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# **Working Paper**

The Varied Work of Challenger Movements: Identifying Challenger Roles in the U.S. Environmental Movement

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# The varied work of challenger movements: Identifying challenger roles in the U.S. environmental movement

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#### Introduction

In 2008, The Nature Conservancy (TNC), the world's wealthiest environmental nongovernmental organization (ENGO) -- with over \$3 billion in assets – hired Mark Tercek, a former managing director at Goldman Sachs to be its president and CEO. While he may not have been the first choice for many ENGOs, the move is consistent with TNC's pursuit of nonconfrontational, pragmatic, market-based solutions to the world's conservation challenges (Wells, 2012; www.nature.org/about-us). While TNC has historically favored cooperation over confrontation with the traditional foes of environmentalists, in particular corporations, many within the ENGO community are not so inclined. Greenpeace, for example, states explicitly that it 'does not solicit contributions from government or corporations' (www.greenpeace.org/usa/about). The League of Conservation Voters takes yet a different approach, branding itself as the political voice of the environmental movement (http://www.lcv.org/about/mission). While organizations within the environmental movement are all challenging long standing institutions in the pursuit of environmental protection, as these examples illustrate, there are differences in what they do, who they interact with and how they understand or present themselves.

In this paper, we turn our attention to understanding what underlies such heterogeneity in challenger movements. In particular, we seek to understand the variation in the work of social movement organizations within a given challenger movement and the dynamics that underpin these differences. To investigate this, we bring together insights from prior research on the social structure of movements (Yaziji and Doh, 2013; van Wijk et al., 2013), identity (Polletta and Jasper, 2000; Snow and McAdam, 2000), work (Phillips & Lawrence, 2012) and institutional work (Lawrence and Suddaby, 2006; Zeitsma and Lawrence, 2010) to ask: how can

we understand the varied nature of the work of social movement organizations within a common challenger movement? Understanding the variation in the work undertaken within challenger movements is important both for the actors engaged in challenging institutions and for the incumbents attempting to maintain them.

Unfortunately, there remain very few systematic, empirical analyses of the varied work of actors as they exert their agency to challenge institutions (Lawrence, Suddaby and Leca, 2011) or that examine how that work is distributed and the structures that underlie these interactions (however, see van Wijk et al., 2013 for recent developments). To address this important gap, we explore the distributed and varied nature of the work undertaken by a set of social movement actors within the U.S. environmental movement. Our focus is on the largest (based on budget) U.S. environmental non-governmental organizations (ENGOs) and how they interact with other actors such as corporations and foundations. Our approach is to first understand the social positions of these ENGOs by drawing on the quantitative tools of social network analysis (Wasserman & Faust, 1994; Borgatti, Everett, & Freeman, 2002) to identify a set of unique relational patterns of interaction among the ENGOs, corporations, and foundations based on their board interlocks, which we go on to label portals, coordinators, members and satellites.

We then leverage these findings with a qualitative study in which we explore the identity of these ENGOs and the different types of work that they each undertake and relate these findings back to the relational patterns we identified in the first phase. Our analysis expands this typology to a set of five roles comprising configurations of position, identity and work (portal, coordinator, member, fringe player and purist). While much of the work undertaken by these organizations could be classified as 'institutional work' (Lawrence & Suddaby, 2006), from our analysis, we also identify work undertaken by the ENGOs that are not *direct* purposeful efforts to

create, maintain, or disrupt institutions, but rather *indirect* work that enables or amplifies the work of movement actors or the movement as a whole.

This leads to five main contributions. First, we outline a method to identify a set of unique social positions (portals, coordinators, members and satellites) among actors in challenger movements. Second, we identify a set of configurations of social position, identity and work that highlight a distinct set of challenger roles (portals, coordinators, members, fringe players and purists) and suggest that effective movements are likely composed of an ecosystem of actors that take on these various roles. Third, we explore organizations in our sample that transition between these roles, demonstrating how identity and social position can both enable and constrain individual organizations within the movement in terms of their ability to undertake different types of institutional work. Fourth, we identify a form of work thus far not explicitly identified in prior studies of institutional work: *indirect* institutional work, which we theorize may be an important potential moderator to the effectiveness of the *direct* forms of institutional work (creation, disruption and maintenance). Finally, we extend our discussion into a broader theorization on the notion of indirect and direct work.

We begin this paper by examining what we know about the work of challenger movements. Next, we delve into our empirical context (the U.S. environmental movement) before describing our methods in more detail. In the third section, we present our findings – the variations in social structure and the configurations of position, identity and work that lead to a typology of roles. We then discuss the dynamics that drive these roles and expand our discussion to the implications for the work of challenger movements and more broadly for studies of work. We conclude the paper with a discussion of our study's limitations and implications.

#### **Understanding the Work of Challenger Movements**

Our interest is in understanding how the work of social movement organizations varies within challenger movements. To inform this undertaking, in this section we discuss challenger movements more generally and then consider what is known about the work of challenger movements. In addition, we draw on prior research that examines how organizations are impacted by their social position as well as their identity claims within challenger movements. We end this section by outlining the two specific research questions that guide our study. *Challenger movements* 

Despite several calls to build stronger connections between social movements and organization studies (Minkoff and McCarthy, 2005; Davis et al., 2008; Yaziji and Doh, 2013), much remains to be understood about the 'work' of challenger movements. Prior research has examined the framing processes employed by SMOs to fashion shared understandings that legitimate and motivate collective action (Benford & Snow, 2000). There has also been work on understanding the 'mobilizing structures' of movements, that is, the organizational forms and tactical repertoires that create agreed upon ways of engaging in collective action (McAdam et al. 1996). There has also been work examining how the environmental context enables and constrains particular 'opportunities' for action (Yaziji & Doh, 2013).

Yet, an understudied aspect of challenger movements relates to the differences among organizational members, including variation in the roles adopted by different organizations. Recent organizational research has presented a more distributed view of agency, one in which change may result from a more "collective phenomenon that involves different actors with access to varying kinds and levels of resources who act in either a coordinated or uncoordinated way" (Battilana, Leca & Boxenbaum, 2009: 89). Thus, the work of challenging and changing

institutions is increasingly understood to be undertaken not exclusively by heroic institutional entrepreneurs, but also, in a more distributed manner by collectives of institutional challengers or social movement actors (Hargrave & Van de Ven, 2006; Lawrence, Suddaby and Leca, 2011; Rao, Morrill, & Zald, 2000; Schneiberg & Lounsbury, 2008; van Wijk et al., 2013). Movements can evoke controversy, instantiate new logics, foster the inter-organizational diffusion of practices and supply new templates for action (Schneiberg, 2013; Schneiberg and Loundbury, 2008). Descriptions of the work of movements have pointed to significant variety in the work that movements undertake, which can vary all the way from sabotage to collaboration (Davis et al., 2008) and there is evidence to suggest that not all members of a given movement will be willing to engage in all of this work (Elsbach and Sutton, 1992; Polleta and Jasper, 2001). *Studying the work of challenger movements* 

More broadly within the field of organization studies, there has been renewed interest in the 'work' of individuals and organizations (Phillips and Lawrence, 2012). Recently, much scholarly interest has focused on the 'institutional work' of creating, maintaining and disrupting institutions (Lawrence & Suddaby, 2006; Lawrence et al., 2011). Yet, as noted by Phillips and Lawrence, there are many other forms of work beyond institutional work that address 'goal-directed effort[s] on the part of an actor (individual or collective) to manipulate some aspect of their social-symbolic context' (2012: 227). These authors cite boundary work, practice work, meaning work, emotion work and identity work as examples (Phillips and Lawrence, 2012: 225). Here, our focus is on the 'work' of SMOs to challenge institutionalized arrangements and practices. Thus, we are interested the 'work' that they each undertake that consists of goal-directed efforts to further these aims.

There are several examples of studies that take a broader view of the work of challengers. For example, Gutierrez, Howard-Grenville, and Scully (2010) examined the work of rank-and-file members whose experiences of split identification led them to challenge the traditional hierarchal nature of the Catholic Church. Another significant stream of research exploring the work of challengers has examined actors' rhetorical strategies and problematizations of current arrangements (e.g., Maguire & Hardy, 2009; Suddaby & Greenwood, 2006). For example, Suddaby and Greenwood look specifically at the rhetorical strategies employed by actors both challenging and defending the introduction of a disruptive organizational form, multidisciplinary practices, in to the field of public accounting. Similarly Maguire and Hardy (2009) studied not only the disruptive work of challengers who promoted frames aimed at desintitutionalizing the use of DDT, but also identified the forms of defensive work undertaken by proponents of DDT.

However, in many studies of challenger work, organizations are typically classified as challengers or defenders of the status quo, and lumped together with other challengers or defenders, and the focus is placed on contrasting the behaviors between groups, with little attention to the potential variation in the form of work undertaken within either of those groups. Thus, prior research examining endogenous change in institutions has typically focused on one particular 'type' of actor; either on the role of elites (e.g., DiMaggio, 1988; Greenwood & Suddaby, 2006), fringe players (e.g., Leblebici, Salancik, Copay, & King, 1991), or 'radical' ideologically unconventional organizations (Yaziji & Doh, 2013). Yet, we have noted above that we expect that the 'types' of work undertaken by SMOs in a given challenger movement will vary.

A structural perspective on challenger work

We contend that treating institutional challengers as an undifferentiated class or category of actors may mask the diverse forms of work in challenger movements. For example, we have seen that some members of the environmental movement vilified chemical company executives while others worked to promote a new discourse around regulation (Hoffman, 1999). Recent research on institutional work has also pointed to the potential for variation in organizational practices among institutional challengers (Zietsma & Lawrence, 2010). In fact, in an intensive study of the Dutch sustainable tourism movement, van Wijk and colleagues (2013) identified various types of instigators and brokers who served different functions in the evolutionary structuration of the sustainable tourism industry. They employed both content and network analysis to examine unique forms of work which simultaneously considered both position and content (e.g., cultural rhetorics). In addition to findings about the overall structuration of the network, they also demonstrated that different social positions were associated with different types of actors (e.g., instigators versus brokers).

Since van Wijk and colleagues (2013) were interested in assessing, for example, the transmission of rhetorics and innovations through the field, they used one-mode projects of affiliation networks of individuals and events, which explicitly captured the opportunity structures wherein such transmissions may occur. Building on their findings, we believe the very *forms* of work SMOs engage in may also be predicated upon organizational characteristics, at least partially constituted by social position, independent of the content or adoption of particular innovations flowing through the network.

Consistent with a more structural perspective in social network theory (Borgatti, Mehra, Brass & Labianca, 2009), we suggest an individual organization's agency and identity are linked

to social position, and that delving more deeply into the social position of *individual* organizations provides one means to move beyond simple classifications (Delbridge & Edwards, 2007; Emirbayer & Mische; 1998, Wooten & Hoffman, 2008). We argue that a relational approach that accounts for actors' patterns of direct and deliberate engagement with other others (Emirbayer, 1997; Emirbayer & Mische, 1998) may lead to new insights on the distributed nature of agency in challenger movements.

Can identity also help explain variations in challenger work?

Identity, in particular, has been a much studied phenomenon in research on social movements; however, most of the theorization has occurred at the level of individuals or at the level of the movement rather than at the level of organizations that form part of the movement. Movement scholars have focused on identity as a way to explain how actors' interests emerge, as well as their motivations to act and their choice of strategies and tactics. A large body of work explores the mechanisms of what Snow and McAdam (2000: 42) describe as issues of identity correspondence – 'the alignment or linkage of individual and collective identities and action.' Such work examines how individuals come to join movements and how movements shape the identities and actions of these individuals. In addition, work on the collective identities of social movements has been successful in extending early resource mobilization and political process accounts by pointing to how collective identity may constrain strategic choice (Lichertman, 1996; Polleta and Jasper, 2001). In this view, the members of social movements may develop a preference for particular tactics or strategies, which may be partly independent of their efficacy (Polleta and Jasper, 2001). For example, den Hond and de Bakker (2007) theorized about the relationship between an activist groups' ideology and the tactics that it might employ.

