

CSR IDENTITY – A SOCIAL NETWORK PERSPECTIVE

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ABSTRACT

CSR Identity – A Social Network Perspective

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There has been rampant research on the topics of Corporate Social Responsibility (CSR) and Organizational Identity (OI) but relatively little work done in combining both to understand how CSR affects an organization's members, particularly, their identification with OI. We follow a few studies that looked at a CSR Identity from a constructionist perspective which regards identity as a product of an inter-subjective process of reality construction (e.g. Humphreys & Brown, 2008; Luring & Thomsen, 2009); but where our study differs is in taking a social network analytic approach as an initial attempt to theoretically and empirically explore the concept of a CSR Identity from a social influence standpoint (e.g. Salancik & Pfeffer, 1978). We develop and test a 2-component model of identification which consists of CSR Identity Perceptions & CSR Valuations as precursors to identification with a CSR Identity. Our analysis was two-fold where we (1) explored the link between CSR Identity Perceptions, Valuations, & Identification, and (2) used network analysis to test for social influence on organizational members' CSR Identity Perceptions & CSR Valuations. We adjusted the initial model based on our findings and some post hoc work indicating CSR Valuation to act as a mediator between CSR Identity Perceptions & Identification. Further, our results suggested that social influence acts on Identification through its precursors Identity Perceptions & Valuations, thus supporting a constructionist view of identity. Social influence was shown to operate mainly through group closure and informal centrality (power) on CSR Identity Perceptions & Valuations, and through brokerage on CSR Valuation. We conclude the paper with some interpretation of findings and a discussion of applications and limitations.

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INTRODUCTION

Corporate social responsibility (CSR), sometimes referred to as *sustainability*, has become one of the most popular notions in the academic world and is increasingly creeping into business missions, operations, marketing and management worldwide (Fenwick & Bierema, 2008). Corporate Social Responsibility (CSR) involves a corporation's relation and responsibilities to society, it dictates that commercial success be balanced by responsible practices that advance general welfare. Success is measured not just in monetary terms but in a firm's impact on its community, customers, and environment (Hartman, Rubin, & Dhanda, 2007). A popular CSR view that we adopt in this paper is that CSR encompasses 3 dimensions: economic, social, and ecological (van Marrewijk & Werre, 2003).

But how does CSR relate to an organization's identity and how does CSR actually touch an organization's members and their identification with the group?

This study is essentially an *Identity* study and we look at 'CSR Identity' as an appropriate and increasingly popular sub-identity or component of identities in organizations (Chong, 2009). We focus on organizational members' perceptions (cognitive) and valuations (affective) of the CSR Identity in an effort to understand the underlying dynamics behind their adoption of a CSR Identity. Therin, the study has two primary objectives: (1) to test the impact of a CSR Identity on members' identification with the organization (see fig.1); and (2) to clarify how an organizational sub-identity or identity-component, a CSR identity, diffuses among the organizational membership through social and inter-personal influence. In relation to organizational identification - i.e. defining oneself with the same attributes seen to define the organization (Dutton, Dukerich, & Harquail, 1994) -, we develop and test the hypothesis that a

CSR identity enhances identification with the organization (see fig.1 below) - the more a member *perceives and values* a CSR Identity at the firm, the more she identifies with the organization. Not only are we interested in the effect of CSR on organizational identification, but we focus especially on *how* a CSR identity diffuses among an organization's membership, specifically, by looking at the social and inter-personal influence on members' CSR Identity perceptions and valuations which is carried via the web of social relations spanning individual members. Convergence on CSR Identity perceptions & valuations between members is our main indication of effective social influence as the logic here dictates that social influence encourage similarity in identity views and preferences among inter-connected organizational members.

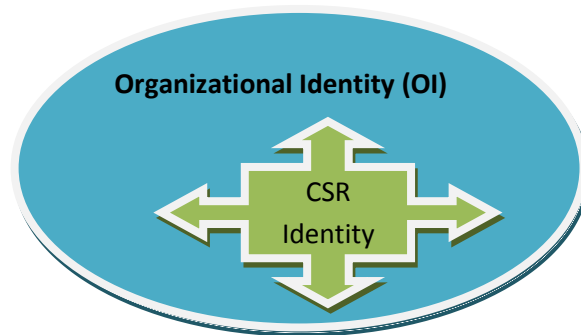


Fig.1 *CSR ID embedded in OI - CSR identification enhances OI identification*

We therefore undertook an empirical investigation and elected to sample Sustainable Concordia, a sustainability group with a strong CSR Identity that functions independently but as part of Concordia University, and we surveyed its membership on their perceptions and valuations of the CSR Identity as well as their identification with the group. We also gathered data on members' social inter-connections at the group in order to model the network of social relations and examine any systematic spread of their CSR Identity views and valuations along

the network of relations (e.g. individuals in direct contact showing convergence on CSR Identity perceptions & valuations). It follows that we not only looked at individual reports to accomplish our first objective in relation to organizational identification, but we also used those reports in a dyadic network analysis that focused on the social connections binding members together in relation to their convergence or similarity on perceptions and valuations.

Following our two-fold research objective, our analysis consisted of two main explorations: first, we tested a model at the individual-level relating CSR Identity Perceptions, Valuations, & Organizational Identification; and second, we tested for social influence on CSR Identity Perceptions & Valuations at the dyadic level using social network mechanisms such as *direct contact, group closure, brokerage, centrality (informal power), and structural equivalence* in testing inter-actor convergence. In terms of results, post hoc work showed CSR Valuation to act as a mediator between CSR Identity Perceptions and Organizational Identification, suggesting that for organizational identification to be enhanced, organizational members must exhibit some personal valuation for the CSR initiatives that they perceive to define their organization. Second, our findings demonstrated that social influence indeed acts on our cognitive and affective CSR identity variables with informal group closure, centrality, and structural equivalence acting as significant mechanisms of influence on perceptions & valuations and brokerage in the informal network showing significant influence effects on valuations; in other words, inter-actor convergence on CSR Identity views was, in large part, attributable to their social connections or position in the network of relations as detailed by the social mechanisms just mentioned. Combining the findings from the two sets of analyses yielded an interesting model that was used to derive some pragmatic recommendations and that could be further explored with future research.

To give this study more contextual relevance, this study is also concerned with management's problem of effectively conveying the ideal or *corporate CSR identity* (how upper management strategically defines the firm's CSR) to its organizational membership (e.g. Humphreys & Brown, 2008; Luring & Thomsen, 2009). This is important for a firm in order to capitalize on the many benefits of CSR (e.g. Chong, 2009; Johnson & Ashforth, 2007; Morsing & Schultz, 2006), as well as to strengthen organizational identification and avoid misalignment between identity & image (Hatch & Schultz, 1997) and between value statements & practices (Greve & Mitsuhashi, 2007; Luring & Thomsen, 2009).

