Original Article

Mining and community relations: Mapping the internal dimensions of practice

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ABSTRACT

Imperatives for examining resource industry approaches to social performance continue to intensify. Mining companies claim to have embraced the key tenets of sustainable development (SD) and corporate social responsibility (CSR) and that social aspects are now 'core to business'. Evidence from the field suggests that despite these proclamations, the industry's mode of engagement and benefit distribution is not always defensible, or 'sustainable'. In this article, we use core-periphery thinking (CPT) as a foundation for mapping mineral resource relationships and internal decision making processes. The internal dimensions of social performance provide a productive platform for influencing and ultimately improving company-community relations in mining. The approach articulates four key dimensions by using a broader core-periphery construction as conceptual anchor points. These dimensions offer coordinates for understanding community relations practice within the organisational sphere. The purpose of building 'practice maps' is to offer scholars, practitioners and decision-makers a conceptual framework for social performance improvement that it is not bound by rigid notions of core and non-core aspects of mineral resource development.

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1. Introduction

Debates about mining and development have reached a tipping point. The resources industry claims to have embraced the key tenets of sustainable development (SD) and corporate social responsibility (CSR) and that social aspects are now core to business (Anglo American, 2013; Barrick Gold Corporation, 2013; Rio Tinto Group, 2007). Perspectives from the field suggest that despite these proclamations the industry's mode of engagement and benefit distribution is not always defensible or 'sustainable' (Slack, 2011). Polarised representations of mineral resource conflicts in both scholarly literature and contemporary media tend to limit debate about the sector's efforts. This limitation is exacerbated by a general lack of insight into how mining companies navigate the pressures of 'operationalising' CSR and SD in day-to-day business (cf. Farrell et al., 2012; Rajak, 2011; Welker, 2009). While the literature is scant, what is increasingly clear is that within mining companies, it is the legal, financial, media and technical functions that tend to hold priority over community-orientated functions. This prioritisation of business functions has been represented in 'core' and 'peripheral' terms (e.g. Kemp and Owen, 2013). In this article, we use core-periphery thinking (CPT) as a foundation for mapping the practice dynamics of community relations and development (CRD) practice within contemporary mining organisations.[1] Our approach is a variation on existing applications of CPT, where the core-peripheral model is utilised as an explanatory framework for development-induced social outcomes, including dependency, inequality and entrenched marginalisation among the world's poor (Laclau, 1977; Wallerstein, 1976; Gunder-Frank, 1967).

Practitioners and professionals with primary carriage of the CRD function in mining companies occupy a complex array of core and peripheral positions within the organisational domain. CPT provides a useful perspective on this practice domain, however, it also limits the number of actual and potential locations and organisational configurations that researchers and practitioners engage with. The approach adopted in this article is to utilise CPT, but to extend its level of utility in order to visually represent the many and varied configurations of CRD practice. In doing this, we demonstrate that while practitioners can occupy spaces which certainly position them on the outskirts of the conventional core-peripheral continuum, including a dialectically orientated "semi-periphery" (Wallerstein, 1976), many establish new frontiers both inside and outside their organisation, which do not adhere to the

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[1] Here, 'practice' refers to the stable patterns of decision-making and action and organisational habits, routines and patterns, rather than the normative ideals espoused in corporate policy frameworks (Yuan et al., 2011; Becker, 2008).

conventional core-periphery paradigm. We draw on practice examples from CRD professionals who are actively engaged in programmes of work that place them both inside and outside the conventional 'core business' of the mine. The development of practice maps provides unique sets of insights into common organisational limitations and opportunities of CRD within mining.

In this article, we first outline the impetus for a more active engagement with the internal dimensions of social performance in mining. Following this, we define the foundational utility of CPT and then how we have applied key concepts and ideas in the building of the practice map framework. In the fourth section we present three brief examples to demonstrate a select range of potential mapping exercises using the same base concepts and plotted points. The fifth section outlines the practical utility of mapping in mining and extractive industries. The final section argues that CRD at the operational level is a powerful proxy for understanding the mining industry's *actual* rather than *espoused* levels of commitment to CSR and SD. The development of conceptual and analytic frameworks that prompt organisations to review both their internal and external systems for engagement is one means by which to determine strength of practice in this area.