While collective identity has been used to explain the mobilization of people within a movement, we agree with Polletta and Jasper (2001) that it has been treated both too broadly and too narrowly. In particular, collective identity often serves as a mechanism of data reduction, abstracting away differences among organizations claiming (or, in our case, categorized into) that identity. But collective identities may not be universally shared or experienced. Creed, DeJordy, and Lok (2010) showed that Protestant ministers sharing a GLBT identity, experienced identity contradictions between their Calling and their sexual identity individually. Consequently, they engaged in a variety of forms of identity work which subsequently positioned them to become agents of change. Although their actions were motivated by *individual* experiences of identity, from the outside their subsequent identity work may well appear to have been rooted in a common experience of collective identity. And while they show how such strategies, in aggregate, potentially contribute to institutional disruption, they originate from the uncoordinated and diverse experiences of individual actors. Drawing on these two perspectives, we build on Polletta and Jasper's (2001) argument and suggest that identity may exist and support movements at an intermediate level of analysis.

To summarize, an important issue that remains understudied in a systematic, empirical manner relates to the potential heterogeneity in the work of challenger movement organizations. Therefore we approach this issue by focusing on two specific research questions: 1) How can we describe the variation in the work of social movement organizations within a given challenger movement? And 2) What are the dynamics that underpin these differences? We study these questions in the context of the United States environmental movement, which we introduce below before describing our methods.

**Empirical context: The U.S. environmental movement** 

Our study focuses on a set of challenger organizations engaged in issues related to the protection of the natural environment. In particular, we focus on the largest (based on budget) of the U.S. environmental non-governmental organizations (ENGOs). The environmental movement represents an interesting context because the membership of the environmental movement has been observed to be highly varied (Beck, 1992; Egri & Pinfield, 1994).

"The term 'environmentalist' was not chosen by the individuals so described. It was seized upon by members of the popular press as a means of labeling a newly prominent segment of society. . . not only have the labelers forced an artificial association on a very diverse group of individuals, but they have also given a terse public statement of what 'those people' are presumed to want." (Evernden, 1985: 125).

Clearly, ENGOs play an important role in instigating and advancing the collective action undertaken in the environmental movement. Yet, not all ENGOs have the same mission, connect to other actors – or even categories of actors – in the same way, or play the same role. Institutional studies have typically treated NGOs as a homogeneous class or category of actors; however, this constellation of actors has been shown to be heterogeneous with regard to their interests and their actions (den Hond & de Bakker, 2007; Egri & Pinfield, 1994), requiring further attention and a more nuanced categorization.

In defining the constellation of U.S. ENGOs, 6,493 organizations identified themselves as environmental groups in 2005 (Gale Research, 2005). And, while they share common attributes regarding the issue, they differ in how that issue is operationalized or framed, with implications for the goals they strive for, the work they undertake, and the position of their allies within the overall social structure (Zald & McCarthy, 1987). For example, some ENGOs employ non-confrontational means to achieve their goals of protecting ecosystems for conservation purposes (e.g. The Nature Conservancy). Some ENGOs seek to protect these habitats for the purposes of sport (e.g. Trout Unlimited and Ducks Unlimited). Some are staffed with lawyers

and scientists and work within existing institutions to bring about corporate and social change (e.g. Natural Resources Defense Council and Environmental Defense Fund). Others prefer to remain outside those institutions working in a more confrontational style (e.g. Greenpeace USA). Still others prefer to engage in acts of sabotage and deliberate violation of the law, leading government agencies to label them terrorist groups (e.g. Earth First! and the Earth Liberation Front).

We posit that the form of work undertaken by ENGOs will be evident in their network of connections which will reflect different preferences for interaction across different types of actors. For this paper, we examine connections among the largest U.S. ENGOs, corporations, and foundations. Since ENGOs have varied interests, they vary in their connections with such actors and thus, the roles that they adopt within the movement. In this study, we seek to identify and describe a set of distinct roles adopted by ENGOs by exploring their connections and relate these to identity and the forms of work that they undertake. We begin by assessing their connections through interlocks at the board level that act as channels for influence, information, and resources. Later, we link these structural findings to qualitative data on identity and work. *Mapping the ENGO social structures using board interlocks* 

Following research on board interlocks in the corporate sector (e.g. Davis, 1996; Gulati & Westphal, 1999; Zajac & Westphal, 1996), we map the social structures of ENGOs using board interlocks as channels of influence. Although there are obviously additional forms of interaction, boards are charged with the 'ultimate responsibility for the non-profit organizations that they oversee' and serve as an important channel for 'connecting individual institutions to their larger context' (Ostrower & Stone, 2006: 612). Board composition is not only self-determined, but

because board membership is public information, it also provides external signals regarding the ENGO's values and philosophy to others.

Some ENGOs may purposefully choose to include corporate executives and grant-makers among their board membership, while others shun the practice. For some ENGOs, this may be an effort to 'co-opt' corporate leaders or other persons of legitimate status by bringing them onto the organization's governing board (Dowling & Pfeffer, 1975; Selznick, 1949). For others, board interlocks can be a mechanism for gaining access to critical resources such as information and, of particular importance to ENGOs, funding 'both because individual board members will influence their corporations' giving and because the closer connections they have to others will raise giving levels overall' (Marquis, Glynn, & Davis 2007: 936). Conversely, ENGOs making board ties to corporations and foundations may be subject to co-optation (Selznick, 1949). The presence of ENGO board ties to corporate or grantmaking entities may create 'difficulties of juggling fidelity to a mission with achieving fiscal stability' (Minkoff & Powell, 2006: 592).

Finally, given our interest in the interplay of social position, identity and work it was necessary to use ties reflective of organizations' mission and values that are deliberate and strategic in nature, and available and comparable across the various relevant actors. Of the various possible options (such as alliances formed or issue co-sponsorship), we selected board ties both because they are consciously self-determined and because they allow us to look at a set of ties that has comparable meaning across ENGO, corporations, and foundations, allowing us to assess position in the macro social space.

#### **Network profiles and varying social positions**

To investigate the variety in social structure amongst institutional challengers, we use the tools of social network analysis (Wasserman & Faust, 1994). Our goal in this analysis is to

identify the differing structural positions occupied by these ENGOs through an analysis of their relationships. Further, by including organizational attributes in our analysis, we can assess not only 'where' an actor is in the structure as whole, but also what types of actors they interact with, and how. Some organizations may connect to other organizations in a variety of categories (in our case, ENGOs may connect to other ENGOs, corporations and foundations) or they may primarily connect to their own in-group (in this case, other ENGOs). We posit these different structural patterns will have profound consequences for how these actors act as change agents within the field and thus the role that these organizations are able to play in shaping the field (Stevenson and Greenberg, 2000). We assess social position through a quantitative study of U.S. ENGO board interlocks employing social network analysis measures. Then, combining those results with a subsequent qualitative study, we relate actors' social positions to their identities and their work.

## Quantitative study

Social network analysis has a long and established history of demonstrating the relationship between an actor's position in a social structure and its role (Borgatti et al. 2009). Methodologically, these analyses generally employ graph theoretic algorithms to identify *equivalences* between actors based on their patterns of connections with each other in the network. These equivalences can be defined very strictly (two actors must be tied to exactly the same actors to be considered equivalent) or more abstractly (two actors must be tied to the same type of actors to be considered equivalent), representing two very different conceptions of position or role in the network (Borgatti & Everett, 1992). These algorithms are codified into a number of standard equivalence classes, ranging from the very strict *structural* equivalence (Burt, 1976) to a more generalized *automorphic* equivalence (Everett, 1985) to the most

abstracted form of *regular* equivalence (Borgatti & Everett, 1989). For our purposes, however, existing algorithms have two short-comings.

The first is that they are entirely structural in nature. While our goal is to refine the traditional approach of categorizing actors based on *a priori* attributes, we make no claims that such attribute-based classifications are meaningless. We accept that actors across such categories are categorically different, and so connections to these different categories of actors should be treated differently; however, the equivalence algorithms described above typically do not take such attributes into account (but see Borgatti & Everett, 1993 for an exception).

The second short-coming is that they are either too sensitive or too insensitive to the number of connections to a given actor. These algorithms either over- or under-emphasize the degree of connectedness of nodes (i.e., the number of ties they have) in determining equivalences. Structural and automorphic equivalences require exactly the same number of connections for nodes to be equivalent, and regular equivalence does not distinguish between an actor having one tie to a category of actors or being connected to 100 of them. As we believe these connections represent the potential for information, influence, meaning, etc., to flow between actors we expect access to only one of a specific type of actor is qualitatively different than access to 20; however, we doubt access to 20 is qualitatively different from access to 21. Thus, we need a more generalizable way to assess each actor's exposure to institutional forces from different categories of actors than is available with established equivalences classes. We propose that assessing the similarity of a network profile will address this need.

Data. Our quantitative data comprise the board interlocks of the largest U.S. ENGOs, corporations, and foundations across three points in time (2000, 2003, and 2005). Our initial ENGO sample was gathered from the 6,493 environmental organizations that identified

themselves as environmental groups in the Encyclopedia of Associations (Gale Research, 2005). From this list, we selected the largest national and international environmental groups (those with budgets over \$1 million), resulting in an ENGO sample of 55 organizations. These groups ranged in size from 100 members to 1.2 million (average 136,000), in budget from \$1 million to \$245 billion (average \$18.5 million) and in date of formation from 1875 to 1995 (average 1958). Overall, while the sample is biased towards large U.S. environmental NGOs, it provides insights into the macro social structure of the movement at the national level. This represents the entire population of ENGOs with a budget of at least \$1 million, providing an objective criterion with which to bound the network (Brass, 2011). We acknowledge that limiting the population this way may increase the homogeneity of the organizations within our analysis and could potentially skew the picture of the work that they undertake. We view this as a preliminary investigation to identify distinctions between the social positions, identity and work of these organizations.

Lists of the boards of directors for these ENGOs were generated from a combination of sources including IRS 990 forms, which were only available electronically beginning with the year 1999. We focused on the year 2003 to match existing data for the corporate board interlocks (see below), but supplemented those with data for the years 2000 and 2005 for comparative purposes. We gathered data from the IRS 990 forms for each of those years. In cases where the forms were unavailable, the ENGOs were contacted directly and asked to provide board information or, if available, historical data was retrieved from the ENGO's website. Data was not available for all three years for one of the ENGOs, which resulted in a set of 54 ENGOs (see Appendix).

We cross-referenced this list of ENGO directors with the 2003 board membership of public U.S. companies found in *Compact Disclosure*®, a database that provides access to SEC-

filed financial and other information contained within Annual Reports, Proxy Statements, and 10-K/20-F filings for over 12,000 companies. Finally, in order to identify those foundations that have an interest in funding environmental causes and thus are engaged in dialogue around environmental issues, we generated a list of foundations that donated more than \$100,000 in *any* year between 1999 and 2004 to *any* of the 54 ENGOs on our list through *GuideStar®*, a database that compiles financial information from the IRS Business Master File of exempt organizations and IRS Forms 990, 990-EZ, and 990-PF (Philanthropic Research Inc., 2007). This resulted in a list of 309 foundations. The list of board members for each of these foundations was generated from their websites, annual reports and IRS 990 forms for the year 2003 (to match the year of our corporate board data set). This resulted in a sample set of 2,233 foundation directors. In order to better identify individual board members, we also collected organizational or professional affiliations if this information was available.

Identifying interlocks. To determine the interlocks between the ENGO, corporate, and foundation board sets we started with the complete list of all members of all 54 ENGO boards. We then identified possible matches based initially on last name and first initial. We researched each possible match looking for biographies or news stories that conclusively demonstrated that this particular person served on the boards of the organizations in question. Only those board members who could be conclusively identified in this manner were included in our analyses. This resulted in a data set consisting of 422 individual ENGO board members that served on the board of two or more organizations (ENGO, corporate, or foundation). From this we created a 2-mode matrix with individual board members down the rows and the complete set of

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<sup>&</sup>lt;sup>1</sup> We wish to thank Jerry Davis for providing us with a cleaned version of this dataset.

organizations (corporations, foundations, and ENGOs) across the columns. Using the Affiliations command in UCINET (Borgatti, Everett, & Freeman, 2002) on this network, combining it with the existing corporate interlock data, and dichotomizing it, we constructed the networks of board interlocks in the field where board interlock exists between two organizations if both organizations share one or more director. Of the 54 ENGOS in our dataset, 16 of them were isolates, sharing no board members with any other organization in the field.

Subsequently, we decided to investigate the dynamic nature of the ENGO's social positions by duplicating the process above for the NGO board information from 2000 and 2005, generating a network for each of the three years. We did not reproduce the corporate interlock for each year; however, research has shown that the corporate board interlock is remarkably stable over time (Davis, Yoo, and Baker, 2003), in part because the tenure of a board member averages roughly six to nine years (Hermalin & Weisbach, 1988; Kosnick, 1990).