A strong organizational identity (OI) is desirable as it leads to activities that are congruent with the identity, support for institutions that represent the identity, stereotypical perceptions of self and others, as well as outcomes traditionally associated with group formation (Ashforth & Mael, 1989). To have a strong OI, an organization has to first have its members widely share in their perceptions of OI (i.e. their perceptions of the central, distinctive, and enduring character - the essence - of the organization) (Albert & Whetten, 1985), and second, have its members share in a strong identification or valuation with what they deem OI to be (Fiol, 2001; Kreiner & Ashforth, 2004). Thus, management finds itself with the challenge of instilling a homogenous, unanimously-accepted identity among its membership, and we look at CSR as a frequent source of ambiguity in both the literature and in real organizations (e.g. Luring & Thomsen, 2009) in an effort to better understand how an identity unfolds through an organization's people.

Overall, this study was a first attempt at linking the CSR, Identity, and Social Influence literatures, as well as a first attempt in using social network analysis to study CSR Identity. The study focused on the understudied relation between CSR and Organizational Identification

(Chong, 2009) and also added CSR Identity Perceptions & Valuations to the list of phenomena applicable to social influence (e.g. SIP theory (Salancik & Pfeffer, 1978)). Finally, our study contributed to solving the managerial problem of successfully transmitting corporate ideals to the organizational membership and we proposed a model that may shed some light on how to better manage OI while recommending using CSR to build a stronger OI.

Next, we start with an overview of the 3 relevant literatures: corporate social responsibility, organizational identity, and social influence. Our hypotheses relating to organizational identification are formed in the section on organizational identity & CSR, while our social influence hypotheses follow in the section on social influence. Our hypotheses converge into a general model of how a CSR identity relates to organizational identification and how a CSR identity is socially influenced, and we test that model empirically using data gathered through a survey at a sustainability group. The methodology section provides the details on how the study was actually carried out while the results section organizes the main findings in reference to our hypotheses. To reiterate, our hypotheses and analyses examine CSR perceptions, valuations & identifications of individuals as well as convergence/agreement of perceptions & valuations between individuals. Finally, we conclude with a general discussion as well as some pragmatic derivations and a mention of limitations.

LITERATURE REVIEW

CORPORATE SOCIAL RESPONSIBILITY

Corporate support of social causes, under the umbrella of CSR programs, has recently experienced unprecedented growth with spending exceeding \$1 billion annually in the United States (David, Kline, & Dai 2005). Investment in CSR is further on the rise and “2008 estimates from sources as bottom-line focused as IBM Global Services and the Economist were predicting a full 25 percent increase in CSR spending by 2011” (Mack, 2009). This rising attention and investment in CSR has occurred gradually over the last few decades and scholars have seen CSR shift focus intermittently, in tandem with the historical chapters that simultaneously shape what firms consider central to their success and identity as well as the exigencies of their stakeholders (Hanft, 2004; Sethi, 1979). As examples, Hanft recalls the cycle that started with the civil rights movement which extended towards women issues and diversity, the environmentalism of the 80’s which now remains as ‘postmillennial sustainability’, and present-day ethical accountability which was brought by the many scandals and abuses that have recently plagued business. CSR therefore presently focuses on several, often-overlapping, themes, ranging from the economics of cost-efficiency and profit maximization, to the management of risk or risk deterrence, and to the philanthropic endeavours such as community support and contributions to charitable organizations (e.g. Hartman et al., 2007).

Because of the nature of its evolution and its breadth, many authors have noted a lack of consensus over an all-encompassing definition of CSR which can hamper academic debate and ongoing research (e.g. Wood, 1991; van Marrewijk & Werre, 2003). For example, CSR is also known as corporate citizenship, corporate sustainability, sustainable responsible business (SRB),

and corporate social performance, covering diverse areas like principles, legitimacy, processes, and outcomes (Wood, 1991). In this study, and in line with many institutions and researchers, we adopt the following CSR definition: CSR encompasses the responsibilities that organizations have toward the societies within which they operate (Hartman et al., 2007); *“it is the private sector’s way of integrating the economic, social, and environmental imperatives of their activities” in pursuit of sustainable development and the triple bottom line* (Industry Canada, 2010). And although ambiguity exists in defining the term, there seems to be some consensus in the literature as to the different approaches to CSR: profit maximization to shareholders, balancing interests of all stakeholders who are affected by and affect a firm’s activities, responsibility towards the society that hosts and supports an organization, and philanthropy are repeatedly mentioned as the main approaches to CSR (e.g. van Marrewijk & Werre, 2003). Other researchers have revealed similar CSR characterizations but with slight variations: e.g. economical, legal, ethical, and discretionary or philanthropic CSR (Carroll, 1998; Wood, 1991); moral/ethical, discretionary, and relational practices (David et al., 2005); idealism & altruism, economics & expedience, and ignorance & cynicism (Humphreys & Brown, 2008); economics, politics, social integration, and ethical CSR (Garriga & Melé, 2004); and Hartman et al.’s (2007) economic vs. citizenship-oriented CSR. It should be noted that the different approaches do not exist in isolation and often overlap considerably, not without frequent tension with one another (Carroll, 1998; 2000). For instance, the ‘economics’ approach may overlap with some of the other CSR categorizations as it may be in a firm’s financial interest to comply with regulations and engage in good ethics while simultaneously improving its bottom-line via increased attraction and retention of employees, enhanced brand image, reputation, and stock value (e.g. Hartman et al., 2007). On the other hand, a very bottom-line oriented firm might exhibit conflict

between an economics CSR approach and having to accommodate rising pressures to adopt more discretionary practices that do not necessarily make strict financial sense (Lauring & Thomsen, 2009). CSR's multiplicity and often overlapping and conflicting directions render the concept an interesting facet of exploration with respect to our study of organizational identity. In other words, CSR's prevalence in organizations and its inherent ambiguity makes it a good venue for research into the polyphony of organizational identity and its varying interpretations by an organization's membership.