2. Disciplinary incongruence in the organisational domain

Imperatives for examining industry approaches to CRD continue to intensify. Viable mineral reserves are being depleted while at the same time civil resistance and opposition continues to increase (Bebbington et al., 2008; Bridge, 2004). The stakes are high for mining companies seeking to take projects through to operation. 'Sunk costs' associated with exploration, concept and design, permitting, construction and start-up requires the investment of millions, sometimes billions, of dollars before a company reaps a financial return. This early investment profile is more pronounced for the new breed of 'mega' projects set to come on stream over the next five years.[2] Despite their apparent potential to make significant contributions to economic and human development, these types of projects have and will continue to create, exacerbate and drive various forms of social conflict over issues such as benefit distribution, safeguarding of livelihoods, resettlement, indigenous rights and the environment. These conflicts can destabilise the operating environment or, in extreme cases, grind projects and operations to a halt (Kemp et al., 2013; Filer and Macintyre, 2006; Muradian et al., 2003). It follows then, that companies should be urgently and actively reconfiguring their business models to adapt to heightened levels of socio-political complexity.

Claiming that social aspects of mining and CRD practice is (or is becoming) 'core business' provides a signal that mining companies recognise a need to transform their organisational arrangements to include professions, perspectives and organisational positionalities that have not previously been part of the 'centre'. In fact, the industry's call to core business can be interpreted as a response to the broader issue of disciplinary incongruence and inequality. Implicitly, this claim recognises a basic distinction between the different disciplines sought out by mining companies. *How* companies value and indeed integrate these disciplines into day-to-day decision making and practice has not been well canvassed in the literature. What the existing literature does tend to highlight, however, is a fundamental separation or inequality between the influence of 'harder' goals represented by engineering/production/profits and the 'softer' goals represented by

community/inclusion/development (Walton and Barnett, 2008). The base frame that we present here engages with the multidimensional nature of practice that the hard/soft science dichotomy tends to overlook. We conceptualise organisations as sites of politics and power within which a variety of stakeholders with competing interests engage in and shape a range of discourses (Grant et al., 2005; Alvesson and Deetz, 2000). Organisations are read here as sites of everyday struggle over the question of whose purpose or interest work and organisational arrangements are intended to serve (Alvesson and Willmott, 2003; Heracleous, 2002; Mumby and Clair, 1997). The focus of our work is therefore the asymmetrical professional and cultural power relations embedded within the organisational domain (Levy et al., 2003), while recognising significant power differentials that also exist externally between resource companies and local communities, and within communities themselves.

A shift from the poles of opposition towards new and productive spaces of research and practice that critically examine the internal dynamics of organisations provides a potential pathway for advancing the debate about whether and if so how the corporate form can be arranged to serve a human development as well as an economic agenda. Our approach engages with one part of this debate by illuminating the challenges faced by CRD practitioners in transforming their business models to better account for social considerations. We are also responding to calls from mining and anthropology scholars about the need to disrupt the dominant construction of mining companies as monolithic, and recognise that practice realities are far more complex (Rajak, 2011; Bainton, 2010; Welker, 2009; Ballard and Banks, 2003).

More broadly, business and society scholars are advocating for a more internally-orientated analysis of CSR that focuses on internal processes and functions. Yuan et al. (2011) focus on internal processes for CSR integration and debunk the assumption that increased societal expectations will automatically be accommodated by efficient businesses, without much attention to process. They offer a convincing argument by stating that: "although a large body of CSR literature has been devoted to organisational responses to external stakeholder demands, there has not been much work relating to how firms attempt to integrate CSR initiatives and as a result achieve 'internal fit'" (2011, p. 76). They observe that researchers have devoted little attention to: (i) the difficulties associated with allocating responsibility for CSR, (ii) prevailing organisational practices or (iii) potential pathways forward. A forward challenge for researchers is to encourage greater exposure and participation by mining companies on their own experience of understanding and responding to CRD problems, processes and systems. Recent studies and reports seem to indicate potential for more open dialogue and an acceptance of the potential risks and opportunities that stem from engaging social scientific research to address this challenge (Kemp et al., 2008, 2013; Smith and Feldman, 2009).

3. Conventional core-periphery thinking (CPT) as a starting point

The inspiration for developing a practice map originated from recent research highlighting certain core-periphery dynamics of CRD in mining, and an engagement with the CPT framework. This framework assumes four basic conditions. First, that a discernible core and periphery can be identified. Secondly, that the constituent core and periphery represent a set of power relations in which the former exerts influence over – and detracts power from – the latter. Third, that the core and periphery are co-dependent, co-existent but independently located. Four, a middle ground can be distinguished whereby a semi-periphery buffers against the

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[2] Rio Tinto for example is working to bring on line Simandou in Guinea, the contested Bougainville project in the Pacific and Oyu Tolgoi in Mongolia, the latter of which is predicted to increase gross domestic product by 30 per cent.

harshest elements of the core-periphery dynamic (Wallerstein, 1976). Our interpretation of the CPT framework engages all four of these base assumptions but decouples what are essentially conceptual tools from the conventional analytic framework itself. Application of CPT to complex organisational settings, such as those found in resource industries, have served to stabilise the basic assumptions of the conventional approach (Kemp and Owen, 2013). In this section we demonstrate the advantages associated with extending the range, content and application of the traditional CPT framework to CRD in mining.