Network profile. To identify social positions based on their connections to other ENGOs, corporations, and foundations, we created a network profile for every organization. This network profile comprises 11 different variables that together describe three distinct aspects of each actor's position in the network: a) its connection to the global network structure (4 variables), b) the composition of its ego network (3 variables), and c) the structure of that ego network (4 variables). To capture each actor's connection to the global structure of the network, we used four variables: the number of other organizations (of any type) to which they are connected through one or more steps (component size, in network terms) and three measures of closeness centrality, computed as the sum of reciprocal distances (Everett & Borgatti, 2010) to all actors in each of the three categories: corporations, foundations, and ENGOs. The composition of each actor's ego network was captured with the number of direct ties to each of

the three categories of actors (3 variables). The structure of their ego networks was captured using four of Gould and Fernandez's (1989) five types of brokerage which also incorporates actor attributes. These roles include coordinator (when the focal ENGO connects two other ENGOs that are not directly connected), liaison (connecting a corporation-foundation pair not directly connected to each other), itinerant broker (connecting two corporations or foundations that are not directly connect) and gatekeeper or representative (connecting an ENGO to either a corporation or foundation to which it is not directly connected). Since our data are undirected, the roles of representative and gatekeeper are redundant, so we did not include both. Similarly, the values for other roles would be doubled, but as described later, we normalize the data to address this issue.

We constructed a unique network profile for each of the 54 ENGOs in our study by calculating the 11 variables identified above in UCINET (Borgatti et al., 2002), resulting in an actor by variable matrix with 54 rows and 11 columns. Because the 11 variables do not have a consistent scale, the columns were standardized to Z-Scores to prevent unwanted weighting of any one measure based on scale. This created a network profile for all ENGOs with each of the 11 variables weighted evenly. Table 1 lists the network profile measures for all of the ENGOs in our study.

Insert Table 1 about here	

The profile matrix shown in Table 1 is a variable-based representation of each ENGO's pattern of relationships or social position within the network. Our next task was to compare these profiles, to assess the extent to which these ENGOs engage other actors in a similar or distinct fashion. To do this, we calculated similarities between the ENGOs' profiles, using the identity coefficient, which captures similarity between actors in both the magnitude and pattern of

variable values (Zegers & ten Berge, 1985). This generated a measure of the profile similarity for each pair of ENGOs which represents the extent to which they engage others through similar patterns of connections to other actors in the network. Similar to a correlation table, this is a square matrix with ENGOs on the rows and columns and a value for each pair of ENGOs that captures the degree of similarity in their network profiles. Next, we used Johnson's Hierarchical Clustering (Johnson, 1967) to group ENGOs that connect to other actors in similar ways together, and discriminate between those that do not. Hierarchical clustering iteratively applies an algorithm to this type of similarity data to achieve data reduction by combining similar items into clusters and generates a series of solutions ranging from each entity in residing in its own cluster to all entities grouped into one cluster. To determine which of those solutions is best, there are several measures of "cluster adequacy" including eta, Q, and Q-prime which vary in their particular algorithm, but all essentially compare the degree of similarity for items within clusters to the similarity for items across clusters. We selected the clustering solution with the highest measure of cluster adequacy using the eta measure recommended by Panning (1982), although Q and Q-Prime statistics also gave the same results. Across all analyses, the optimal solution identified four distinct clusters, which grouped the 54 ENGOs into four social positions that we call portals, coordinators, members, and satellites. Before describing these four social positions in more detail, we first describe the qualitative portion of our study that examines the identity and work of these challengers. We then combine the findings derived from these two approaches to explain how we ultimately arrive at five distinct challenger roles.

Qualitative Study

To better understand our quantitative results, and to link them to the identity and work of challengers, we turned to data from two additional sources: the websites of the ENGOs and semi-structured interviews with senior leaders within the ENGOs.

Qualitative Data Gathering. Because we are also interested in questions of identity and the various forms of work these organizations engaged in, we turned to qualitative data better suited for these constructs. In particular, we examined the 'about us' or 'who we are' and 'history' sections of the ENGOs websites to gain insights into their identity, and the 'what we do' or 'how we work' sections to look at the types of work they perform. We also undertook sixteen semi structured interviews with senior managers within a representative subset of fourteen ENGOs. These ENGOs were selected to represent a range of organizations across the four social positions uncovered in the quantitative analysis. Our interview sample included two portals, two coordinators, two members, and four satellites. We also spoke with four additional organizations that experienced a shift in classification over time. In these conversations, we asked questions about their identity, their strategy for selecting board members, their overall strategy and the role that they thought that the organization played within the environmental movement. We also asked about changes that they have seen in board membership in their organization and in the ENGO sector overall, their sense of the motivations for these changes and their opinions regarding future possible changes. Thus the interviews helped to triangulate our findings on social position, identity, and work and also helped provide context for shifts seen in those categories over time.

Data coding and inductive analysis. Our coding process was inductive and emergent. Our approach was to read the materials collected from the websites line by line engaging in a process of open coding related to our two themes of interest: identity and work. In our second round of

coding, we attempted to group the codes into meaningful categories (Miles & Huberman, 1994). This coding and categorization was undertaken by one of the authors with all of the websites. We also undertook a second round of coding in which a research assistant unfamiliar with the project used the resulting codebook to ensure the validity of the coding scheme. Through iteration and constant comparison, we arrived at 12 codes related to identity, 10 codes related to what we came to describe as *direct* institutional work and a further 5 codes that we ultimately grouped into a category we call *indirect* work. Table 2 presents representative samples of the data associated with the identity codes. Table 3 presents representative samples of the data associated with the work codes.

#### Insert Tables 2 and 3 about here

Finally, we grouped the ENGOs based on their dominant social position and looked across the organizations to identify common identity claims and similarities in work, for each of the four social positions. Looking across the ENGOs in particular social positions, we found common configurations of identity and work for the first three of the social positions (portals, coordinators and members). In contrast, in the fourth group, satellites, we found two different configurations of identity and work, requiring us to refine our typology by creating two new role types (purists and fringe players). The end result was five distinct challenger roles (portal, coordinator, member, purist and fringe player).

To ensure contextual validity, we provided our interviewees with a summary of our findings and asked for their feedback on the results. In particular, we asked whether our classification of their role appeared to reflect their perception of their social position, identity, and their work. These discussions supported our findings and added considerable richness to our understanding of the patterns that we observed in our study.

### **Findings**

We begin this section by discussing the results of our efforts to understand the variation in social position of the ENGOs and to define a set of unique social positions. Next, we present findings from our qualitative investigation in which we outline a set of challenger roles based on configurations of social position, identity and work.

#### *Identifying social position*

Our aim was to develop a more generalizable way to assess each actor's interactions with other actors in the movement and more broadly in the institutional community (Lawrence, 1999) in which the movement is situated. Analysis of our primary data (for year 2003) yielded an optimal solution (based on eta scores) of four distinct clusters, thus suggesting four distinct social positions. This result was replicated in our analysis of the data from 2000 and 2005 as well, suggesting stability of the four-cluster solution over time. Furthermore, the majority of ENGOs (30 of the 54) demonstrated consistency in the classification of their social position across the three time periods, and another 19 shifted membership only once, showing considerable stability of the relational patterns over time. However, while the classifications generally remain fairly stable over the three time periods, some organizations do drift between structural categories. The qualitative phase of this study helps us to put some of these changes into context and to understand why they may have occurred. We will return to the issue of the temporal stability of actors in these four social positions later in the paper. First, we describe the four categories of social position.

To better understand and name these four social positions, we submitted the network profiles to Factor Analysis. The eleven measures loaded onto three factors for our primary data from 2003, again replicated for 2000 and 2005, although in 2005 the eigenvalue for the third

factor was 0.976, which is lower than the typical cut-off point. When we examined which variables loaded onto which factors, we found three patterns consistent across all three years of data. The variables in the first factor relate to global connectivity, which means they connect with many other organizations across the network through direct and indirect connections. The second factor captures high local (1-step) connectivity to a variety of actors (what we call local heterogeneity). This means that they have direct connections with many types of organizations (in this case, corporations and foundations as well as NGOs). The third and last factor captures local homophilous connectivity, which means that the organizations local connections are primarily to others that are the same as they are (in this case, other ENGOs). Factors 2 and 3 are reverse coded. Calculating average factor scores for each of the four categories of actors yields the patterns outlined in Table 4 and depicted in Figure 1. We classified average factor scores as Average (within one standard deviation centered on the mean), High (above) or Low (below). With three factors, and three categories, there is the potential for 27 different patterns; however, as described above, the clustering adequacy measures consistently supported the four cluster solution as optimal. Thus many of the possible patterns (for instance, high on all measures) were not seen. Alternatively, if we widen the window for "Average" to one standard deviation in either direction, three of the categories rate as High or Low on one of the factors in a mutually exclusive fashion, and the forth category (Members) rates as average across all three factors. Although the more extreme classification (highlighted in italics in Table 4) is simpler, the added information about secondary factor influences is informative for our discussion, so we use those values. We report the average factor scores in Table 4 and variable factor loadings in Table 5 for anyone interested in examining the data using the alternative classification.

Insert Tables 4, 5, and 6 and Figure 1 about here

Table 6 lists the ENGOs according to their social position over the three different time periods and has been sorted according to the 2003 classifications. Based on their characteristics, we label the four distinct social positions *portals*, *coordinators*, *members*, and *satellites*.

\*Portals\*. These organizations have high global connectivity, high local heterogeneity and average local homophily. Portals are structurally delineated by their high connectivity as exhibited through strong local heterogeneity and brokerage. They connect with many other actors, especially non-ENGO actors. Based on the brokerage roles loading on Factor 2, their high level of local connectivity serves to connect otherwise disconnected actors of all types with each other, except, unlike coordinators, they do not generally connect two otherwise disconnected ENGOs. They are centrally dominant actors that are located at the center of a dense hub and spoke pattern (as depicted in Table 4). Conservation International (N9), Environmental Defense Fund (N15), and World Wildlife Fund (N38) are exemplars of this category.

Coordinators. These organizations have high global connectivity, average local heterogeneity and high local homophily. Coordinators are structurally identified by their high degree of local homophily and specialized brokerage. They are strongly connected to the whole network, but primarily through connections to other ENGOs. They serve as the most common brokers between otherwise disconnected ENGOs (what Gould & Fernandez (1989) have also described as a coordinator role), and play a moderate brokerage role between ENGOs and non-ENGOs (what Gould & Fernandez (1989) described as gatekeepers/representatives), but not between non-ENGO actors. So, while coordinators are central and connect otherwise disconnected areas of the network, they almost exclusively create these connections through ties to other ENGOs in the network. Defenders of Wildlife (N10), the League of Conservation Voters (N21), and the Student Conservation Association (N30) are exemplars of this category.

Members. Organizations in this category have high global connectivity, average local heterogeneity connectivity and low local homophily. They score highest on the factor for global connectivity, but have relatively little else to distinguish them structurally: they do not have the local connectivity of portals, the homophily of coordinators, or the isolation of satellites.

Members are structurally interesting primarily for being part of the main component, basically being engaged in the movement, but without any other major structural distinctions. Examples of members include the Coalition for Environmentally Responsible Economies – CERES (N7), Bat Conservation International (N4), and the Center for Clean Air Policy (N5).

Satellites. Organizations with this pattern of engagement have low global connectivity, average local heterogeneity and average local homophily. Satellites are most structurally distinctive because they are not connected to the main component. They load strongly and negatively onto the global connectivity factor, indicating they are disconnected from the vast majority of the other actors in the field. Some are isolates, with no connections. Other satellites have limited connections but not into the main component. We found that four types of ENGOs were more likely to be satellites: sport conservation groups (those with a focus on hunting and fishing); advocacy groups (with an agenda of policy engagement); grassroots organizations that attempt to mobilize local community-based action; and professional associations. For instance, Friends of the Earth (N16), Pheasants Forever(N25), and the River Network (N28) are all satellites.