A second dimension to CSR that we consider and which is particularly relevant to this paper involves the values underlying a firm's CSR activities which van Marrewijk & Werre (2003) delve into. Values, as we will see in the subsequent section, are very relevant to identities as they lie at the foundation of our personal identities while also permeating our social identities (Hitlin, 2003). In a sense, to identify with a certain aspect of CSR requires some alignment in values between our person and that corresponding CSR locus; for example, we are more likely to identify with an environmental CSR initiative if we agree with its underlying values which may appear to us as "*benefiting ourselves while simultaneously benefiting the environment*", in contrast to "*profit maximization (through minimizing waste)*" which might have less appeal to us. We will refer to such values as the underlying 'Drive' behind CSR at a firm, and this complements the previously-mentioned CSR approaches which seem to implicitly include such a dimension (for instance, an *economic vs. citizenship* CSR orientation reflects the difference between a *bottom-line driven vs. a more care-driven* CSR). CSR drive is therefore a dimension that conveys the general motivation behind the different CSR initiatives at a firm, regardless of which stakeholders are actually targeted or which CSR approach appears to be effective (e.g. a CSR campaign can be created to look like a genuinely altruistic initiative, whereas employees

might still regard it as a mere attempt at impression management). Marrewijk & Werre (2003) use the Graves value-system model which organizes the different CSR values into eight core value systems - each *`a way of conceptualizing reality and encompasses a consistent set of values, beliefs and corresponding behaviour and can be found in individual persons, as well as in companies and societies`* (Marrewijk & Werre, 2003, p.108). The model is hierarchical where each value system includes and transcends the previous ones and it ranges from the absence of any CSR ambition, to profit-driven CSR, and towards caring and synergistic/holistic ambitions. What is of interest here is that employees might have preferences for a **CSR Drive** or value system that differs from what they actually observe as applicable at their firm. Our suspicion is that agreement between an employee's ideal CSR drive and observed CSR drive would relate to the extent of their identification with their firm's CSR initiatives.

As stated in the introduction, the main purpose of this investigation is to look at CSR in relation to an organization's identity and to understand how CSR touches members and their identification with the organization. This was mainly inspired by a few studies taking a narrative approach to CSR identity and revealing a discrepancy between management's CSR ideals and the identity interpretations of their employees (e.g. Humphreys & Brown, 2008; Luring & Thomsen, 2009). For example, Humphreys & Brown (2008) reported that employees at a bank did not easily incorporate a novel ethical CSR initiative into their established economic-centered identity narratives. Organizational identity, it appears, is a function of member perceptions and interpretations and not nearly a direct outcome of corporate vision (Rodriguez & Child, 2008); much to the dismay of corporate managers who desire their members to unanimously share in their ideal version of the organizational identity. In this study, we attempt to clarify how such interpretive processes occur at the level of the organizational membership, and we examine CSR

as a facet of identity that may well increase identification with the organization. As awareness rises on sustainability issues and on the prominent role of corporations in integrating responsible practices into our social consciousness, is CSR an additional tool to weave a more cohesive organizational identity and to contribute towards a sustainable future?

As mentioned, to understand CSR identity from an organizational membership's perspective, we have to consider both how members perceive the firm's CSR initiatives (e.g. emphasis placed on which CSR approaches – social, ethical, governmental, etc) as well as how members perceive the values that they think underlie these initiatives (e.g. profit maximization, compliance with regulations, etc). Our task is exacerbated by research findings pointing to a hazy connection between corporate conceptions and member interpretations, and similarly, between CSR practices/declarations and the values operating below the radar (e.g. Carroll, 1988; Hartman et al., 2007). It is interesting to note that a particular expression (e.g. behavior) does not necessarily imply that a particular value system is dominant or functioning (Marrewijk & Werre, 2003). Consider companies with 'questionable' products such as tobacco, weapons, alcohol, or pornography, who not only comply with regulations and contribute to the community, but who also lobby legislators for more permissive laws that do not necessarily favour society. It may be misguided thence to assume caring or altruistic motives and more reasonable to presume profit maximization and rule compliance motives.

Businesses have numerous incentives to adopt sustainable strategies such as reducing costs through more efficient use of resources and waste reduction (e.g. Shrivastava, 1995). Other incentives include an increased competitive advantage (David, Kline, & Dai, 2005; Lindgreen, Swaen & Johnston, 2009); encouraging value creation and investments (Iouanno & Serafeim, 2010); facilitating a unified organizational identity (Chong, 2000; Korschun, Bhattacharya, &

Swain, 2011; Luring & Thomsen, 2009); initiating strong, positive reactions among employees (e.g. Chong, 2000; Johnson & Ashforth, 2007; Morsing & Shultz, 2006); helping to acquire, retain, and engage talent (Bhattacharya, Sen, & Korschun, 2008); strengthening organizational commitment (Brammer, Millington, & Rayton, 2007; Peterson, 2004); promoting consumer-company identification (e.g. David et al., 2005; Perez, 2009); improving employees' customer orientation and customer identification (Korschun et al., 2011); as well as gaining first-mover advantages, securing long-term profits, strengthening community relations & enhancing a firm's image (Shrivastava, 1995). The way members come to define and value their organization's CSR identity, an integral part of firms' identities (Luring & Thomsen, 2009), is important as it may affect their identification with the organization along with the positive outcomes associated with CSR. Moreover, the diminishing boundary between a firm's identity (internal) and image (external) implies that external relations are becoming part of the day-to-day activities of many organizational members who increasingly act as both insiders as well as outsiders (Hatch & Schultz, 1997). The way employees interpret and connect with their firm's identity thus contributes directly to impression management through members' contact with customers and through everyday interactions as community members (Hatch & Schultz, 1997). Luring & Thomsen (2009) therefore strongly advise firms to make sure their desired corporate identity is adopted by all their members as the mismatch between value statements and practices is often revealed by stakeholders and made visible to the public eye.

To sum up this section, the study of CSR involves several dimensions including the concept's definition, the different CSR approaches or perspectives (van Marrewijk & Werre, 2003)), and the underlying CSR values or drive. Furthermore, its relation to identity is not straightforward as simply assuming an organization's CSR identity to be a reflection of corporate expressions (e.g.

declarations, actions) is probably erroneous (e.g. Humphreys & Brown, 2008; Luring & Thomsen, 2009). Understanding how CSR touches employees and their identification with the organization is important to maximize the advantages of CSR while minimizing potential problems with misalignment.

Next, we move on to a discussion of identity and identification and then proceed to making the case for using a network approach in understanding the social diffusion of CSR identity perceptions and identification in an organization.

IDENTITY & IDENTIFICATION

The concept of identity dates back to early philosophers like Aristotle, Descartes, and others who were interested in the study of human behavior and the self (Corley, Harquail, Pratt, Glynn, Fiol, & Hatch, 2006). Identity has been defined as the means through which any entity, individual or collective, relates to society, particularly as it embodies the essence of *who it is* in a social context (Deaux, Reid, Mizrahi, & Ethier, 1995). But only in the recent 20 years has identity become so popular in organizational studies, though not without its share of controversy and debate, especially when it comes to defining, theorizing, and modeling the concept (Corley et al., 2006).

