnitin. Now they know that that's going to be my research interest. I suppose it has a little interest.

In our study, abduction and retroduction (steps 3- 4) indicated that normative and configurational powers were triggered as illustrated in Alex’s and Bert’s examples, as both change institutional norms to enhance new practices while drawing on relationships with colleagues to bring this about. Dominique’s case illustrates the effect of different configurational powers, given the role played by his relationships with colleagues and by his own functional role:

What I can do as the Director is I can implement stuff, and the programs I'm responsible for. Now I need to obviously make sure that the heads of department are happy. But with stuff like student support, which is really I'm focusing on out of class student support, I've got a bit more of a free reign.

In each case the mechanisms in play were closely affected by the social relations that the doctoral students maintained, and the associated collective reflexivity that accompanied these relations (step 5).

***Social structures as enablements or constraints on organisational morphogenesis***

The initial coding cycle revealed *in vivo* codes such as “standards”, “governing body”, “regulation body”, all of which refer to external social structures with normative powers (steps 1-2). Alex, for example, cited the disciplinary standards put forward by an external professional regulatory body:

So, the work that I was doing is part of the reason for the General Medical Council's promoting excellence documentation and the standards that have been put forward for demonstrating, promoting excellence…. the strategy for the medical school does build on such sort of things I've been talking about. (Alex)

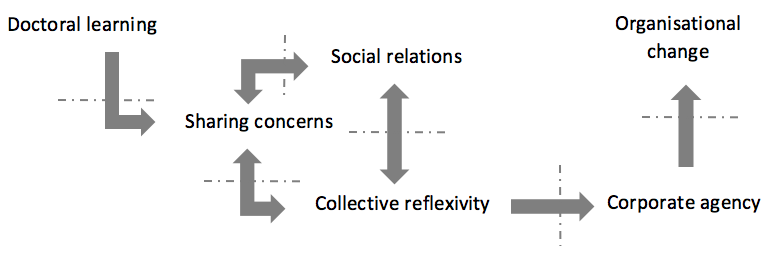
Alex’s junior colleague, indeed, indicated that Alex’s own contributions were recognised by the General Medical Council, adding further credibility to his own internal work in response to this external normative power. Likewise, Chris mentioned accreditation agencies as external normative and regulatory systems that enabled him to introduce some limited changes around research requirements in the organisation’s internal promotion schemes. In this case any extensive collective reflexivity was effectively circumvented. Dominque, meanwhile, noted the value of government funding to support his work in developing a new campus. Consequently, these codes were regrouped into the category “external structures” as they related to external entities with their own properties and causal powers that either enabled or constrained the triggering of relations with work colleagues (step 2).

Conversely, in vivo codes such as “strategic review”, “strategic framework”, “strategic objectives” and “organisational policy” (step 1) clearly pointed towards organisational guidelines functioning as internal structures with normative power (step 2) as reported, for instance, by Bert’s senior colleague: “All our projects now are focused and aligned to achieving the objectives that have been established for ourselves in (the) strategy.” Indeed, reference is made to the strategic plan as the normative framework for strategic objectives to determine future actions at the organisational level. Accordingly, these codes were regrouped into the category of “internal structures” as they related to the internal organisational systems.

These varied structures were seen to influence the possibilities for collective reflexivity, typically favouring a performative reflexivity that matched the agendas of the given normative systems and that affected the scope for organisational morphogenesis or morphostasis (steps 3-6).

***Summary of the mechanism impacting on organisational change***

The overall mechanism that we have identified in this study as accounting for organisational change is outlined in Figure 1. Doctoral learning led to the sharing of various sets of professional concerns on the part of the student, depending on the mode(s) of individual reflexivity that the student had adopted. This in turn led to various modes of collective reflexivity and to coordinated interactions of group members that were underpinned by social relations, which subsequently generated actions reinforcing either existing social structures or which elaborated new ones. Indeed, social structures had a clear effect on how the doctoral student’s project unfolded. Organisational change that is linked to doctoral learning nonetheless also needs to be closely connected to the organisational and structural level. This mechanism for organisational change extends far beyond a student’s research project.



**Figure 1.** Mechanism mediating the impact of doctoral learning on organisational change. (The dotted lines indicate the scope for social structures to enable or constrain the identified interaction.)

Individual reflexivity was present for all of the five doctoral students and, although variations were present in this reflexivity (see Table **3**), each student shared their concerns with work colleagues. However, the mechanism triggering organisational change could not always be activated and regulated by pre-existing internal organisational structures or externally-driven institutional structures, as evident in Table 3.

|  |  |  |  |
| --- | --- | --- | --- |
| **Doctoral student** | **Dominant mode(s) of collective reflexivity** | **Key internal or external structure** | **Organisational morphogenesis or morphostasis** |
| Alex | Collective performative reflexivity | Professional body | Limited organisational morphogenesis (aligning with external structures and performative in focus) |
| Bert | Collective performative and meta- reflexivity | Strategic plan | Significant organisational morphogenesis (aligning with internal structures and emancipatory in focus) |
| Chris | Collective performative reflexivity and a collective reflexivity of contestation | Accreditation agencies | Organisational morphostasis (aligned with external structures and performative in focus) |
| Dominique | Collective performative reflexivity and meta- reflexivity | Strategic plan | Organisational morphogenesis (aligning with internal structures and emancipatory in focus) |
| Jamie | Collective reflexivity of contestation | Deans and Chairs committee | Organisational morphostasis |