Position, identity and the work of SMOs

While the social positions outlined above consistently and distinctly differentiate between the various actors' relational patterns, they do not provide much insight into their identities or what kind of work they undertake as social movement organizations. To investigate those

questions, we draw in insights from our qualitative investigations. As noted in our methods, we initially coded each ENGO's website looking for themes relating to identity and work. As we coded, we began sorting the data into provisional codes and through iteration refined them. Illustrative data associated with these codes are provided in Table 2 (for identity) and Table 3 (for work). We identified several kinds of work and were able to classify many of them as forms of institutional work (purposeful efforts to create or disrupt the institutionalized arrangements or practices regarding the consumption of resources and the creation of waste). However, we also began to identify other kinds of work that were not purposeful efforts to create, maintain, or disrupt institutions. For instance, we began to uncover work that one ENGO would undertake in order to support or amplify the efforts of other organizations. We began to group these codes together and call this category of work *indirect work*.

Next, we wanted to look across these codes to see whether there were configurations of codes related to identity and work and whether these configurations were related to an ENGO's social position. Table 7 is a detailed coding table summarizing the codes applied to each ENGO in our sample. Note that the rows in Table 7 have been sorted based on similarities in social position identity and work to highlight common configurations. As we note in our methods, looking across the ENGOs in particular social positions, we found common configurations of identity and work for the first three the social positions (portals, coordinators and members). In contrast, among the satellites, we found two different configurations of identity and work, requiring us to refine our typology by creating two new role types (purists and fringe players). A summary of our findings is presented in Table 8. These actors appear to be describable in terms of five different roles derived from configurations of social position, identity and work. We present our findings related to each of these roles below.

#### Insert Tables 7 and 8 about here

*Portals*. The portals in our study were at the center of a hub and spoke pattern made up of other ENGOs, corporations and foundations. These SMOs connect with many other different kinds of actors. We found that portals describe themselves as the professionals of the environmental movement. Common identity codes among the portals include: professionals; pursuing large scale change; build partnerships with companies; and work with other NGOs and governments. For instance, N15 notes that they are "dedicated scientists, economists, attorneys and other professionals." They also make reference to being actors that are willing to engage with a broad range of other actors, including institutional incumbents (in our case, corporations) in order to effect large-scale change. They often noted the necessity for "cross-sector solutions", the need for "partnerships" and often spoke both of "transformational change" and the need for "market-based solutions". In terms of institutional work, portals undertake both creation work and disruptive work. Common codes among the portals included: convening; share best practices; coaching businesses; lobbying; educating and campaigning. These organizations were convening and facilitating multi-sector partnerships by attempting to build links among disparate organizational actors (Wood & Gray, 1991). They were also engaging and attempting to influence the behavior of corporations by facilitating benchmarking and the sharing of best practices and offering new practices and "new ways of doing things." In terms of their disruptive efforts, these organizations were more likely to engage in litigation and lobbying. These organizations were also more likely to work with institutional incumbents to create new practices. These organizations were also undertaking indirect work – they were helping to develop the next generation of movement leaders and professionals and undertaking research that could be used by others in the movement.

Our discussions with managers supported the idea that organizations classified as portals were actively attempting to convene a range of players to solve environmental issues. For instance, Environmental Defense Fund (EDF) has transitioned from their 1960s motto of "Sue the bastards!" into one that emphasizes partnering with businesses, governments and communities to find practical environmental solutions. While they still go to court when necessary, increasingly, they try to bring about change based on sound science by demonstrating the economic benefits to improving environmental practices across an entire economic sector. One senior manager described their approach as "grasstops rather than grassroots" and emphasized that "sometimes it's about the messengers as much as the message." To deliver on this mandate, they rely on their social position and seek out board members with influence – those who can make key introductions and whose calls will be returned quickly. Yet, while the goal for EDF is to bring lots of voices to the table, they do not see themselves as purely facilitators, they do have an agenda and the goal is to get as many different constituencies on board with their goal and their message. This often means forging alliances with a broad range of actors by partnering with government, businesses, landowners, farmers, fishermen and others who have a stake in solving a particular environmental problem.

Portals bring together a range of disparate actors to try to develop new cross-sectoral solutions to domain problems. As such, they are sites through which the institutional influence (such as the flow of resources in the form of both money and information) of a variety of different kinds of organizations (in this case, ENGOs, corporations and foundations) can be leveraged to spark broader dialogues. Overall, the importance of portals for social movements is that they may be best placed to drive debates and discussions surrounding a particular issue or problem domain within the broader institutional community (Lawrence, 1999). We also predict

that portals may play a central role in the evolution and transmission of new rules and practices within their immediate networks (Provan, Fish, & Sydow, 2007).

Coordinators. Structurally, coordinators are connected to the whole network, but primarily through other social movement organizations (in this case, ENGOs). Similar to the portals, a common identity code amongst these organizations was that of being professionals - "the lawyers, the scientists and the professionals" of the environmental movement. Among coordinators, there is more of an emphasis on disruptive work than on working with institutional incumbents to create new ways of doing things. But more striking about this group is the extent to which they engage in indirect work, including work to secure resources for others, to amplify the efforts of others, and to align work among movement actors. When we spoke with organizations classified as coordinators, we found they had a different approach than the portals. They commonly emphasized that many of their efforts were being undertaken on 'behalf' of the environmental movement. Coordinators were often trying to act as a bridge or a broker for information or influence between other ENGOs, a role which Gould and Fernandez (1989) also describe as 'coordinators'. Coordinators are far less likely than portals to engage with institutional incumbents directly.

For example, according to one of its senior executives, the League of Conservation Voters (LCV) was set up to "help other ENGOs become smarter and more sophisticated by helping them pool their expertise and coordinate their political influence". Another senior manager at LCV talked about how they seek to "make connections between ENGOs in a purposeful way to try to reach collective agreement on a few key issues. This means that as a group, when we approach legislators, we are on message and consistent." This manager also pointed to the value of working with leaders from other high profile ENGOs to "lend the

credibility that this isn't just one group's opinion". The idea is to operate as "the political voice of the environmental movement". According to the senior executive, this is facilitated by LCV's legal structure: "we have 501(c)(3) status², but also 501(c)(4) status and political action committees ...this makes us more nimble. We can produce score cards and engage in more editorializing about the decisions that are being made by governments and about who among them are making them. In contrast, 90% of the other ENGOs are (c)(3)'s and can't be so political."

Several of the coordinators in our sample also undertake legal actions on behalf of the movement. Our informants also spoke about the work that they undertook to "pull together the data and policy analysis that would serve the movement well" or how "the environment needs a good lawyer." Their social position as coordinators affords them this ability to coordinate with other ENGOs to ensure a consistent and focused message in such lobbying activities, unencumbered by the parochial views of other kinds of stakeholders. But coordinators also undermine assumptions and beliefs by bringing forward new research to support new technical definitions or question the assumptions underlying the existing ones.

Coordinators bridge between actors of a similar type in order to act on their behalf or to distribute information or resources between them. They often link multiple clusters within a network by providing the link between portals, as depicted in Figure 1. Working together, these two roles – portals and coordinators – provide the backbone of a small world network (Watts,

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<sup>&</sup>lt;sup>2</sup> In the United States, the Internal Revenue Service classifies nonprofit organizations as 501(c) organizations. These are further subdivided into 29 types. 501(c)(3) includes Religious, Educational, Charitable, Scientific, Literary, Testing for Public Safety, to Foster National or International Amateur Sports Competition, or Prevention of Cruelty to Children or Animals Organizations. Some contributions to 501(c)(3) organization are eligible for income tax deductions, however, these organizations are not permitted to lobby. In contrast, 501(c)(4) organizations, such as Civic Leagues, Social Welfare Organizations, and Local Associations of Employees are permitted to undertake lobbying, but the donors are not eligible for tax deductions.

1999) undertaking the "movement work" which may undergird social movements more generally (van Wijk et al., 2013).

Coordinators provide integrating mechanisms (Lawrence & Lorsch, 1967) that allow the network of ENGOs to collaborate in the pursuit of common goals. These organizations are the "weak ties" (Granovetter, 1985) that provide access to novel information across the network by bridging otherwise disconnected organizations. They span a structural hole (Burt, 1992) both channeling information and acting as gatekeepers (Obstfeld, 2005). Based on their social position, cooordinators can generate information and control benefits. As central actors in the movement, coordinators have access to a variety of information flowing across disparate parts of the movement and can combine these different ideas and knowledge. As such, these organizations will be "early knowers" who can provide early dissemination of certain information through the system (Schwartz & Jacobson, 1977) and may be the source of scarce and valuable information, which results from the diversity of their contacts (Reynolds & Johnson, 1982). This was reflected in the fact that many of these organizations post regular 'alerts' on their websites. Reynolds and Johnson (1982) call these types of actors liaisons and suggest that it may be necessary that coordinators are perceived as 'neutral' to fulfill this role. Due to their centrality and far-reaching linkages across the network, coordinators are ideally suited for the role because they reduce the probability of message distortion and increase the timeliness of communications (Reynolds & Johnson, 1982). Consequently, we view the primary role for coordinators as supporting the work of the movement through the provision of key resources and by amplifying the efforts of others. But we see a secondary coordination role in which they both broadcast and integrate ideas.

Members. These are the organizations that form part of the main component, but have no other major structural distinctions. In terms of identity, the common thread across these actors relates to their tendency to be focused on their specific 'issue'—be it bats, rivers or air pollution rather than targeting large-scale change (although some members do). Our discussions with ENGOs in this role revealed that they appear to view themselves as being engaged in a larger movement, but that their interlocks were less based on a deliberate attempt to fulfill a particular role within the movement and more related to their ability to attract individuals with dedication and enthusiasm for their particular cause. In terms of the work that they undertake, these organizations were primarily engaged in direct disruptive work that includes developing and delivering local campaigns by educating and lobbying. They also engage in indirect work to secure resources to support their particular issue. These organizations were more focused on their own activities and their board relationships were often described in terms of what these connections could bring in terms of expertise and resources to their particular issue rather than a more strategic engagement with the movement as a whole.

Drawing on DiMaggio's (1983) analogy of an organizational field as a battlefield, members are the foot soldiers of social movements. These organizations participate in the work of the movement as they go about their daily tasks of trying to protect ecosystems or endangered species, bringing about corporate or regulatory change, or conserving natural resources. When required, they may rise up to lend resources or voice to the movement as a whole; they may make use of the resources offered by the coordinators; and they may get drawn into efforts to deal with specific domain problems convened by the portals, but the key is that they do so from the standpoint of how it benefits their particular issue.

Breaking apart the satellites. The last social position that we identified from our network analysis is that of satellites – those organizations that are disconnected from the main component. Some satellites are complete isolates with no connections and others have limited connections but not into the main component. As we examined these organizations further, we found that satellites appear to be divided into two distinct configurations of social position, identity and work –those that were disconnected by choice versus those that were disconnected by circumstance. The first group of satellites (found at the bottom of Table 7) appeared to be making a conscious choice not to connect to other ENGOs, to only connect with those that shared their particular cause and/or not to include corporate or foundation employees on their boards. We refer to this first type as purists and discuss these first, below.

Purists. For the group we call purists, inclusion in the main component would amount to a conflict of interest. The common identity threads among purists were being grassroots, independent and challenging the power and actions of institutional incumbents (in this case, corporations). Several stated categorically that their organizations avoid or even refuse to accept corporate donations. A manager from Greenpeace described how his organization accepted the presence of a corporate board member only after exhaustive and anguished debate in meetings and only because this particular board member was seen to be advancing the environmental agenda through a new kind of capitalism. Many within the organization felt that the inclusion of corporate board members would be some form of sell-out or leave the organization open to the cooptation of its mission. Overall, the respondents in this first group spoke about 'being the sober voice of reason' or 'preserving their independence'.

For purists (those that elect to remain disconnected from the main component of the movement), their restricted level of ties preserves their autonomy; they are less influenced by the

concerns or interests of others within the field such that they retain more control over their role, agenda and interests. This allows them to maintain 'purity' of purpose (Conner & Epstein, 2007) where they may become the 'true' supporters of the cause of the movement. But this purity comes at a cost in terms of influence as it restricts their access to resources and to the ongoing, evolving dialogue of the more central organizations in the field. Their independence may enable more latitude on ideological grounds, but simultaneously constrain their ability to create change by accessing channels of direct influence and dialogue. We expect that purists would predominantly play a problem identification role within the field. However, with less direct access to others in the movement, these organizations may need to make use of other more indirect tactics (den Hond & de Bakker, 2007) and are thus more likely to engage in tactics that Yaziji & Doh (2013) describe as 'contra-institutional' such as direct action and civil disobedience or perhaps making use of 'radical flank effects' (Haines, 1984).