Identity and identification have been seen as root constructs in organizational studies as every social entity (an individual, a group, an organization etc) needs to develop a sense of what it is, what others are, and how it resembles, differs, and fits with other entities (Ashforth,

Harrison, & Corley, 2008). Ashforth et al. (2008) described *identities* as providing a sort of cognitive social map that situates entities in a social landscape, with *identification* embedding an individual in the relevant identities. And since identities develop in relation to other identities, two characteristics are especially pertinent: identities are necessarily ‘relational and comparative’ (e.g. Ashforth & Mael, 1989; Gecas, 1982; Ibarra, 1999, Turner, 1975; 1985) so that individuals and collectives define and evaluate their identities by comparing themselves to relevant others (similar to Festinger’s (1954) social comparison theory). An implication is that what is self-defining tends to change in accordance to changing referents or cues (e.g. Brewer, 1991; Elsbach & Bhattacharya, 2001; Sluss & Ashforth, 2007). For instance, a child’s self-definition or identity may change from strong and heroic to weak and complacent depending on whether the others around are children or grownups; or a student may experience an identity salience shift from ‘chemist’ to ‘athlete’ when moving from a professional lab environment to soccer practice. The fact that identities are relational and comparative is a good starting point for our main premise of identities being contingent on interactions in the social world.

Identification can be dissected into situated and deep identification (Ashforth et al., 2008; Rousseau, 1998). Situated identification is more superficial and short-term where one sees him/herself merely as a member of a collective or social category instead of incorporating the entity into his/her self-concept (e.g. I am a black individual vs. Being black strongly defines me). The latter describes deep identification where an individual ‘is likely generalizing from myriad grounded experiences to offer an abstracted take on what the group is along with his affinity for it’ (Ashforth et al., 2008, 332). Deep identification has a more stable quality that transcends specific situations and increasingly implicates the self in relevant experiences. Both, however, are activated by situational and social cues that prime the potential enactment of the relevant

identities, whereas only deep identification involves cues that reflect descriptive and normative information about the identity (Rousseau, 1998). Characteristic of deep identification, individuals deeply identifying with their organization may internalize organizational premises, values, goals and so forth, to the point where acting for the organization almost becomes equivalent to acting for themselves (DiSanza & Bullis, 1999; Scott & Lane, 2000). This is particularly relevant to the upcoming section which discusses the significance of studying identity and identification from an organizational standpoint: ultimately, an organization wants its membership to develop a shared organization identity with deep identification which brings about internal motivation (Kogut & Zander, 1996) where members autonomously seek outcomes and decisions that benefit the firm (DiSanza & Bullis, 1999). The distinction between situated and deep identification is also relevant to our study as we suspect that members who personally value their firm's purpose and definition experience more identification with their organization.

Many categories of identities exist and different identities may be used to define an entity at any given moment. Identity is a multilevel construct and the literature discusses 3 levels which we tap into in examining our CSR Identities: personal, role-relationship, and collective identities. First, personal identity has been distinguished at the individual level focusing on the individual as a unique being with self-esteem tied to interpersonal comparisons of traits, abilities, performance and so on (Ashforth et al., 2008). In developing personal identities, the main drive is self-interest and the individual is essentially independent and autonomous (Sluss & Ashforth, 2007). Image has also been distinguished from personal identity in that the image one socially projects is not necessarily internalized and incorporated into the self-concept the way identities are (Ibarra, 1999). Researchers have also included other elements in the concept of personal

identity such as ‘authentic’ thoughts (e.g. R. Turner, 1976), goals, values, and personality (Hitlin, 2003).

The next level of identity entails a relationship between two people. Structural identity theory (known as identity theory) proposes inter-personal, role-relationship identities that are embedded in roles (hence “role-relationships”) such as supervisor-subordinate or parent-child relations (e.g. Corley et al., 2006; Sluss & Ashforth, 2007). Individuals are thus inter-related, the self being entangled with others, the basic motivation being the dyad’s interests, and self-esteem deriving from satisfying role-relationship outcomes (Sluss & Ashforth, 2007). According to Sluss & Ashforth (2007), roles are the main locus of identity construction in organizations as individuals are hired into organizations to occupy and engage in them. Role-relationship identities are typically conceived by each individual based on their version of a prototypical ideal for the role; however, with repetitive exchanges, participants may soon redefine and adapt the role-relationship identity to the characteristics of its occupants (‘personalization’, Sluss & Ashforth, 2007). Interestingly, relational identities are usually simultaneously general (e.g. a salesperson’s relation to clients) and particularized (e.g. a salesperson’s relation with Jeff the client) (Ashforth et al., 2008).

Finally, social identity theory (SIT) and social categorization theory (SCT) (Turner, 1975) focus on the individual in relation to a collective and situate the individual in social space as a member of a group (e.g. organization) or a social category (e.g. gender) (Hogg & Terry, 2000). Similar to role-relationship identities, an individual defines a social identity by the prototypical characteristics typically abstracted from its members (e.g. Hogg & Terry, 2000). According to Ashforth & Mael (1989)’s minimalist definition of collective identification, “an individual need only perceive him- or herself as psychologically intertwined with the fate of the

group” (p. 21), not necessarily exhibiting value-congruence or commitment with the group (as with situated identification). With collective identities, self-esteem stems from positive comparisons against other groups and is also contingent on the welfare of the collective, common fate, cohesion, and group norms (Hogg & Terry, 2000; Sluss & Ashforth, 2007).

In general, all 3 identities involve individuals in their social world; but where personal identities are idiosyncratic and private, role-relationship and collective identities are more social, situating the individual within the social system in a relatively depersonalized way. This depersonalization (unlike the negatively held terms deindividuation or dehumanization) can have consequences like “normative behavior, stereotyping, ethnocentrism, positive in- group attitudes and cohesion, cooperation and altruism, emotional contagion and empathy, collective behavior, shared norms, and mutual influence” (Hogg & Terry, 2000, p.123).

Central to our examination of how an organizational member comes to identify with a certain aspect of his organization (e.g. a CSR Identity), the 3 identity levels can be intimately intertwined such as in a role-relationship which may become personalized such as with a manager-subordinate identity becoming adapted to the personal identities of its constituents: Joe the manager-Sam the subordinate. Here, individuals bring their personal values and beliefs to the role-relationship instead of merely acting out a set role. Interaction between identity levels can also occur with generalization: for example, Sluss & Ashforth (2007) proposed that relational identification may generalize to identification with the salient groups and categories that the two individuals share or with those that one of the individuals represents. According to the authors, this may occur when the collective is seen as an ‘extension’ of the role-relationship representing and sustaining the relationship; when an actor views the other as a prototypical member of a collective so that relational identification ‘spills over’ to identification with the other’s social

entities; and with personalization and interpersonal attraction which increase the extent to which one is influenced by the other's attitudes and opinions about their own social groups. In sum, a role-relationship may touch on both actors' personal and collective identities through personalization and generalization respectively, thus acting as a conduit for the potential transfer of impressions and identifications between members.