The idea that a 'core' and 'periphery' can be identified as discrete units of analysis is fundamental to the CPT framework. These two concepts sit at the centre of the practice mapping framework (see Fig. 1) and provide the coordinates for subsequent analysis and interpretation. Where the conventional CPT approach lacks flexibility is in its ability to identify multiple sets of similar base elements, or instances where similar elements operate in direct competition with one another. For example, in large scale industrial organisations, core functions of a business can be found at corporate and at national or sub-national levels. Business functions retain their status as core but can also become peripheral when viewed within the context of the hierarchy of the organisation. Multinational corporations with multiple sites and devolved systems of authority and decision making cannot be regarded as consisting of a single business core. Systems for managing complex business activity across multiple locations can be better understood by using core and periphery as *relative* values; that is, in relation to other factors within the organisation, as opposed to essential descriptors. In our efforts to engage with and extend the utility of the CPT framework, the concepts of 'core' and 'periphery' are used as relative coordinates which vary according to a range of spatial and temporal factors inside and outside the business.

Moreover, in conventional CPT the relationship between core and peripheral functions are characterised by a uni-directional flow of power and resources. The core amasses power and controls resources at the expense of the periphery by utilising influence to maintain the superordinate–subordinate dynamic. Resources are seen as gravitating to the centre with little compensation or advantage to the periphery, unless it serves the agenda of the centre. Industrial organisations adhere to this pattern by locating core decision-making functions at the corporate level while strategically establishing peripheral units at the source of the opportunity. Following this logic, corporate level actors make decisions in order to facilitate the transfer of resources and wealth from the periphery to the core, with the core then re-distributing according to the objectives of the centre. By and large, this

continues to be an accurate depiction of how mining organisations configure themselves, however, for so-called peripheral functions to successfully extract and transfer resources, they often adopt the characteristics or at least mimic the logic of the centre, often in terms of the 'business case'. The process of practice mapping demonstrates that this is not the only strategy employed in this practice space. In organisational studies, there are examples where the application of CPT has facilitated the study of interactions between prevailing routines, structures, discourses and other institutional factors in an organisation (e.g. Yuan et al., 2011; Siggelkow, 2002). For both development and business scholars, the proximate dimensions of power, resources and influence provide valuable insights into how networks are formed, reproduce themselves overtime, and the net experience and effect this process has on stakeholders more broadly.

Conventional CPT also assumes a material divide between core and peripheral entities. This is a necessary step in being able to forge a distinction between that which is considered central and that which is to be understood as marginal. The fourth base element, the idea of a 'semi-periphery' is useful in explaining how excesses of power can be mitigated in practice and where opportunities for new dynamics can arise along the core-periphery continuum. In many respects, a CRD function can be understood as having characteristics very much similar to those associated with the semi-periphery. When looking at the company-community relationship, for example, 'semi-periphery' is a most convenient expression for capturing the dilemmas attached to being caught in the "in-between space" (Kemp and Owen, 2013). Where the term requires additional capability is to capture the cross-boundary nature of CRD practice, in order to extend beyond the strict confines of the organisation itself (McGready et al., 2013). A boundary crossing dimension is therefore built into the practice map, which we present below. In essence, we assert that 'core' and 'periphery' should be explored as relative positions based upon dynamic interactions within organisations across a range of dimensions, including those that are typically used to define core or peripheral status including influence, resourcing and structural position, in addition to a cross-boundary dimension of external engagement.