Yet, these organizations may be best equipped to undertake the disruptive institutional work that Lawrence and Suddaby (2006) describe as *dissociating moral foundations*. This work is focused on questioning or undermining the moral foundations that are considered appropriate in a particular cultural context. While Lawrence and Suddaby (2006) focus on how elites make use of indirect practices that undermine rather than directly attack moral foundations, we argue here that there is also a more direct form of moral work undertaken by the most ardent of institutional challengers. The purists in our study engage in moral work that has as its audience the broader citizenry. This 'grassroots' work aims at disrupting taken for granted assumptions about the value of natural resources and how natural capital should be factored into the economic system. This moral integrity is reflected in, and reinforced by, their insular network position

which consciously and deliberately avoids potential cooptation or contamination from the undesirable influences of other stakeholder perspectives.

Fringe players. In contrast to the purists, a second group of satellites described their disconnection not as a choice, but rather, as a circumstance. These organizations talked about wanting or even needing to connect, but either not having the resources or the structures to do so. These organizations would happily be members of the main component and act as members, cooordinators or even portals, but currently lack the resources or influence to connect. Taking our analogue from the notion of fringe stakeholders (Hart & Sharma, 2004), we describe the role of these organizations as 'fringe players'.

In fact, some of the fringe players that we spoke with do act in more of a coordinator capacity within their own specialized domain, but they engage with much smaller ENGOs that were not in our original sample. For instance, the River Network (N28) acts much like a coordinator for the smaller more grassroots ENGOs with a focus on water and rivers. Some fringe players are actively trying to shift from fringe player to coordinator. For instance, several of the 'sport' and 'hunting and gaming' focused organizations are attempting to make this shift. While these organizations often are well funded, they are not well connected. In our discussions with a former executive at Ducks Unlimited (N12, 2005 budget of \$128 million) regarding their position as a satellite, we were told that sporting groups like DU formed historically at the grass roots level, with boards traditionally composed of volunteers that moved up the ladder and in many cases, the focus of these groups has remained local. It is for this reason that several of the sport conservation groups with whom we spoke were contemplating developing new governance structures that would open up board membership to more 'influential' board members.

The literature on social networks identifies the importance of fringe players along two lines – they are likely connected to other networks that are not currently mapped and they may be boundary spanners, an important resource for fresh information (Reynolds & Johnson, 1982). Prior institutional research has shown that new practices are most likely to be introduced by parties at the fringes or the periphery of an institutional field (Leblebici et al., 1991; Rao, Morrill, & Zald, 2000) or by members who connect to other networks and other fields (Greenwood & Suddaby, 2006; Kostova, Roth, & Dacin, 2008). Therefore, despite residing outside of the main component, fringe players may occupy a critical position within the network, potentially spanning communities of organizations within and outside the movement. Their ties may reach across into other domains such that they have access to information not readily available to the organizations that are more central to the network. The challenge for these members is that of dissemination. Given their relatively low centrality, their ability to share this knowledge becomes limited. These types of organizations must be more diverse in their strategies and tactics to effect change within the field using the information they have gathered from beyond it. Role dynamics: identity and relational work in shaping the institutional work of SMOs

What we see from Table 6 is that while 30 of the 54 actors remain stable in their classification over time, the social positions of some ENGOs can and do shift over time. Consequently, we also interviewed several organizations whose structures had shifted markedly over the time period in order to better understand what drives these shifts. For example, The Nature Conservancy (TNC; N24) shifted from being classified as a portal in 2000 to being classified as a member in 2003 and 2005. Yet, returning to Table 7, we see that the identity and work codes for N24 are most similar to those of the portals. In discussing this change in social position with managers at TNC, one of the primary explanations was the need to respond to

Conservancy (TNC) was the subject of a *Washington Post* exposé charging that it had developed too close a relationship with corporate America. TNC was accused of stacking its board with directors from major oil, chemical, auto, mining and forestry companies, and that this was leading to questionable deals with private members. The piece called the resulting configuration a "transformation from a grassroots group to a corporate juggernaut" (Ottaway & Stephens, 2003: A1). Under particular attack were large contributions from corporations, culminating in accusations that corporate polluters were using TNC to 'greenwash' their activities. In response, TNC developed a detailed conflict of interest policy and reduced links to corporations on its board. As a result, the overall board size dropped from 38 to 21.

But, the decision to reduce corporate ties did not come without a cost. Our contact at TNC noted that the reduced board (and hence their shifted social position) had less influence and in particular, less convening power than before —and that they sought to bridge the gap through two strategies, both of which involve attempting to regain their social position. First, TNC sought out high status corporate board members that were vocal in their commitment to environmental causes in order to increase the board's convening power. Second, TNC was looking to add some globally high status policy actors to increase its influence within world governments. While TNC's structure shifted from that of a portal to a member in the time period, it still viewed itself throughout the period as a portal. Yet, our respondent stressed the need for an influential and connected board to pursue this role effectively and noted that their new social position had, in fact, reduced their convening power, which aligns with the reclassification that we saw in this study.

Trout Unlimited (TU) also shifted in its social position during the period of study. While most of the sport conservation groups in our sample were either satellites or members, Trout Unlimited (N33, 2005 budget of \$10 million) was a member in 2000, a satellite in 2003 and a coordinator in 2005 representing the only organization that was classified into three different structural categories and one of only four that shifted twice. Our discussions with TU executives revealed that in the early 1990s TU faced fiscal challenges and recognized that they needed a more sophisticated way to raise money. While their old model of board oversight was to select trustees from the ranks, they switched their model. By 2005, TU had a board made up of 'grassroots trustees' that were elected from the ranks of the volunteers and 'at-large trustees' that were officially nominated by the board. Members of this latter group were sought out for their philanthropic history and were often located through the social ties of existing board members. TU also began to search for board members that had some past experience with government to increase their influence in lobbying activities. To support this attempt to shift their social position, TU also needed to attempt to shift its identity, which involved communicating to their key stakeholders that their goals "required the organization to work at increasingly larger scales, and to collaborate with other conservation interests, local communities and state and federal partners to begin to rebuild the natural resiliency of watersheds."

Last, we note that Greenpeace's shift in social position from a satellite to a member was also accompanied by a change in identity. While Greenpeace's website still emphasizes investigating, exposing and confronting environmental abuse by governments and corporations, the organization has also treaded tentatively into selective partnerships with corporations. They now partner with key corporations and are beginning to undertake more coaching and sharing of best practices. Yet, these new forms of institutional work do not always sit comfortably with

many ardent Greenpeace activists, as evidenced by an online petition by some of the most outspoken members to "live up to the spirit of 39 years of dedicated action and renounce collaboration and partnership with destructive corporations" (Burrows, 2010).

## **Discussion**

Our goal was to understand the varied and distributed work of social movement organizations. Building on the notion that an organization's capacity for action is both enabled and constrained by the position it occupies within its social structure, we developed a method to categorize field actors based on their social position. Next, we tied in qualitative data on identity and work to arrive at a set of configurations of social position, identity and work. We also identified a different class of work, that we have called indirect work. The result is a set of five challenger roles (portal, coordinator, member, fringe player, and purist) that describe the varied ways in which organizations attempt to challenge institutions. Here, we return to our research questions of how to describe the variation in the work of social movement organizations and how to make sense of the dynamics that underpin these patterns. We tie our findings back to the literature and theorize on the underpinnings of the heterogeneity among institutional challengers and more broadly about work.

Describing an ecosystem of actors

We have demonstrated in our findings that not all actors within a social movement undertake the same forms of work. Instead, we demonstrate that different SMOs undertake different forms of work that coincide with differences in their identities and their social positions. This suggests movements comprise an ecosystem of actors that undertake different forms of work. One of our informants (from a portal) spoke bluntly about this when he said: "...we invite [companies] to the table, but if they aren't motivated, then sometimes it's up to the

other ENGOs to soften them up a bit ...when they're a little bruised, they'll come back to us to help them make the pain go away." This suggests that different forms of institutional work may demand different categories of actors (Lawrence and Suddaby, 2006). The typology of roles we present here (portal, coordinator, member, fringe player, purist) begins to distinguish more concretely among the variety of work undertaken in movements and the variety in the actors that engage in that work. Whereas prior work has largely tended to dichotomize movement actors into 'mainstream' and 'more radical' actors (Elsbach & Sutton; 1992; Yazjii and Doh, 2013), our work reveals a distinct set of roles as well as means to identify them in other fields.

Consequently, developing a typology of movement roles contributes a much needed nomenclature to help study and describe the work undertaken within social movements and may also prove helpful in understanding the temporal sequencing of actions by different kinds of actors.

Changing our view about work: Indirect and direct work

We also found that some of the work undertaken by SMOs was not institutional work in the sense that it has been previously described in the literature, but instead was work to coordinate, support or amplify the work of other movement actors. Unlike other more direct forms of institutional work identified by Lawrence and Suddaby (2006), we identified work that was not *directly* targeted at creating, maintaining, or disrupting institutions. Instead, the various tactics are focused on creating the capacity to do future institutional work more effectively. For example, the "aligning" tactic of getting everyone on the same message is focused internally to the movement itself, and therefore not targeting the institutional environment. But, once completed, the constituent members subsequently speak with a more unified voice and consequently, are more effective in their message. Thus, while these tactics do eventually

contribute to institutional work, they do so indirectly. Further, what is unique about this indirect form of work is that its goal is to enable or amplify the direct form of institutional work. By coordinating the message across many ENGOs, securing resources or providing training, the ENGOs that engage in this indirect form of work improve the efficiency and effectiveness of their future actions and/or of the future actions of other movement actors.

In our findings we call this *indirect* institutional work, which we define as purposeful efforts to coordinate, support or amplify the work of other actors. The coordinators play a vital role in this respect, as described by one informant: "sometimes our role is to help identify areas of agreement among the various ENGOs so that as a movement, we can be on message with legislators." This very specific example helps illustrate this larger category of institutional work. Thus, we propose that indirect institutional work forms of a new branch of institutional work, which parallels the direct forms of institutional work delineated by Lawrence and Suddaby (2006), as depicted in Figure 2.

## Insert Figure 2 about here

While not examined here, we theorize that other forms of this indirect/direct dichotomy may be present in other forms of work. For instance, there may be both indirect and direct identity work. The idea that indirect work likely moderates the effectiveness of future direct work mirrors findings in social networks where social capital is thought to moderate the rate of return on human capital through either resource (Lin, 2002) or structural (Burt, 1992) advantages.

Making sense of the dynamics that underpin these patterns

We now turn our attention to our second research question – what are the dynamics that underpin these differences? While we found that different configurations of work coincided

with differences in social position and differences in identity, our analysis also revealed that shifts to the 'type' of work undertaken by a given SMO are accompanied by shifts in identity work and/or social position. As depicted in Figure 3, we propose that social position and identity both enable and constrain the 'types' of work undertaken by SMOs.

# Insert Figure 3 about here

We propose that SMOs' current identity and social position both enable and constrain them in terms of their ability to undertake particular forms of institutional work. This both drives individual organizations into different roles, but also constrains them in terms of the role they can fulfill. It explains why organizations end up in different roles undertaking particular kinds of work and also why it might be difficult for an organization to shift strategies and undertake different forms of work. While the senior leadership at Greenpeace may wish to move from a purist role into a member or even a portal role, their identity and social position may continue to constrain that shift unless or until they make deliberate investments to alter their identities and/or social positions. This view also helps us see why it would be difficult for one organization to try to undertake several different roles or many forms of institutional work simultaneously. Last, it helps to explain why an organization like TNC became hampered in their work by the need to relinquish its social position and why it was working so hard to regain it.

Furthermore, if an organization's identity and position both enable and constrain the work that it is able to undertake on behalf of the movement, this also suggests that successful challenger movements may *require* a range or 'ecosystem' of organizations to undertake and to some extent even balance this work. This requires the presence of different configurations of social position, identity and work as embodied in different organizations. Organizations are not necessarily able to readily adjust to fill gaps in the movement if they do not possess the requisite

identity or occupy the associated position. For instance, the World Resources Institute was created in 1982 to explicitly fill what was perceived to be a gap in the U.S. environmental movement. The founders sought to create an institution that was both independent and broadly credible to carry out policy and research analysis around environmental issues that was viewed as necessary to bring more credibility to the movement, adopting an identity and occupying a position not otherwise present in the field. Both Haines' (1984) work on radical flank effects and Yaziji and Doh's (2013) recent work on ideological radicalism support the notion that the identity of organizations may both enable and constrain the social position that they occupy and the forms of work that they can undertake.