The 3 levels of identity further relate at a very fundamental level: a person's core values.

Hitlin (2003), addressing a noticeable gap in the literature when relating the concept of personal identity to role-relationship and collective identities (Stets & Burke, 2000), integrated the 3 levels by conceptualizing personal identity as based on *core values* that yield a unified and stable sense of self. "These values in turn are enacted and articulated situationally through the intermediate development of various role-, group-, and value-identities" (Hitlin, 2003, 122). Hitlin adds that the relationship between our core values and our many incorporated identities is reciprocal such that other identities and behavior can also shape our core values. In this view, core values in our personal identity permeate our discussion of role-relationship and group identities as they essentially guides the formation of our social identities (whether individual, inter-personal, or collective). In relevance to the previous discussion on situated vs. deep identification, it is likely that 'authentic' or deep identification engages personal identity more intensely than situated identification, creating a robust bond based on compatibility between one's core values and the values inherent in the relevant identity.

Organizational Identity (OI), Organizational Identification, and CSR

In this section, we continue the previous discussion on the three levels of identity, but we focus more intently on Organizational Identity and start with the collective level since we are

introducing the concept of identifying with an organization, a social collective. According to Albert & Whetten (1985), Organizational Identity (**OI**) is the central, distinctive, and enduring characteristics of an organization; it is how the collective answers the question of ‘who we are as an organization’. This definition implies that OI is situated in members’ perceptions of what is defining in their organization - not necessarily equivalent with the image being reflected - and is therefore contingent on forces that affect members’ perceptions (e.g. Garriga & Melé, 2004; Humphreys & Brown, 2008; Rodriguez & Child, 2008). Organizational identity can be distinguished from corporate identity in that OI is a function of members’ collective perceptions on what defines the company (OI can be uncovered by asking each member what they see as fundamentally defining their organization) whereas corporate identity is a function of how upper management and company leaders strategically define their organization (Balmer, 1995; Hatch & Schultz, 1997; Van Rekom, 1997; Van Riel & Balmer, 1997). Corporate identity is conceptualized as a function of leadership and by its focus on visuals (e.g. symbols, design) (Balmer, 1995) and integrated corporate communication (e.g. company website), whereas organizational identity is dependent on how members interpret these corporate attempts as well as how they interpret other relevant sources of information such as news, reports, conversations and so on (Brown, 2006). Although both OI and corporate identity build on an idea of what an organization is (Balmer, 1995), strong links with company strategy and vision emphasize the role of upper management in the formulation of corporate identity (Hatch & Schultz, 1997).

Organizational identification, a type of social identification, embeds an individual in the organizational identity and is defined as ‘the perception of oneness with or belongingness to’ an organization (Ashforth & Mael, 1989, p. 21) - ‘the degree to which a member defines him- or herself by the same attributes that he or she believes define the organization’ (Dutton et al., 1994,

p. 239). Organizational identification embeds an individual in what they *perceive* as the OI and an individual either incorporates into his or her self-concept what is viewed as defining the organization, or simply recognizes overlap between the self-definition and the perceived OI ('emulation vs. affinity' in Ashforth et al., 2008). In this study, we focus on an organization that is well versed in CSR initiatives and we launch our inquiry with the assumption that an important element of its OI involves CSR. In other words, we assume that such an organization will have its membership consider CSR as an essential component of the OI; and we hereon designate the term *CSR identity* to describe the CSR element of the OI as perceived by the membership, and *CSR valuation* to refer to the extent an individual personally values what he or she perceives the CSR identity to be. And similar to the conceptualization of organizational identification, we consider identification with the CSR identity to be a matter of extent (Dutton et al., 1994) such that one can see little or considerable overlap between their self-definition and the perceived CSR identity.

Defining a CSR identity as part of an organization's identity is supported by literature as we essentially follow the broader conceptualization of identification that Ashforth et al. (2008) outlined in their comprehensive piece on organizational identification. According to Ashforth et al. (2008) the concept of identification is often used in its broader form that goes beyond the 'core' to include 'content' and even identity behaviors. At its core, and in line with social identity theory and social categorization theory (SIT/SCT) (Ashforth & Mael, 1989), identification involves cognitive social categorization, valuation, and possibly affect (I am a member of, I value my membership). On the other hand, identification's content is more expansive and includes values, goals, beliefs, stereotypes and so on (I care about, want, believe, generally do) (Ashforth et al., 2008). Thus, although SIT/SCT would typically only view

identification as membership in a social group, the broader conceptualization of identification allows inclusion of CSR elements under the label *content of identification*. Under content of identification, we can go beyond simply looking at whether an employee values being a member of an organization to include more details on what an employee actually values about the membership, such as its CSR facet (e.g. I am a member of A, a firm that respects the community and its environment, just like I do). Additionally, defining CSR as a sub-part of our conception of OI, and therefore talking about identification with a CSR identity, is not a novel attempt in itself and is validated by previous research on OI which diagnosed and studied the CSR identities of several firms and analyzed the discrepancies between corporate conceptions and the actual CSR identity of employees (e.g. Humphreys & Brown, 2008; Luring & Thomsen, 2009).

Based on our discussion thus far on the interpretive nature of OI and our discussion of personal values and identification, we followed Foreman & Whetten's (2002) conceptualization of identification and dissected the concept of identification into (1) *identity perceptions* and (2) *identity valuation*. What we refer to as identity valuations was termed identity expectations by the authors and conveyed individual preferences for specific identity elements. The term 'valuation' seems more appropriate as it captures what Ashforth et al. (2008) outlined in their formulation of identification which included *importance* (I value "A"), at identification's core, and *values* (I care about "B"), as part of identification's content. Our term CSR Valuation thus reflects how much importance and value an individual accords to elements of the perceived CSR identity - what we term *CSR Identity Perceptions*. We also include the concept of CSR Drive as part of our conceptualization of CSR identity in an OI. As discussed, CSR Drive puts the emphasis on the value system that underlies CSR initiatives at a firm, thereby complementing the content of identification (i.e. *what* an employee actually values) with a focus on *why* an

organization does what it does. We consider Perceived Drive to be a part of CSR Identity Perceptions and Ideal Drive to be a part of CSR Valuations.