We made a deliberate decision to keep the practice map workable by selecting four priority points from which to define a practice space. These points were drawn from existing empirical studies, as well as from our own experience in applied research and site-based engagements. The external dimensions of practice are well established as a driver of social performance (e.g. Evans and Kemp, 2001; Zandvliet and Anderson, 2009; Kemp, 2010; Jenkins and Yakovleva, 2006; IIED, 2002; Veiga et al., 2001;
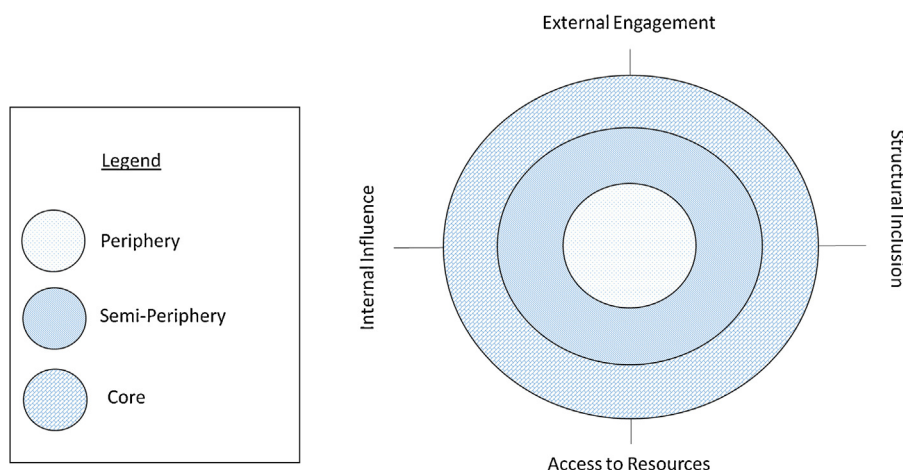

Fig. 1. Basic coordinates of the practice map.

Ballard and Banks, 2003; Humphreys, 2000). The ability of company personnel to engage externally is determined to a large extent by access to resources. A lack of access to human, financial and other resources can seriously reduce the level and effectiveness of community engagement and development practice. Even though the structural aspects of mining are rarely discussed in the literature, it is clear that CRD is increasingly 'structured in' at the operational level through dedicated departments and units. It is also apparent that where CRD is structured into the business, it is not always given equal standing among other organisational units, or included in key decisions (Kemp and Owen, 2013). Recognising that structure is not the sole determinant of the practice space, influence provides an additional indicator of the degree to which practitioners are able access decision-makers and decision-making opportunities. Fig. 1 represents these four basic coordinates of the practice map and a delineation of a 'core', 'semi-periphery' and 'periphery' position for each.

Diagrammatically practice maps works as follows: on the outer reaches of the axis, the figure depicts high levels of 'core' status, while at the centre of the axis, 'peripheral' status is recorded. In effect, the greater the total surface area, the great the level of CRD influence on core business. The examples provided below plot approximations of conventional configurations of CRD practice. In visual form the various configurations indicate a high level of interdependency between the four organisational factors. The attribution of 'core', 'peripheral' and even 'semi-peripheral' status is shown to depend on the overall relationship between the four variables. For example, higher levels of structural integration are generally observed to have a positive impact on access to resources, while influence is contingent upon both the level of functional integration and how the function is orientated in terms of its relationships inside and outside the fence.

4. Extending CPT: key dimensions of the practice map

In this section, we describe the key dimensions of our four-point practice map. The practice map takes CPT as a foundation, recognising the conceptual benefits of assigning agents and activities with core or peripheral status. For our purposes, these terms provide valuable coordinates when attempting to locate people and processes within an organisational setting. Where CPT becomes limiting is when core and peripheral markers become essentialising descriptors to account for motives or outcomes in organisational settings. To overcome this, we argue that these markers should be understood as having relative value determined by key elements, rather than absolute value plotted against abstract criteria. While conventional CPT asserts the core-periphery relationship as the defining feature of the framework, practice mapping is defined using four elements which allow for a more comprehensive analysis of organisational relationships and processes, while utilising the base core-periphery logic. In terms of operability, actors and activities are positioned based on their relative position within the broader organisational context. One of the conceptual advantages of practice mapping is that the organisational context forms a key component of the framework and the focus for assessing the relative position of organisational units, as well as individual practitioners, in relation to a given process. To locate *sets* of core-periphery relationships our framework assumes four points of interest, which are each briefly elaborated in the four sections that follow.

External engagement is a conventional starting point when considering CRD practice. The nature of interaction that a practitioner has with external stakeholders provides a strong indicator of 'coverage' in the practice space. 'Level' represents an aggregate ranking across of a number of sub-dimensions. 'Frequency' or 'volume' of interaction is one consideration; that

is how often a practitioner is in touch with or connects to external stakeholders on issues of concern or interest. 'Quality' of engagement is another. Engagement can be frequent and surface level, or infrequent yet more meaningful. Drivers are also relevant. If a practitioner engages with community on an 'as needs' basis, or only when the company has a pressing need, then the level of engagement would not be as strong as a practitioner who engages pro-actively to build mutual understanding. Other temporal and spatial considerations such as time in the field and geographic coverage are also important. Ultimately, the ranking will be relative to the broader context, culture and community expectations for engagement.