Last, if movements are more like ecosystems with different organizations fulfilling different roles and if particular actors are constrained in their ability to take on particular roles based on their social position, their identity and/or the institutional work that they undertake, one might expect that the performance of the movement overall could suffer, especially in the case of unbalanced movements. This may, for instance, provide insights into the dynamics of longstanding unsuccessful movements. We believe this represents a fruitful direction for further research.

#### Limitations

We have theorized about how and why social movement organizations might undertake different forms of institutional work. We have focused only on Environmental NGOs in the United States, and of these, we focus on the largest ENGOs (those with budgets over \$1million). This may introduce societal and economic biases based on the socio-economic culture of the United States and our decision to examine only the largest ENGOs may bias our view of the work undertaken by ENGOs as a whole. Further investigations will be required to determine

whether our findings hold for a broader set of ENGOs, perhaps employing a different operationalization to capture social structure given that shared board directorships may not be an appropriate proxy for smaller ENGOs. Also, while we collected board memberships for all three time periods (2000, 2003, and 2005) for the ENGOs, we used 2003 for all time periods for the corporations and foundations. Given this, it is possible that some of our classifications for 2000 and 2005 may be slightly different than those identified here. Further, organizations with larger budgets may be more likely to engage corporations and foundations, biasing our results. Thus, although we classified over 40% of the ENGOs in our study as satellites (those that did not generally engage the critical mass of corporations or foundations), the relative percentage of satellites across the larger movement may be higher. Further, while a similar pattern and breakdown of roles may exist at the local or regional levels, or across other movements, the selection criteria for this study limits the potential to generalize our findings across such varied contexts until subsequent research is conducted accounting for such contextual factors. However, since our goal was to understand heterogeneity, this also makes the consistency of our findings particularly robust. Additionally, we studied only the presence or absence of ties based on board interlocks and did not delve into the nature or attributes of the ties themselves. Not all board members enact the same role in terms of direction of influence and they may vary in the extent to which their role as a director for an ENGO is a personal versus professional enactment. A future direction of research is to explore the attributes of particular actors, the nature and directionality of their influence, and their personal motivations.

## **Conclusions and future directions**

In this paper we present a view of the work of social movements in which agency is more distributed and varied than previously described. It is one in which an ecosystem of actors

engage in both direct and indirect work to challenge institutions. Our current study contributes to the study of social movements by 1) outlining a method to identify a set of social positions; 2) identifying a set of configurations of social position, identity and work that highlight a distinct set of challenger roles; 3) explaining how position, identity and work can both enable and constrain individual organizations within the movement in terms of their ability to fulfill these different roles; 4) identifying an important potential moderator to the effectiveness of the institutional work of movements: indirect institutional work; 5) theorizing that indirect and direct forms of work may be present in other studies of work, and 6) positing movements as an ecosystem of actors with varied and even specialized roles, whose effectiveness may depend on maintaining a balance of work within the system.

First, we make an important methodological contribution. In borrowing a concept from psychology, we advance the concept of a network profile comprising a set of actor-level measures which captures social position. Further, we outline an analytic method for identifying a set of common social positions from that profile and grouping actors accordingly. This process leverages well established quantitative methods to extend traditional equivalence-based methods in two ways. This allows us to use *a priori* categorizations of the actors in the network in determining role and position. Traditional equivalences are determined purely based on structure, but ties between different types of actors often represent different types of social phenomena, so including actor attributes in the role determination takes advantage of that additional information, providing a more nuanced result. It also allows for a context-sensitive qualification of quantities of ties based on the data. Traditional equivalences in social position are based on matching two actors ties either with exact counts or matching presence or absence only. This method allows for tie counts to be categorized qualitatively (e.g., none, few, many)

rather than by exact degree when determining positional similarity, making it more practical for use with the realities of empirical social network data.

Second, we outline configurations of social position, identity and work that result in a distinct set of challenger roles. The structures and roles that we have defined here can be used to extend our understanding of the dynamics of social movements and our understanding of institutional work. Further research should not only explore the extent to which the challenger roles we have identified (or the social positions, identities, and work they comprise) generalize across contexts, but also how they influence institutional change, both individually and collectively. In particular, it would be fruitful to explore role interactions. While we identified interdependencies between social position, identity, and work for individual organizations, perhaps there are interdependencies between portals, coordinators, and members within the movements themselves, similar to the interaction between instigators and brokers seen in the sustainable tourism industry (van Wijk, et al., 2013).

Alternatively, each role may serve its own, unique role in the movement. For example, Haines (1984) has studied "radical flank effects" where radical groups can affect the ability of more moderate groups to engage in change processes either negatively and positively (Gupta, 2002). Considered in light of our findings, purists may act as a catalyzing agent for the change process itself, and therefore one might theorize that a movement without these disconnected purists may change more slowly than one that has them. On-going research on the work of movements must address a more nuanced and holistic view of the many actors that participate in these change processes and the interconnected roles that they play.

Also, while the three more embedded social positions (portals, coordinators and members) mapped directly onto specific roles, the least embedded social position, satellites,

actually mapped onto two different configurations of work and identity (purists and fringe players). This suggests that embeddedness may moderate the extent to which social position actually constrains and enables identity and action, which future research could examine more systematically.

Third, we also find that these roles are situationally dynamic, and that social position, identify and work can and do shift over time. The institutional challengers in our study behave like an ecosystem, engaging with different actors and undertaking different forms of institutional work in coordinated and uncoordinated ways. By raising the idea of an ecosystem of actors, this study also calls into question the traditional boundaries used to describe movements. The 'environmental movement,' for example, is a popular term that is defined primarily around ENGOs as central actors. However, this paper depicts the 'environmental movement' as at once differentiated among its traditional NGO membership, and more inclusive of such groups as corporations and foundations. The 'environmental movement' becomes a collection of actors that go beyond ENGOs to include organizations that are engaged in common forms of dialogue and debate. And through on-going engagement within the field, identities and alliances evolve to represent new collectives and new identities. Attribute based categories such as 501(c)(3), nonprofit status or SIC code are not fully illustrative of the true identities within the field. In the end, certain ENGOs, corporations, and foundations may have more in common with those with whom they interact than with those that share their organization type. The terms 'environmentalist' or 'corporation' may serve as misnomers, lumping many organizations or clusters of organizations with varied interests into one category.

Our analysis builds on recent growing research on the interconnections between for-profit and non-profit organizations in bringing about social change (e.g. den Hond & de Bakker, 2007;

Nicholls, 2006; Weisbrod, 2000; Dees, Economy & Emerson, 2002; Yaziji & Doh, 2013) and the resultant blurring of boundaries between organizational roles and types within field level debates. This engages current debates and tensions over the direction and strategy of the environmental movement (Schwartz & Shuva, 1992; Schellenberger & Nordhaus, 2005; Conner & Epstein, 2007; Speth, 2008). We propose multiple roles that ENGOs can play in bringing about institutional change such that the key for the environmental movement will be to sort out how to maximize their efforts amongst these various challenger roles.

Finally, we contribute to further research on institutional work and work more broadly, by proposing that institutional work may be viewed in terms of both indirect and direct work.

Indirect work may be undertaken to prepare, enable, resource, coordinate or amplify the actions of other actors within a challenger movement. Furthermore, direct and indirect institutional work may find parallels in other forms of work.

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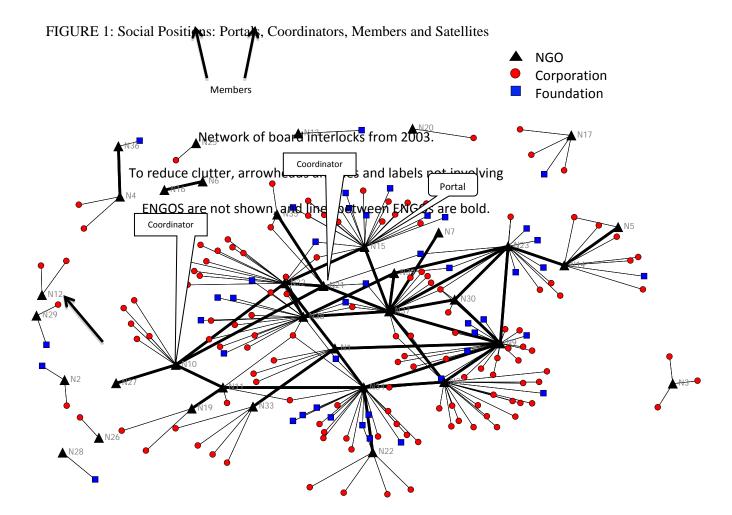


Figure 2: Indirect and direct institutional work

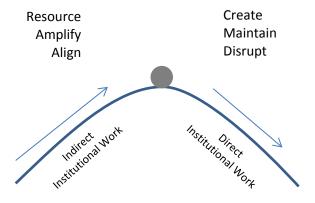


FIGURE 3: The relationship between identity, social position and the institutional work of SMOs

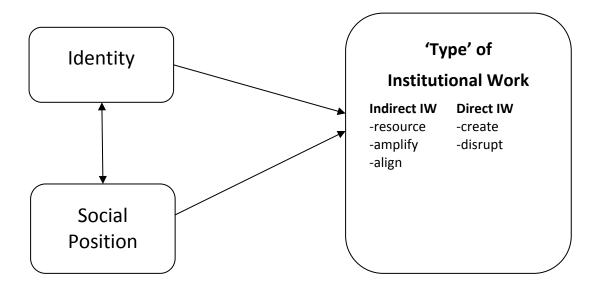


TABLE 1: ENGO Network Profiles (Z-Scores)

	Dist (Corp)	Dist (Found)	Dist (ENGO)	Comp size	Freq (Corp)	Freq (Found)	Freq (ENGO)	Coordin- ator	Gate- keeper	Itinerant broker	Liaison
N1	1.071	0.930	0.573	1.058	0.501	0.119	-0.569	-0.351	-0.354	-0.112	-0.115
N2	-0.796	-0.759	-0.874	-0.896	-0.210	0.119	-0.569	-0.351	-0.354	-0.269	-0.232
N4	0.189	0.094	-0.071	1.058	-0.210	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N5	0.874	0.807	0.599	1.058	-0.210	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N6	-0.902	-0.900	-0.601	-0.942	-0.448	-0.510	0.269	-0.351	-0.354	-0.269	-0.271
N7	0.699	0.897	0.930	1.058	-0.448	0.119	0.269	-0.351	-0.263	-0.269	-0.271
N9	1.279	1.138	0.360	1.058	2.637	2.633	-0.569	-0.351	-0.354	2.197	2.106
N10	1.139	1.131	1.734	1.058	-0.448	-0.510	2.781	2.884	-0.354	-0.269	-0.271
N11	1.114	1.038	0.741	1.058	0.264	-0.510	-0.569	-0.351	-0.354	-0.206	-0.271
N12	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N13	1.004	0.890	0.876	1.058	-0.448	-0.510	0.269	-0.351	-0.354	-0.269	-0.271
N14	0.736	0.685	0.705	1.058	0.027	0.119	-0.569	-0.351	-0.354	-0.269	-0.193
N15	1.707	1.576	1.455	1.058	2.400	2.633	1.106	0.458	2.747	1.791	2.067
N16	-0.902	-0.900	-0.601	-0.942	-0.448	-0.510	0.269	-0.351	-0.354	-0.269	-0.271
N17	0.159	0.253	-0.007	1.058	-0.448	0.119	-0.569	-0.351	-0.354	-0.269	-0.271
N18	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N19	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N20	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N21	1.381	1.424	1.900	1.058	-0.448	0.747	2.781	2.884	0.284	-0.237	-0.271
N22	1.157	1.039	0.778	1.058	0.501	0.747	0.269	-0.351	0.193	-0.175	0.040
N23	1.114	1.477	1.681	1.058	0.501	2.633	2.781	4.502	2.747	0.168	0.508
N24	0.817	0.619	0.489	1.058	1.451	0.119	-0.569	-0.351	-0.354	0.387	0.001
N25	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N26	-0.864	-0.900	-0.874	-0.942	-0.210	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N27	0.807	0.843	1.167	1.058	-0.210	0.747	1.106	-0.351	0.193	-0.237	-0.232
N28	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N29	0.319	0.386	0.054	1.058	-0.210	0.119	-0.569	-0.351	-0.354	-0.269	-0.232
N3	0.752	0.732	1.122	1.058	-0.448	-0.510	1.106	-0.351	-0.354	-0.269	-0.271
N30	1.357	1.582	1.466	1.058	0.027	0.747	1.106	0.458	0.102	-0.206	-0.154
N31	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N32	1.709	1.612	1.974	1.058	2.637	0.747	2.781	2.884	4.023	0.980	0.742
N33	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N34	0.709	0.793	0.336	1.058	-0.448	0.119	-0.569	-0.351	-0.354	-0.269	-0.271
N35	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271
N36	0.756	0.611	0.510	1.058	0.027	-0.510	0.269	-0.351	-0.172	-0.269	-0.271
N37	1.466	1.456	1.842	1.058	0.739	0.119	1.944	1.267	1.196	0.012	-0.076
N38	2.105	2.166	1.790	1.058	4.773	4.519	1.106	0.458	3.841	6.380	6.354
N39	0.690	0.879	0.930	1.058	-0.448	0.119	0.269	-0.351	-0.354	-0.269	-0.271
N40+*	-0.902	-0.900	-0.874	-0.947	-0.448	-0.510	-0.569	-0.351	-0.354	-0.269	-0.271

<sup>\*</sup> Nodes N40 through N54 are isolates, with no board interlocks to any other corporations or foundations. All 15 nodes have the exact same network profile and the exact same Z-scores. They are reported here only once to conserve space. Analyses were also run excluding these isolates. Results reported are robust across both sets of analyses unless otherwise noted in the text.