**Table 3.** Variation evident in the primary mechanism seen to affect organisational morphogenesis or morphostasis

Indeed, for Chris, external normative systems affected the agential power of internal organised groups as collectivities, although it was clear for Chris that his functional role also enabled him to impose a limited amount of organisational change. In Jamie’s case internal normative powers pertaining to the role and position of a work colleague blocked the student from engaging in social relations that might have triggered collective meta-reflexive deliberations and collaborative activity. This concurs with the description by Vincent and Wapshott (2014) of internal configurational powers as downward causes, whereby people shape their work activities according to normative rules, thus showing a form of restricted collective reflexivity. It is noteworthy, though, that neither Jamie nor Chris were themselves in senior roles, and this may have affected their scope to appreciate the nature of the concerns of senior colleagues. In Alex’s situation, internal normative routines were affected by the student’s position in relation to an external body, but the resulting change was limited to the departmental setting. It was only in Bert and Dominique’s cases that social relations as a part of a collective meta-reflexivity process impacted on organisational change more fully, with internal normative structures under the form of strategic plans and operational objectives also promoting collective performative reflexivity. Dominique indicated that his research fell “squarely within our organisational strategy”.

In this study, what led finally to organisational morphogenesis was that students’ projects were aligned with the institutional structures in force at that time, thereby generating organised actions at the corporate level to tackle these concerns in a collaborative manner (Bert, Chris and Dominique). Where the project was not fully aligned with the organisation’s main project(s), the elaboration of new institutional structures was limited to the immediate context (Alex) or structures were reproduced (Jamie) depended particularly closely on the student’s role and position. The mechanism evident in this study was relational and transformative in nature, but the conditions under which change could emerge was influenced also by the organisational context.

**Conclusion**

This research identified a mechanism by which doctoral learning triggers organisational morphogenesis, with variation in the outcomes of this mechanism determined in significant part on the collective and structural levels. There is no reason, of course, why organisational change might not lead to doctoral learning. The focus of this study was partly chosen to address the contestation evident in the research literature on professional doctorates, but it also reflected the absence of any strong connection by which doctoral learning might stem from organisational change on the professional doctorate under investigation. The answer to the research question posed in this study is not a straightforward one. The essential issue is that different intertwining causal powers were at play to either reinforce or undermine human actions. This resulted in a range of outcomes around organisational transformation. According to this view, there is no straightforward reason why the conduct of a research project within an organisation should impact on that organisation. Indeed, the primary mechanism identified in this study to account for organisational change is constituted by a collective reflexive process, either emancipatory or performative in orientation, coordinating interactions of group members and either reinforcing existing social structures or elaborating new ones. This is not to deny that managerial control cannot also effect organisational change more directly, where such control aligns with internal and external normative structures, or that change is less likely to occur where collective reflexivity is characterised by a contestation. Literature on the role of leadership in change management highlights that sharing the same vision and the same orientation towards achieving a common goal with employees and their empowerment to manage themselves are key elements for implementing organisational change successfully (Gill, 2002; Graetz, 2000). Meanwhile, Hayes (2018, p. 172) argued that “visioning can be an inclusive process” – only, however, if the legitimate needs and rights of all stakeholders are respected. This comes close to what we call the collective reflexive process which can be emancipatory or performative in nature according to whose needs or interests are considered in implementing organisational change.

Cunningham (2018, p. 63) suggested that learning on a professional doctorate takes one on a reflexive journey that has a disruptive potential and that culminates in what he called “pensive professionalism”. Any actual disruption, though, is conditional on the extent to which the organisation actually provides the necessary resources that support the transformation of individual actions into corporate agency. It is essential that professional doctorates incorporate opportunities to critically reflect on the learning process itself as a (trans)formative structure that becomes an integral part of the journey rather than a collateral incident of the process, an argument also put forward by Burnard et al. (2018). Doctoral learning should enable the student to master a discourse that bridges both research and professional practice for the benefit of the organisation and for society. This concurs with recent research by Hawkes (2017) and Hawkes and Yerrabati (2018) that highlighted the lack of a consistent body of research related to thesis supervision focused on helping students to bridge this divide.

Barnett (2011) argued that we presume that higher education organisations are focussed on the flourishing of individuals in a learning context, whereas this is often different from the reality that underpins the organisation. Professional doctorate programmes should not effectively look just to form compliant employees. They should aim to raise their students’ awareness of the underlying mechanisms affecting organisational change, and of the direction taken by that change. Doctoral learning should trigger reflexivity that helps students to become critical leaders. The concerns of such leaders should not simply be dominated by organisational performativity, but they should also reflect an awareness of the forces operating within their institutions. Such emancipatory leadership has the potential to raise the organisation’s awareness of its functioning, whether as an organisation dominated either by external structures imposing their views on how to shape organisational actions or by agents fostering the organisation’s own economic advantages without considering the flourishing of free-thinking human agents. Such perspectives also have the potential to contribute new insights regarding the role and mission of higher education in a globalised world encouraging debate about its ecological and economic value. An understanding of the way that organisational change is grounded in collective reflexivity is essential if students on professional doctorates are to become critical leaders who shape their organisations for the benefit of society.

**About the authors**

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