The second dimension relates to access to resources. Identifying and defining what constitutes 'necessary resources' for CRD in mining is a key exercise. In the mining context, a CRD budget commensurate with the external environment is imperative, as resources will determine the level of 'mobility' and 'presence' that CRD practitioners are able to achieve in the internal and external domain. Human resources are certainly fundamental in relational work; without people to interact with stakeholders, CRD work becomes impossible. Skills, education, training, and professional development for staff are also necessary, particularly if practitioners start from a low base of knowledge or experience. Resources also include software, such as specialist programmes to manage social data, and assets, such as cars, computers, phones, equipment and the like. Specialist services are also important resources in some circumstances.

The ability to actually secure resources is distinct from the task of identification. In most organisations, capital is controlled and dispersed centrally, with different functions and departments forecasting budgets and presenting a 'business case' as to why they require particular financial and/or resource allocations. CRD managers who are adept at 'packaging' proposals by appealing to or mimicking the centralist logic tend to fare better than those who lead with moral or ethical arguments. Currently, the logic of 'risk minimisation', 'cost containment' or 'return on investment' dominate resourcing decisions at the operational level. Whatever the approach, this dimension captures the degree to which CRD practitioners are able to access necessary resources.

The third dimension open ups discussion about where CRD sits in the organisational structure and whether and how it is included in organisational decisions. This enables practitioners to determine whether CRD is connected to the business as a whole, or located on the margins. It may also identify patters whereby CRD is relegated to the periphery other than when crisis erupts and the business draws practitioners in as a matter of convenience. In this regard, the issue of whether the CRD function is core or peripheral can also have a temporal dimension. Along this axis, practitioners are able to consider whether they are structurally and authoritatively equivalent to other functions, or not. Structural equivalence and formal authority provide no guarantee of inclusion; but together they represent an important dimension that determines coverage within the practice space.

The fourth dimension sits in contrast to formal structure, and requires consideration of informal influence in considering the core and/or peripheral status of actors and activities in mining organisations. 'Influence' provides a rather obvious reference point where those who have influence are typically considered to be core players and those who are subject to that influence as 'peripheral'. In mining, available evidence seems to stabilise this reading, with existing studies demonstrating that other parts of the business often influence CRD in undesirable ways and that it is difficult for practitioners to reverse this directionality. The conclusion is easily drawn that the CRD function is peripheral to the core business of mining. While this may true on one level, it is the static reading that we seek to disrupt here.

Table 1
Table of practice maps, including mode of engagement and method of development.

Type of map	Mode of engagement	Method of development
Individual (Fig. 2)	Mentoring relationship	Individual dialogue
Relative A&B (Fig. 3)	Workshop environment	Professional exchange
Departmental (Fig. 4)	Part of a strategic review	Team based analysis (externally facilitated)

We suggest that by considering 'influence' alongside external engagement, resourcing and structure, alternative CPT readings become possible. Some practice maps will (re)position CRD as influential, even though they are not well positioned structurally. Others will gain entry into core discussions via structural position, but may not be heard due to lack of influence. This reading avoids essentialising CRD as weak, marginal and otherwise peripheral to the core business of mining. Our purpose is not to suggest that CRD is core when in fact the function remains marginal, but that it is possible to re-draw the boundaries and re-read actions and actors as central in some dimensions, rather than only peripheral, by using CPT in new ways.

The base frame is a simple discursive device not an instrument of precision. It should be considered an entry point for discussion, rather than a performance ranking tool. By building connections between elements, practitioners are prompted to share and discuss those things that are important to them, using the four dimensions as anchor points and locating themselves within the context of their internal and external relationships.

5. Worked example practice maps

A key lesson to emerge from the development of practice maps is the variability of outcomes in the CRD practice space, and furthermore, that even so called 'marginal' business functions can assume 'core' value from within their marginal status. The four points in the conceptual framework provide the basis for discussion using inter-dependent sets of existing organisational coordinates. These coordinates are assumed to push and pull against one another to produce what we call definable 'practice shapes'. In Table 1, we summarise three types of maps, including their method of development. In Figs. 2–4 below, we chart these three types to demonstrate application.