Next, we come back to personal and role-relationship identities as they relate to our discussion of organizational identification and CSR identity in several ways. As mentioned before, inter-relationships between the 3 levels of identities are to be expected such that defining oneself with certain identities may affect how and the extent to which one identifies with other identities. For example, if an individual identifies with a ‘subordinate-manager’ role identity, where the manager is very active in a sustainability group, the role-relationship identity may ‘spill over’ to identification with the sustainability identity represented by the manager. At a fundamental level, the core values underlying personal identity guide identification with the various identities available in the social world (Hitlin, 2003). Identifying with the manager’s sustainability group would be, in part, related to some alignment between the subordinate’s values and those of the sustainability group as portrayed by the manager. On the other hand, and as noted by Hitlin (2003), even core values are malleable and subject to influence by social identities (see sensebreaking; e.g. Ashforth, 2001). We can therefore expect members’ perceptions of the organizational identity as well as their role-relationships in the organization to play a part in shaping personal identity along with core values. In our example, our subordinate might come to place more value on social responsibility because of role-identification with the manager which brings influence at the level of core values. In terms of the CSR identity, we can expect individuals’ CSR-values (otherwise referred to as *CSR Valuation*) to be affected by their CSR identity perceptions, among other organizational engagements in roles and identities: with consistent exposure and socialization, organizational members may grow into the organization and exhibit stronger identification with it, including its CSR element, due to a better alignment

with the firm's values. Employee's preferred CSR value system or CSR Drive might also evolve (or devolve) as they get influenced by their organization's way of doing things.

It should be noted here that role-relations can also relate to differing perceptions of the organizational and CSR identity due to social and cognitive factors that may vary across roles (discussed more extensively in the later section on social influence). For instance, a customer-service agent might perceive *customer focus* to be more prominent to the CSR identity of the firm, and accordingly, develop stronger personal valuation for that element of the CSR identity. A member occupying an accounting role, on the other hand, might regard *disclosure and transparency in reporting* as a more defining feature of the CSR identity, and consequently come to appreciate that form of responsible practice the most.

Summing up, an organization's identity constitutes a CSR element which we refer to as its CSR identity, both of which are defined by the perceptions of the organizational membership. We can talk about either **OI** or **CSR identity** in reference to a single individual's perceptions (e.g. the **CSR Identity Perceptions** of Nicole – i.e. how Nicole views and defines the CSR identity of the firm), in reference to a subgroup (e.g. the accounting department's OI perceptions), or in reference to the entire membership's perceptions (e.g. Concordia University's CSR Identity). Another central concept is **CSR Valuation** which expresses the importance an individual places on the CSR issues relevant to the organizational identity. We may refer to the personal CSR valuations of an aggregate of individuals which would reflect the average importance they place on CSR, and we may also discuss personal valuation for a specific CSR aspect such as community development or waste reduction. Next, CSR Drive is another concept that we refer to in highlighting what drives CSR at the firm in terms of a general value system; we refer to **Perceived Drive** as well as to **Ideal Drive** to distinguish between what members see as an actual

drive behind CSR at the firm, and what they would like to see as a preferred or personally favoured drive underlying CSR at the firm. Although we view CSR Drive as an integrated part of the CSR Identity Perceptions and Personal Valuation constructs, so that our discussion of either encompasses the Drive element (i.e. CSR Identity Perceptions includes Perceived Drive & CSR Valuations includes Ideal Drive), we form our drive element separately as it requires a somewhat different treatment at the conceptual and empirical levels. Moving on, we talked about personal identity and core values as underlying CSR Valuation and identification, and we also noted influence from social identities as well as situational factors in shaping these personal preferences. Finally, we are interested in **Organizational Identification** (i.e. defining oneself with the same attributes that are seen as defining the organization), and we can use the term again in reference to an individual, a subgroup, or the whole collective's extent of identification with what they deem **OI** to be. Using all the terms in a short description: an organizational member has strong CSR Identity Perceptions when experiencing the OI, and exhibiting strong CSR Valuation for those CSR elements along with an alignment between Perceived & Ideal Drive, the individual comes to show stronger organizational identification than his peers.

Before moving on to our first set of hypotheses, we give a short overview of organizational identification in relation to some other constructs.

Organizational Identification & related constructs

“Identification matters because it is the process by which people come to define themselves, communicate that definition to others, and use that definition to navigate their lives, work-wise or other” (Ashforth et al., 2008, 334). We have the need to belong to a larger collective because of motives like self-enhancement, self-knowledge, self-expression, self-coherence, self-

continuity, and self-distinctiveness (Ashforth, 2001). Organizational identification hasn't been easily understood and defining its antecedents and consequences has been noted as a challenge (Bergami & Bagozzi, 2000). Fortunately, theoretical and empirical work has shown some convergence. Among the factors continuously reported as antecedents to organizational identification, we name organizational attractiveness, prestige and distinctiveness (Ashforth & Mael, 1989; Bergami & Bagozzi, 2000; Dutton et al., 1994; Mael & Ashforth, 1992), tenure (Dutton et al., 1994; Mael & Ashforth, 1992), organizational satisfaction (Mael & Ashforth, 1992), and factors traditionally associated with group formation (e.g. interaction, similarity, liking, proximity, shared goals, etc) (Ashforth & Mael, 1989). In another direction, of the consequences or products of organizational identification, the following are some examples: a self-reinforcing loop which further increases identification (e.g. Ashforth & Mael; 1989; Dutton et al., 1994); in-group cooperation (e.g. Ashforth & Mael, 1989; Dutton et al., 1994; Mael & Ashforth, 1992; Turner, 1975); group cohesion, cooperation, and altruism (Ashforth & Mael, 1989); internalization and devotion to group norms & values and homogeneity in attitudes & behavior (e.g. Ashforth & Mael, 1989; Hogg & Terry, 2000); organizational citizenship behaviors (Dutton et al., 1994; Mael & Ashforth, 1992); effort, participation, and organizationally beneficial decision making (Bartel, 2001), etc.

CSR and Organizational identification

Our first hypothesis is primarily derived from the antecedents and consequences of organizational identification. As just discussed, among the precedents to organizational identification, the literature notes attractiveness, prestige and distinctiveness (Ashforth & Mael, 1989; Bergami & Bagozzi, 2000; Dutton et al., 1994; Mael & Ashforth, 1992) which we

combine into the intuitive notion of identifying with what we consider desirable. Dutton et al. (1994) defined the term ‘attractiveness’ of OI such that “three principles of self-definition - self-continuity, self-distinctiveness, and self-enhancement - account for the perceived attractiveness of an organizational image and explain why it strengthens identification” (p. 244). We speculate that some of the attractiveness indices might be met and satisfied with social responsibility connotations, especially self-enhancement, which seems reasonable given the amount of resources poured into developing an organizational image of social responsibility (Fenwick & Bierema, 2008). Research has already confirmed the idea that perceived attractiveness of OI can predict organizational identification; for example, Bergami & Bagozzi (2000) revealed perceived prestige and attractive organizational stereotypes (powerful, caring/participative) to significantly predict *cognitive organization identification**

Although some have warned that focusing too intently on CSR associations may arise suspicion from spectators (Morsing & Schultz, 2006), there is fair consensus on the notion that CSR associations tend to be seen as positive by most stakeholders which include an organization’s membership (e.g. Hartman et al., 2007; van Marrewijk & Werre, 2003; Wood, 1991). Thus, to the extent that CSR perceptions embellish the organizational identity or image, we expect employees who view their organization as well invested in CSR to report stronger organizational identification (i.e. CSR Identity Perceptions increase perceived attractiveness which increases Organizational Identification).