#### **Profile variables:**

**Dist(type)** is the sum of reciprocal distances between the row's node and all entities of that type in the network. A larger number indicates the node is more closely connected to nodes of that type than a smaller number.

**Comp Size** is the number of nodes the row's node of any type is connected to through any number of steps.

**Freq**(*type*) is the number of direct ties the row's node has to that type of entity.

Coordinator, Gatekeeper, Itinerant Broker, and Liaison are Gould & Fernandez's (1989) attribute-based brokerage roles.

TABLE 2: Codes and illustrative quotes related to identity

IDENTITY	Illustrative Quotes
Think tank	We are a green think tank (N39)
	[N5] is the only independent, nonprofit think tank working exclusively on climate and air quality policy issues (N5)
Professional	[We are] a professional organization of forest stewards, associated natural resource professionals, and affiliates
Association	who are passionate about restoring and sustaining the integrity of our forests (N47)
Market based	We [] come up with solutions that make economic and environmental sense. (N9)
	We [] believe in prosperity and stewardship. Grounded in science, we forge partnerships and harness the power
	of market incentives. (N15)
	[We] engage with corporations and help advance our goal of building a sustainable global economy (N7)
	We develop innovative, market-based solutions (N5)
Science-based	Our work is guided by science (N2)
	[We were] founded by a small group of scientists. Ever since, we've relied on rigorous science to identify serious
	environmental problems and the most effective remedies. (N15)
Professionals	[we are] dedicated scientists, economists, attorneys and other professionals (N15)
	[we are] scientists, biologists and policy makers [] leaders from the scientific, conservation and business
	communities (N38)
Partner with	We partner with leading companies to achieve environmental results on a broad range of environmental
Companies	challenges (N15)
	We've worked with companies large and small to make conservation part of their business model (N9)
	[We] work with investors, Wall Street analysts, credit rating agencies and other financial firms to develop tools to
	integrate environmental, social and governance (ESG) risks and opportunities into day-to-day decision-
	making.(N7)
	We are engaging with major companies and their supply chains to change the way [goods] are produced,
	processed, consumed, and financed worldwide. (N38)
Work with other	We partner with governments, nonprofit organizations, universities, businesses, and local communities (N9)
NGOs & gov'ts	We partner with indigenous communities, [], governments, multilateral institutions, and other non-profits.(N24)
large-scale	We [] seek to have conservation become a core part of government policies and corporate business models (N9)
change	Our partnerships are designed to influence not just single companies but entire industries (N15)
	[we seek to] turn environmental values into national priorities (N21)
Issue focused	[we are] the leading organization working to protect and restore the nation's rivers and streams (N3)
	[we are] dedicated to protecting and restoring the Hudson River, its riverfront and the majestic vistas and working
	landscapes beyond (N29)
	[] the leading international conservation organization focused solely on Africa(N1)
	[]advocates for the protection and expansion of America's forests (N2)
	[] the leading organization working to protect and restore the nation's rivers and streams(N3)
Independent	To maintain its independence, [N18] does not accept donations from governments or corporations but relies on
	contributions from individual supporters and foundation grants. (N18)
	Our effectiveness depends on work that is uncompromised by partisan politics, institutional or personal
	allegiances, or sources of financial support.(N37)
Grassroots	We believe the key to success is long-term, grassroots involvement. (N36)
	[We] help citizens [] fight their "backyard" battles. (N29)
	We are the world's largest grassroots environmental network.(N16)
	We are the largest and most influential grassroots environmental organization in the United States.(N52)
	For 40 years, [N6] has been building a movement for cleaner water and a healthier environment, person by
Cl. II	person, door by door.(N6)
Challenge	[] whether the threat is from heavy industry, a major corporation, or a greedy real estate developer. (N29)
corporate power	We know that solving deep-rooted environmental problems requires exposing and fighting the economic forces
	that fuel them (N16)
	[] the nerve to challenge some of the largest institutions of the world whose business models rely on the destruction of our environment, health and climate (N51)
	r destruction of our environment, health and climate that D

Table 3: Codes and illustrative quotes related to work

	DIRECT WORK	Illustrative Quotes
	Convene	We convene and direct stakeholder engagements with [] companies to find smart strategies and meaningful performance
		improvements on key environmental and social issues (N7)
		[The] key to [our] work is finding and connecting effective leaders and innovators so that, together, we can have even greater
		impact. (N9)
	Share best practices	[We] harvest best practices [] and provide participants with examples of successful strategies (N5)
		[We are] helping [companies] reduce their environmental impacts and share their successes with their peers (N23)
		[We] share best practices and business tools [] with companies of all shapes and sizes (N15)
		We partner with businesses [] to help them establish "green" benchmarks. (N9)
Create	Coach Businesses	We partner with businesses [] to help them embrace environmentally sound practices. (N9)
l S		[N23] helps businesses and other organizations to reduce their environmental impacts and cut costs throughout their
		operations and supply chains, by determining ways they can produce less waste, consume less paper and energy, and use
		resources more efficiently (N23)
	Certify	[By] giving consumers a reliable way to identify responsibly produced goods and services via the Rainforest Alliance
		Certified™ seal and Rainforest Alliance Verified™ mark we demonstrate that sustainable businesses thrive in our global
		economy.(N26)
	Leverage existing legal	[N24] has been at the cutting edge [developing] innovative financing solutions (N24)
	structures	We develop financing solutions to protect and sustainably manage some of the most valuable natural resources in the world
		[including] several debt-for-nature swaps. (N38)
	Litigate	We act as legal counsel on behalf of a population segment that cannot act for itself, North America's wildlife.(N10)
	Lobby	We advocate in the halls of Congress [and] in state capitals (N16) [N1] works to influence and support key policies that strengthen conservation at every level: local, national and international.
		We influence treaties, recommend legislation, and facilitate land-use practices that help everyone — from small communities
		to entire nations — manage their lands successfully and sustainably (N1)
		[]keeping policymakers informed about how trees interact with climate, sequester carbon, manage water, and benefit
		cities. We explain that ecological services from trees and forests have real economic value. We work in and advocate for
		federal, state, and urban forests (N2)
	Educate	We improve global understanding and treatment of great apes through public education (N19)
t d	244646	Our award winning environmental education program can be implemented in your classroom (N22)
Disrupt	Campaign	[N18] is an independent global campaigning organization that acts to change attitudes and behaviour, to protect and
"		conserve the environment and to promote peace (N18)
		[We] continue to partner with communities and to bring our unique skills and persistence to bear on key projects [through]
		backyard campaigns (N29)
		We campaign on today's most urgent environmental and social issues. (N16)
	Protest	[N51 has been] dubbed some of the most savvy environmental agitators in the business (N51)
		[N51] board chair arrested in front of the White House(N51)
		[] it's part of our job to make the invisible impossible to ignore. Often this means going to the source of the problem -
		hanging a banner on a coal plant's giant smokestack, for example. Other times, it means reminding decision makers they
	INDIDECT WORK	have a higher responsibility than the corporate bottom line.(N18)
	INDIRECT WORK	Illustrative Quotes
	Conduct research	[] the founders saw the need for an institution that would [] carry out policy research and analysis on global environmental and resource issues and their relationship to population and development goals. (N37)
		[we undertake] qualitative and quantitative research; technical analyses [] and climate adaptation options (N5)
9	Train the next generation	[we] build the next generation of conservation leaders (N30)
onrce	Trum the next generation	[N1] fosters the education and work of African wildlife research scientists. (N1)
Reso		[We] train graduate students from leading business and policy schools and send them to major companies and organizations
-		(N15)
	Secure resources for	We identify state and federal funds (N3)
	others	[we] provide [others] with the resources and tools to accomplish and sustain their mission (N21)
	Amplify the work of	[We provide] support to individuals, organizations and anyone interested in conducting a cleanup on their local river. (N3)
₹.	others	[We help other organizations use] private sector marketing tactics to "sell" social change. These tactics include audience
Amplify		segmentation; focus-group testing of highly targeted messages; use of multiple media vehicles and outlets to reinforce
An		messages over a sustained period of time; and rigorous measurement of "product adoption" (i.e. new attitudes, behaviors,
L		and sustainable alternatives). (N27)
_	Align and/or coordinate	Our programs are designed to create a stronger and more unified environmental movement. (N20)
Align	among ENGOs	[We] avoid duplicating work already being done effectively by others. (N15)
⋖		
	il	

TABLE 4: Details of the social positions

E 4: Details of the social positions  Characteristics	Example
Factor 1 Mean: 0.509 → HIGH Global Connectivity Factor 2 Mean: -2.917 → HIGH Local Heterogeneity (r.c.) Factor 3 Mean: 0.347 → Average Local Homophily (r.c.) Portals are structurally delineated by their high connectivity as exhibited through strong local heterogeneity and brokerage. They connect with many other actors, especially non-ENGO actors. Based on the brokerage roles loading on Factor 2, their high level of local connectivity serves to connect otherwise disconnected actors of all types with each other, except they do not generally serve the coordinator role of connecting two otherwise disconnected ENGOs.	138
Factor 1 Mean: 0.693 → HIGH Global Connectivity Factor 2 Mean: 0.189 → Average Local Heterogeneity (r.c.) Factor 3 Mean: -1.428 → HIGH Local Homophily (r.c.) Conduits are structurally identified by their high degree of local homophily and specialized brokerage. They are strongly connected to the whole network, but primarily through connections to other ENGOs. They serve as the most common brokers between otherwise disconnected ENGOs (coordinators), and play a moderate brokerage role between ENGOs and non-ENGOs (gatekeepers), but not between non-ENGO actors.	N10
Factor 1 Mean: 0.750 → HIGH Global Connectivity Factor 2 Mean: 0.385 → Average Local Heterogeneity (r.c.) Factor 3 Mean: 0.628 → LOW Local Homophily (r.c.) Members are structurally interesting primarily for being part of the main component, basically being engaged in the field, but without any other major structural distinctions. They score highest on the factor for global connectivity, but have relatively little else to distinguish them structurally.	Members are connected into the main component through their limited ties.
Factor 1 Mean: -1.351 → LOW Global Connectivity Factor 2 Mean: 0.143 → Average Local Heterogeneity (r.c.) Factor 3 Mean: 0.123 → Average Local Homophily (r.c.) Satellites are most structurally distinctive because they are NOT connected to the main component. They load strongly and negatively onto the global connectivity factor, indicating they are disconnected from the vast majority of the other actors in the field.	Isolates, like N40 on the left have no connections. Other satellites, like N6 on the right have limited connections but not into the main component.
	Factor 2 Mean: -2.917 → HIGH Local Heterogeneity (r.c.) Factor 3 Mean: 0.347 → Average Local Homophily (r.c.) Portals are structurally delineated by their high connectivity as exhibited through strong local heterogeneity and brokerage. They connect with many other actors, especially non-ENGO actors. Based on the brokerage roles loading on Factor 2, their high level of local connectivity serves to connect otherwise disconnected actors of all types with each other, except they do not generally serve the coordinator role of connecting two otherwise disconnected ENGOs.  Factor 1 Mean: 0.693 → HIGH Global Connectivity Factor 2 Mean: 0.189 → Average Local Heterogeneity (r.c.) Factor 3 Mean: -1.428 → HIGH Local Homophily (r.c.) Conduits are structurally identified by their high degree of local homophily and specialized brokerage. They are strongly connected to the whole network, but primarily through connections to other ENGOs. They serve as the most common brokers between otherwise disconnected ENGOs (coordinators), and play a moderate brokerage role between ENGOs and non-ENGOs (gatekeepers), but not between non-ENGO actors.  Factor 1 Mean: 0.750 → HIGH Global Connectivity Factor 2 Mean: 0.385 → Average Local Heterogeneity (r.c.) Factor 3 Mean: 0.628 → LOW Local Homophily (r.c.) Members are structurally interesting primarily for being part of the main component, basically being engaged in the field, but without any other major structural distinctions. They score highest on the factor for global connectivity, but have relatively little else to distinguish them structurally.  Factor 1 Mean: -1.351 → LOW Global Connectivity Factor 2 Mean: 0.143 → Average Local Heterogeneity (r.c.) Factor 3 Mean: 0.123 → Average Local Homophily (r.c.) Satellites are most structurally distinctive because they are NOT connected to the main component. They load strongly and negatively onto the global connectivity factor, indicating they are

Legend: The example node is the large, labeled circle.