The primary application of the framework is to assist individuals and organisations to reflect on those factors that influence and shape CRD practice. Individually, the framework offers a mechanism to help account for how practitioners negotiate organisational and external domains, and to explore the connections between them. The aim is to increase awareness of internal practice dimensions and make adjustments based on these insights. By superimposing practice maps that capture practice
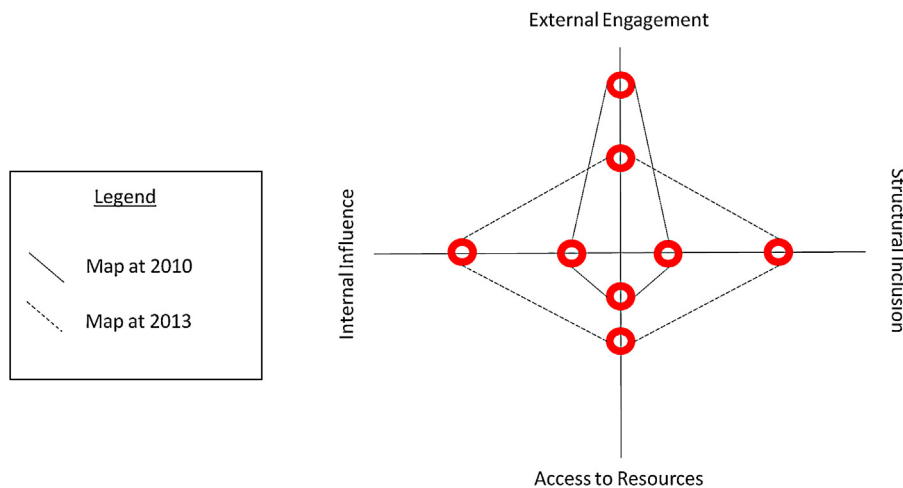
Fig. 2. Practice map illustrating change over time for a single CRD practitioner (2010 vs. 2013).
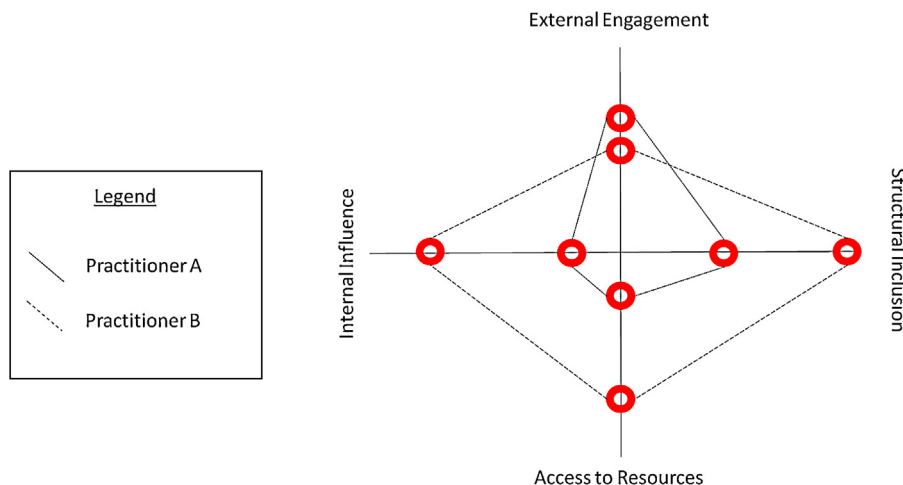
Fig. 3. Practice map comparing the overall "shape" of two relatively senior CRD practitioners (2013).
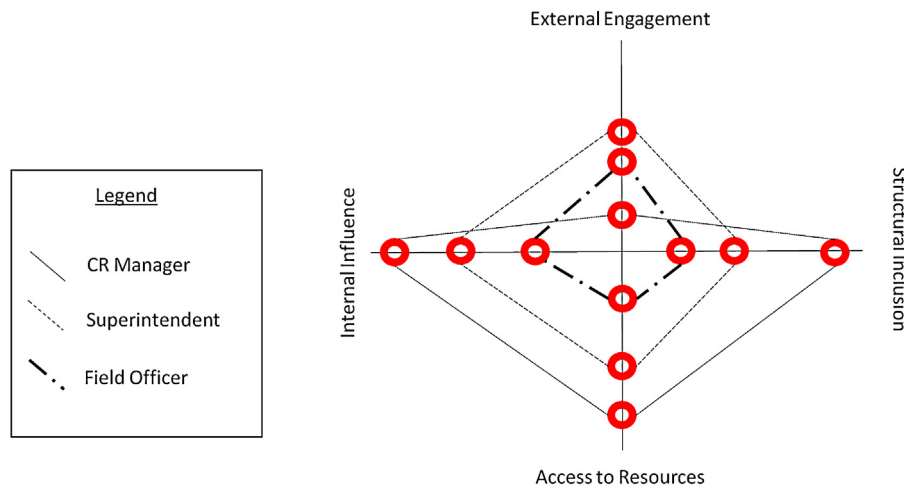
Fig. 4. Practice map plotting overall departmental coverage based on three CRD practitioners (2013).

at different points in time, practitioners are able to reflect on temporal change.