H(1) Individual CSR Identity Perceptions positively correlate to individual Organizational Identification

This is natural given our assumption that CSR is a subcomponent of OI. In fact, CSR can be a fully integrated component of the OI, and indeed, has been described as underlying most organizational activity if properly integrated (e.g. Chong, 2009; Luring & Thomsen, 2009). Thus, an organizational member who views the firm as strongly invested in CSR, an attractive element that permeates the organization's activities and identity, may find the OI more attractive and therefore exhibit stronger identification with it.

*Note: They measured cognitive organization identification with a verbal and a visual scale, of which we adopted the visual scale as our measure of organizational identification in our study. Our definition of organizational identification is also very similar to Bergami & Bogozzi's definition of cognitive organization identification: "*self-awareness of one's membership in the organization, which is an instance of self-categorization*" (572). This statement was ultimately reduced to the term *self-categorization* by the authors who equate it and use it to define identification. Similar to our study, self-categorization or identification with an organization is defined as the perceived overlap between one's own self-concept and the identity of the organization (e.g. Ashforth & Mael 1989; Dutton et al., 1994). It is worth noting that choosing a self-categorization conception of identification seems like a vigilant move in order to avoid confusing the core of identification with its content (Ashforth et al., 2008; Dutton et al., 1994).

organizational member not only associates an attractive element with the OI, but also happens to personally care for that element being a part of OI, then we would expect an increase in organizational identification for that member. This extends from our discussion on core values as underlying identification. In brief, for identification to occur, some alignment between one's personal values and the social identity in question is required (Hitlin, 2003). The social identity here is the organizational identity and the alignment in values concerns the CSR component, such that agreement between one's CSR identity perceptions and personal values would result in stronger organizational identification. As a reminder, personal values related to CSR are referred to by '*CSR Valuation*' which reflects the extent to which one cares for the perceived CSR Identity. Our congruence hypothesis thus gives:

H(2) Individual CSR Identity Perceptions and CSR Valuation congruence positively correlates to individual's Organizational Identification

The concept of drive is also expected to operate similarly such that agreement between perceived and ideal drive is predicted to enhance identification with the organization - essentially, with respect to CSR, any agreement between what the organization is doing and personal valuations for those initiatives is expected to further identification.

Another relation that we may ponder lies between CSR identity perceptions and CSR valuation. One might presume that socially desirable connotations like CSR would be generally appreciated by an organization's membership (e.g. Rupp, Ganapathi, Aguilera & Williams, 2006), especially given that CSR enhances the image and attractiveness of the organization (e.g. Hartman et al., 2007). A member perceiving his or her firm as invested in socially responsible activities might not only identify more with the organization, but may also come to appreciate or show stronger personal valuation for those desirable undertakings. On the other hand, a skeptic might doubt the apparent intentions behind CSR as shallow attempts to gain favourable reactions and support, and therefore not exhibit increased CSR valuation just because the organization is invested in such activities. On average however, we would expect members to see CSR as a positive and fruitful endeavour, and so we focus the rest of this argument in reference to an average organizational member with positive views on CSR (this is appropriate given that our focal organization is a student-led sustainability group that is part of Concordia University, where members join mainly out of interest or passion for social issues).

In examining the relation between CSR identity perceptions and personal valuation for those elements, we consider the role organizational identification might play. Consider a member identifying strongly with the organization who learns about substantial organizational interest and investment in social or environmental issues. Having defined the self by membership and alignment with the organization, *“the individual's identity and fate become intertwined with*

those of the organization, (and) he or she becomes a microcosm of the organization” (Ashforth et al., 2008, 333). In a sense, what the organization does and represents may affect the identifying member significantly so that learning about the CSR initiatives at the firm may exact increased personal valuation for those elements (I am a proud member of A; A promotes CSR and therefore I experience increased valence for CSR). Support for such a view comes from the literature’s discussion of interaction between social identities and personal identities & values (e.g. Ashforth, 2001; Hitlin, 2003), and from the discussion of feedback of identification on its antecedents (e.g. Ashforth & Mael; 1989; Dutton et al., 1994). It is worth noting the possibility that employees may perceive some CSR elements as particularly defining the organization simply because of a perceptual bias (selective perception) induced by high personal valuation for those CSR elements. This is beyond the scope of this paper however, and we focus on the direct relation between CSR identity perceptions and CSR valuation, moderated by organizational identification - more organizational identification strengthening the positive correlation between CSR identity perceptions & valuations.

H(3)-(a) Individual CSR Identity Perceptions positively correlate to individual CSR Valuations; and (b) Organizational Identification moderates the relationship between CSR Identity Perceptions & CSR Valuations such that stronger Organizational Identification increases the positive correlation between CSR Identity Perceptions & CSR Valuations and vice versa

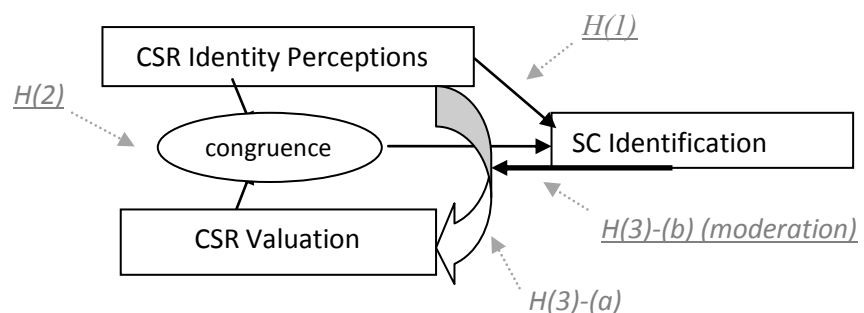


Fig.2 *H(1), H(2), & H(3) Illustrated*

Moving along, the next section extends our previous discussion on identities and focuses on social influence and the social context. The main enquiry we try to address is how members' perceptions of the CSR identity and their valuations for it are socially shaped. We base this inquiry on the general premise that one's identities, relational and comparative in nature (Ashforth et al., 2008), are a function of one's social connections (e.g. Ibarra, 1999). We therefore look at social influence theories and their associated mechanisms to provide an explanatory link between the predictions from identity theories and actual member identifications. In this vein, social network analysis is selected as a fitting tool to operationalize and make explicit the different hypothesized social influences.