ENGOs are circles, corporations are triangles, and foundations are squares.

The principle factor associated with each position is presented in *italics*; Members have no distinguishing factor.

**TABLE 5: Factor Analysis and Loadings for Network Profile Variables** 

(eigenvalues)	Factor 1 (7.136)	Factor 2 (2.173)	Factor <b>3</b> (1.139)
Distance (Corporations)	0.901	-0.337	-0.261
Distance (Foundations)	0.894	-0.329	-0.296
Distance (ENGOs)	0.849	-0.236	-0.456
Component Size	0.969	-0.145	-0.13
Frequency (Corporations)	0.321	-0.896	-0.131
Frequency (Foundations)	0.37	-0.821	-0.258
Frequency (ENGOs)	0.44	-0.131	-0.853
Coordinator	0.229	-0.093	-0.937
Gatekeeper	0.191	-0.694	-0.603
Itinerant Broker	0.146	-0.972	-0.04
Liaison	0.144	-0.973	-0.059
Factor interpretation	Global Connectivity	Local Heterogeneity (reverse coded)	Local Homophily (reverse coded)

Note that all variables except one load predominantly on one of these three rotated factors which capture 95% of the variance in the actors' network profiles. The exception, *Gatekeeper*, is a brokerage measure that captures an ENGO's brokerage between a non-ENGO and an ENGO, representing one homophilous and one heterophilous connection, loading moderately on both Factor 2 and Factor 3.

**TABLE 6:Social Positions of the ENGOs** 

ADLE 0.50CIAI FUSITIONS OF THE ENGOS		1	
ENGO	2000	2003	2005
CONSERVATION INTERNATIONAL - USA (N9)	portal	portal	portal
ENVIRONMENTAL DEFENSE (N15)	portal	portal	portal
WORLD WILDLIFE FUND (N38)	portal	portal	portal
NATURAL RESOURCES DEFENSE COUNCIL (N23)	portal	coordinator	portal
THE WILDERNESS SOCIETY (N32)	portal	coordinator	coordinator
WORLD RESOURCES INSTITUTE (N37)	Portal	coordinator	coordinator
WILDLIFE CONSERVATION SOCIETY (N34)	Portal	member	portal
NATURE CONSERVANCY (N24)	Portal	member	member
LEAGUE OF CONSERVATION VOTERS (N21)	coordinator	coordinator	coordinator
STUDENT CONSERVATION ASSOCIATION (N30)	coordinator	coordinator	coordinator
DEFENDERS OF WILDLIFE (N10)	coordinator	coordinator	coordinator
RARE (N27)	member	coordinator	coordinator
NATIONAL AUDUBON SOCIETY (N22)	member	coordinator	member
AFRICAN WILDLIFE FOUNDATION (N1)	coordinator	member	member
DIAN FOSSEY GORILLA FUND INTERNATIONAL (N11)	coordinator	member	member
ENVIRONMENTAL & ENERGY STUDY INSTITUTE (N14)	coordinator	member	member
WORLDWATCH INSTITUTE (N39)	coordinator	member	member
AMERICAN RIVERS (N3)	member	member	coordinator
WILDLIFE TRUST (N36)	member	member	coordinator
SCENIC HUDSON (N29)	member	member	coordinator
CERES (N7)	member	member	member
BAT CONSERVATION INTERNATIONAL (N4)	member	member	member
CENTER FOR CLEAN AIR POLICY (N5)	member	member	member
GREATER YELLOWSTONE COALITION (N17)	member	member	member
ECOLOGICAL SOCIETY OF AMERICA (N13)	satellite	member	member
TROUT UNLIMITED (N33)	member	satellite	coordinator
JANE GOODALL INSTITUTE (N19)	member	satellite	satellite
WILDLIFE HABITAT COUNCIL (N35)	member	satellite	satellite
AMERICAN FORESTS (N2)	satellite	satellite	member
DUCKS UNLIMITED (N12)	satellite	satellite	member
GREENPEACE USA (N18)	satellite	satellite	member
LAND TRUST ALLIANCE (N20)	satellite	satellite	member
RAINFOREST ALLIANCE (N26)	satellite	satellite	member
CLEAN WATER ACTION (N6)	satellite	satellite	satellite
FRIENDS OF THE EARTH (N16)	satellite	satellite	satellite
PHEASANTS FOREVER (N25)	satellite	satellite	satellite
RIVER NETWORK (N28)	satellite	satellite	satellite
THE LAND INSTITUTE (N31)	satellite	satellite	satellite
N40-N54	satellite	satellite	satellite

<sup>\*</sup> Nodes 40 through 54 are all isolates with no board interlocks to any other actors in the field. They all clustered into the Satellite category with other ENGOs that had a small number of board interlocks, but were not connected to the main component. They are collapsed into one line to conserve space.

Analyses were run both including and excluding the isolates (N40-N54), and the clustering solutions were robust across analyses; however, when the 15 isolates were included, measures of cluster adequacy favored a two-cluster solution that divided the nodes solely on membership in the main component. Measures of cluster adequacy for analyses without the isolates (but included all other satellites) favored the four cluster solution above. This more granular solution better captures the structural heterogeneity with the field and is the basis of our analyses.

Table 7: ENGO Identity and work codes

	Identity											Direct	Institu	utiona	l Wor	k				Indirect Institutional						
							Idei	ntity								create	e			(	disrup	t			Work esour	
Social Position (from Table 6)	ENGO	Think Tank	Prof. Assoc.	Market-based	Science-based	Professionals	Partner w companies	Work with NGOs & gov'ts	Large-scale change	Issue focused	Independent	Grassroots	Challenge corporate power	Convene	Share best practices	Coach Businesses	Certify	Leverage Legal Structures	Litigate	Lobby	Educate	Campaign	Protest	Resource	Amplify	Align
PPP PPP	N9 N15			X	X	X	X	X	X		Х			X	X	X				X	X	X		X		Х
PPP	N38			^	X	X	X	X	X					X	X	X	Х	Х		X	X	X		X		
PCP	N23				X	Х	Х	X	Х			Х			Х	Х			Х	Х	Х	Х		Х		
PMM PCC	N24 N37				X	X	X	X	X		Х			Х	Х	X		X		Х	X			X		Х
PMP	N34				X	Χ			X							-					Χ			X		X
PCC	N32					X			V	Χ								Х		X	X	X		V	٧.	
CCC	N21 N30					X			X											X	X	Х		X	Х	Х
CCC	N10					Х				Х									Х	X	Х	Х		X		X
MCC	N27					Х			Χ												Х	Х		0.0	X	Χ
MCM CMM	N22 N1				X	X	Х	Х		X		Х						Х		X	X			(X)	(X) X	Х
CMM	N11				Х			X		X											X			(X)		
CMM	N14	.,		Х	.,			Х	X					Х						Х	X			(X)		<u> </u>
CMM MMC	N39 N3	Х			Х				Χ	Х										Х	X			(X)	(X)	$\vdash$
MMC	N36									X		Х									X			(74)	(///	
MMC	N29			. V			. v		V	Х		Х	Х	V	V	٧.					X	Х				<u> </u>
MMM	N7 N4			Х	Х		Х		Х	Х				Х	Х	Х				Х	X			(X)		
MMM	N5	Χ		Х						Χ	Х			(X)	(X)									(X)		
MMM SMM	N17 N13		Х		Х					Х	Х	Х									X	Х		Х		<u> </u>
MSC	N33		^		^					Х	^	Х									X			^		
MSS	N19				Х					Χ											Χ			(X)		
MSS SSM	N35 N2				X					X										Х	X					<u> </u>
SSM	N12				^					X		Х								^	X					$\vdash$
SSS	N47		Х							Χ											Х			(X)		
SSS SSM	N53 N26			Х	Х					X							v				X			Х		<u> </u>
SSM	N20			_^						X							Х	Х		Х	X					Х
SSS	N6									Х		Х									Х	Х				
SSS	N49 N28									X		X								Х	X	Х			(X)	<del>                                     </del>
SSS	N31				Х					X											X			(X)	(^)	
SSS	N43				X				.,	Х										Х	X					———
SSS	N48 N25				Х				Х	Х		Х									X					$\vdash \vdash$
SSS	N41									X		Х									X					
SSS	N42								X			X								Х	X					———
SSS	N55 N40								Х	Х		X									X	Х				<del></del>
SSS	N44								Χ			Χ									Χ					
SSS	N52								Х	v		Х								Х	X	Х				<u> </u>
SSS	N54 N46									X										Х	Х			(X)		
SSS	N50								Х											Χ	Х	Х		Ľ,		
SSS SSM	N45 N18				Х				Х	Х	Х	Х	Х							X	X	Х	Х			<del>                                     </del>
SSS	N16								X		X	X	X							X	X	X	X			
SSS	N51								Χ		Х	Х	Х							Х	Х	Х	Χ			

#### Notes

The first column summarizes the contents of Table 6 (each ENGO's social position in 2000, 2003 and 2005) P is portal, C is coordinator, M is member, S is satellite. Brackets (X) indicate the work is undertaken on behalf of the issue rather than the full movement.

Table 8: Challenger roles: Summary of configurations of position, identity and work

Role	Identity	Types of direct institutional work	Extent of direct work	Types of indirect work	Extent of indirect work
Portal	-professionals -seeking broad scale reforms or change -tend to make use the existing political, legal and regulatory institutions to attain the ends sought (lawsuits, lobbying) -willing to engage with a broad set of actors including institutional incumbents (in this case, corporations)	-tend to undertake both disruptive work and creation work - disruptive work leverages the existing political, legal and regulatory institutions to attain the ends sought (leveraging existing legal structures, litgating, lobbying, educating and running campaigns) -creation work is in partnership with institutional incumbents (convening, coaching incumbents, sharing best practices).	high	-Develop the next generation of leaders / professionals -provide credible research -aligning and coordinating the work of other actors	low
Coordinator	-professionals -tend to engage primarily with other social movement organizations -see themselves as 'working on behalf of the movement' -not as likely to engage directly with institutional incumbents	-more likely to engage in disruptive work than creation	Moderate	-provide credible research -Secure funds and resources for others -develop the next generation of leaders -these actors also amplify and coordinate the work of others	Moderate to High
Member	-mainly issue focused (as opposed to focused on large scale change) -more comfortable working with other SMOs and governments -some discomfort in working with institutional incumbents	-predominantly undertake disruptive work (educate, rally, march, petitions)	High (focused on their issue)	-some help to amplify the work of others (within their issue) - some resource their issues by developing the next generation of leaders / professionals and/or providing credible research	Low (and mostly directed at their particular issue)
Fringe Player	-may be issue focused or seeking large scale change -grassroots	-predominantly engage in disruptive work (educate, rally, march, petitions)	High (mostly focused on their issue)	-amplify the work of others (within their own issue) -some are more explicitly involved with training new professionals	Low (and mostly directed at their particular issue)
Purist	-seeking large scale change -independent -grassroots -ideologically opposed to the institutional incumbents	-favour disruptive work -educate -campaign -lobby -protest	High	-may partner with others but are generally not actively attempting to enable the work of others	Low