Fig. 2 represents a comparison between current and prior practice. The diminished level of external engagement between 2010 and 2013 is readily identified. The practitioner indicated that this is largely as result of moving from a senior field officer post into a managerial position and associated requirements for internal engagement. The practitioner also recognised that during this period, the type of relationships they held had shifted. There was less diversity, for example, and an increased level of interaction with external stakeholders holding official or representative positions. Given the distance between current and prior levels of external engagement, the practitioner recognised that communication with field staff needed to be strengthened to be able to maintain their "internal bridging" role; that is, providing a key link between internal and external perspectives.

The practice map also reveals significant shifts along the horizontal axes. Not only had the practitioner received a promotion, but a functional review recommended that the Environment and Community Relations (E&CR) Department be separated, and the CR Manager included in the senior management team. This position had previously been subsumed under the Head of E&CR. Over the three year period, the practitioner also reported increased levels of internal influence as a result of building rapport with other managers, identifying allies, and engaging in dialogue with other decision-makers about the role of CR at the mine site. While the practitioner sees scope for improvement on this dimension, they were able to articulate who they needed to influence, on what issues and why. However, they had not determined *how* this work would proceed. The discussion provided a space for the practitioner to strategise about influencing internally, not as a one-dimensional exercise, but relative to their structural position, their access to resources, and their current level of engagement with external stakeholders, including through field staff.

Another significant area of discussion was the practitioner's ability to secure resources for themselves, and the department. While the structural position and levels of influence had certainly improved, this had not translated into greater access to resources. Access to vehicles, in particular, remained difficult, and the operation's position was proving hard to shift. Ultimately, the discussion culminated in a strong articulation by the practitioner of the future trajectory of interaction with remote communities, should additional resources not be secured. Where there was clearly a need to present a 'business case' at the operational level, there was also an opportunity for the practitioner to present future trajectories of 'not acting now', including to the regional and corporate office; those parts of the business that tended to take a longer-term view. This may work to shift the conversation about resources beyond the operation's production-centric logic.

Fig. 3 depicts the relative position of two different practitioners at one point in time. In this instance the two individuals are employed by different sites, on different continents and for different mining companies. The comparative value identified in the map for Fig. 1 holds for Fig. 2 application in that both uses require practitioners to reflect on the conditions under which they operate, together with their overall ability to attract and utilise a range of skills, relationships and resources within the organisations they work for. From the example represented in Fig. 3, it is clear that practitioner A does not have the same institutional coverage as that occupied by practitioner B. The formation of practice shapes will invariably reflect the unique confluence of person, institution and context. In a workshop environment, comparative maps have served as a foundation for dialogue between participants, where the reflective value is enhanced through peer questioning and critique. Participants are able to cross-reference their practice conditions with peers to identify practice possibilities, avenues for effecting change, in addition to exploring the many personal and professional strategies used across the range of internal/external practice configurations available for comparison.

Fig. 4 provides a further possible usage for the practice map. In this example the map is applied to a select number of individuals within a team setting. The purpose of this application is four-fold: (i) to understand both the overall coverage of the function against the four points on the axis, (ii) to determine the particular shape of the department by level of authority, and (iii) to map areas of overlap as a means for ensuring information, resource, and supervisory support flow appropriately between roles. As a deliberate team-based process, (iv) the framework offers a unique platform for conducting collaborative analysis, and a useful tool for strategy development with the CRD function.

6. Practical utility of practice mapping

The sample narratives map three approaches to demonstrate the range of potential practice points on a given axis and the practice shapes that can emerge as a result. Profiling practitioner narratives this way illustrates in visual form professional experiences that different combinations of professionals and organisations can generate. The narratives that form around the different shapes produce valuable textual data for professional development, critique and learning. The contrasting shapes that form around the various coordinates indicate that configurations

are highly contingent and with potential for re-organisation and re-development. This challenges the essentialist or inherent 'peripheral' status that is routinely assumed of CRD practice in the mining sector.

One potential application not presented above includes mapping on an issue-by-issue basis, where for example, a practitioner considers their work specifically in relation to a particular conflict, resettlement plan, community development programme or engagement in mining projects or exploration activities. Several specific issues maps can then be developed to depict overall performance as a means of self-assessing both capacity and compliance simultaneously. The participative nature of the mapping exercise has the potential to fill a methodological gap inherent in conventional auditing systems (Kemp et al., 2012).

As a strategic device, practice maps can chart relative strengths or weaknesses in terms of the four points of analysis. This enables individuals and teams to determine which areas of the business require further resources to meet CSR or SD objectives. The analysis can be deployed to identify areas that are at greatest risk of under-performance or non-alignment within the context of the overall organisational strategy, while at the same time, identify practice groupings with clear strengths or the potential for improvement. Above and beyond being able to locate strategic positioning across different dimensions, the identification of internal capacity remains essential for gauging what is both operable and achievable with the CRD function, as and where it stands.

The implications for mining companies are significant. In the first instance, the data presents a picture of practice as it looks from the vantage point of those working on the ground; that is, in the realities of practice. The coordinates of practice maps also speak to the 'reach' of the CRD function and the degree to which they have relationships at different levels of the organisation that allow them to influence internally. Without these insights and relationships, the ability of CRD managers and frontline personnel to perform their roles may become, or continue to be, constrained and even counter-productive.

Second, planning and programme implementation can be structured around a definable evidence base. This evidence base enables a better allocation of financial and human resources within a department. If practice mapping is applied to form a collective map of the CRD function, the process of developing shared knowledge also enables practitioners to formulate better strategies for managing opportunities and constraints within the organisation. Strategic use of resources becomes vitally important in a cost-constrained environment. A strategic foundation for planning and delivery is also important in an environment where departments compete for funding and influence.

Third, structuring the model across four organisational points provides a valuable tool for supporting internal engagement. In a business culture traditionally dominated by the technical and physical sciences, practice maps provides a visual model for presenting data in a way that are more naturally rendered into business discourse. Finally, the model allows CRD functions to define their roles relative to other areas of the organisation. Greater role clarification can assist CRD managers in determining when to 'push back' and when to 'push for' inclusion in internal decision making processes. Integration and dis-integration of professional functions within mining companies remains an important but largely under-researched question and the data generated by practice maps can assist organisations to determine levels of design and default in this area.

7. Conclusion: towards deliberate CRD practice

The internal dimensions of CRD work provide a critical platform for understanding the social performance of organisations in mining and other extractive industries. In other work we have argued that the performance of the CRD function is a strong proxy for the level of alignment between a company's espoused position on CSR and SD and their actual position (Kemp and Owen, 2013). The internal dimensions of social performance have to a large extent been overlooked by scholars, practitioners and decision-makers; for a variety of reasons, including the limitations of gaining sustained access to organisational decision making processes, and a bias towards characterising the impacts of mining outside the fence. As a consequence, scholarship in this field has yet to provide a clear and comprehensive 'read' on the very function responsible for facilitating key aspects of the resource sector's CSR/SD agenda at the project and operational level. For this reason, our focus has been on developing what we see as a modest contribution for better engaging the internal domain. We have articulated four key dimensions by using a broader core-periphery construction as conceptual anchor points. These dimensions offer basic coordinates for understanding the positionality of practitioners, and their practice, within the organisational sphere. More dimensions could certainly be added as understandings of this practice domain continue to develop.

Our approach sits in contrast to idealised policies and aspirational global norms that are typically imposed by those operating well outside the field of practice. Practice mapping provides a practitioner-orientated assessment that generates multiple perspectives and interpretations of the organisational domain. The analytical framework and the map it generates provide tools that can encourage a more disciplined and deliberate approach to practicing and positioning CRD internally, rather than offering an immediate solution for social performance gaps. The data generated provides an evidence base to prompt practice change, functional reconfiguration, resource re-allocations and internal re-arrangements that offer potential to improve social performance. More importantly, however, the mapping process offers an alternative to conventional audit based assessments where employees contribute relatively little analysis to the data they provide.

While it carries a high degree of utility, practice mapping provides but a partial response to the broader challenge of characterising and engaging CRD work in the extractive industries. In this usage we have only gone as far as applying practice maps to the internal context of CRD practice. The 'trans-boundary' nature of CRD work, however, requires that practitioners orientate their efforts to include the internal and external domains concurrently. There is potential to extend the framework to the external domain of practice, and relate this back to the internal reading. Previously, these internal and external environments have largely been treated as exclusive domains, despite widespread recognition that the CRD function must operate across this boundary. Further developments of practice mapping will need to transcend this internal–external divide if the full range of CRD practice dimensions are to be fully realised and if resource companies are to take seriously their social responsibilities in the context of the current high-stakes, cost-constrained global mining and extractive industries.

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