SOCIAL INFLUENCE & SOCIAL NETWORK ANALYSIS

It is important to first highlight the difference between the content of the self-concept or self-conceptions (e.g. personality, skills and abilities, identities) and the content of self-evaluations (e.g. self-esteem). Both are closely inter-related, but where self-conceptions deal with the meanings and structure comprising the self and embeds the self in the social system, self-evaluations involve the emotional and evaluative functions of the self (Gecas, 1982). The main idea here is that self-conceptions are a function of self-evaluations such that positive self-evaluations typically reinforce the associated self-conceptions (Reeve, 2005). This is relevant as

we will soon consider how feedback from social interaction can affect identity confirmation and self-verification (e.g. Milton & Westphal, 2005).

In his integrative work titled ‘The Self-Concept’, Gecas (1982) notes an interesting consensus he found in the self-concept sociological literature: “If there is a central theme in the sociological literature on the self-concept it is the idea that the content and organization of self-concepts reflect the content and organization of society” (p.10). This statement can be interpreted such that the same entities and relations that society defines are to be ultimately found in self-concepts (e.g. roles, role-relationships, social positions etc). Identity lies beyond self-esteem, a purely evaluative element, and “focuses on the meanings comprising the self as an object, gives structure and content to self-concept, and anchors the self to social systems” (Gecas, 1982, 4). This definition of identity complements our previous definition and identification is viewed as one’s motivation or one’s extent of self-definition with a certain identity.

A distinction here is central to the organization of this paper. Gecas (1982) notes two general perspectives in the study of identity: the processual interactionist & the structural interactionist perspectives, of which we draw elements from both to provide a comprehensive understanding of identities in organizations. In brief, both perspectives posit that the individual and society inter-penetrate via communication, social interaction, reality-construction, and identity formation; but where processual interactionists focus on the social situation/context, the structural interactionists center on roles or role-identities (Gecas, 1982). Identity theory (role-relationships) would fit neatly under the latter with problems such as role-person merger (e.g. Turner, 1978), while social information processing (SIP) theory (Pfeffer, 1978) and social-comparison theory (Festinger, 1954) would lean towards the former. Such categorizations are necessarily reductionistic, however, and social theories typically include elements from both

camps. For example, while SIT/SCT seems to fall under the structural interactionist camp with emphasis on group categorizations and prototypicality of members, elements of social processing can be encountered such as with member socialization, identity salience, social cues, and other interactional and processual phenomena (e.g. Hogg & Terry, 2000).

The distinction between the processual and structural perspectives is a convenient categorization for this paper; and though we acknowledge the interrelatedness between both, we consider each perspective in isolation in order to understand the contributions of each to the social influence on identities. Interestingly, the social network literature similarly distinguishes between structural and relational approaches such as with the distinction between equivalence vs. cohesion (Friedkin, 1984), centrality vs. proximity (Ibarra & Andrews, 1993), and other positional vs. relational dichotomies. Strictly speaking, the connectionist or relational perspective focuses on interpersonal transmission through mechanisms like social contagion (e.g. Erickson, 1988), transitivity (e.g. Krackhardt & Kilduff, 1990), and cohesion (e.g. Coleman, 1988), while the structural or positional approach focuses on raw structural features such as structural equivalence (Friedkin, 1984), centrality (Brass & Burkhardt, 1993), and adaptation (Johanson, 2000) when explaining outcomes. Our ensuing hypotheses fall in accord with network theory's relational/structural dichotomy (e.g. Borgatti & Foster, 2003) and in close parallel to the processual/structural interactionist dichotomy proposed by Gecas (1982).

Next, we start with an overview of social network analysis and then move on to review some theories of social influence. Throughout, studying identities from a social network perspective will be justified and relevant hypotheses will be made explicit.

Social Network Analysis

The study of networks has been employed in various fields including organizational studies and management. Network studies are regularly featured in sociology and management journals contributing to the understanding of a wide array of organizational topics across different levels of analysis: individual, work unit, and organizational (e.g. Brass, Galaskiewicz, Greve, & Tsai, 2004; Kilduff & Tsai, 2003). What differentiates social network research from other social scientific approaches is the focus on the relations between actors rather than individual attributes; on patterns of interaction as opposed to isolated individual actors (e.g. Borgatti & Foster, 2003; Kilduff & Tsai, 2003). Actors, whether individuals, work units, or organizations, are seen as embedded in webs of interconnected ties that present both opportunities and constraints (Kilduff & Tsai, 2003). Network analysis provides a rigorous, quantitative methodology to study actors in relationships with one another (Galskiewicz, 2007), and starting with the dyad, the smallest unit of analysis, it offers a variety of measures to characterize an actor's connections and position in the social world. In this study, we apply network measures against measures of member CSR perceptions and valuations, thus allowing a test for any systematic relations between social connectivity and organizational identification precursors. Social network analysis is particularly suited for this purpose as it allows a close-up on dyadic relations and on the social mechanisms theorized to shape identity formation.

Different lines of reasoning are available to justify our adoption of a social network approach to our study of identities. First, according to the well-established narrative approach, identities are moulded out of narratives and are therefore a product of the social world (identities also shape the social world) (Ashforth et al., 2008). In this view, identities are seen as strongly dependent on individuals' interactions with one another with special emphasis on the use of language in creating meaning and shaping reality out of everyday experience. Individuals are

embedded in a social world where narratives are developed, shared, reproduced, modified, and interpreted among actors (e.g. Ford, 1999; Ravasi & Schultz, 2006). Central to this approach is the inter-subjective process of interpretation and meaning-creation that transforms everyday organizational experience into socially-negotiated and shared impressions (e.g. Brown, 2006; Ford, 1999). It follows that research has often espoused a polyphonic and localized view of OI when explaining phenomena such as OI's divergence from corporate definitions and OI's varying interpretations by different organizational members and subgroups (e.g. Humphreys & Brown, 2008; Luring & Thomsen, 2009). Adhering to this constructionist view, we expect social meanings or interpretations about OI (including its CSR subcomponent) to be socially shaped through shared reality construction and narrative exchanges, spreading systematically along the network of relations and forming what Lamertz (2009) termed "*identity communities in complex organizations*" (p.2). Therein, network analysis is particularly suited to track the development and diffusion of identities across social space as it allows a close-up on dyadic ties, the basic unit of inter-subjective reality construction, and because it incorporates several social theories and mechanisms that may account for the spread observed (e.g. Sweitzer, 2008).

As just stated, network analysis is compatible with and has been used in conjunction with various social influence theories which we evoke in forming our social influence hypotheses. In essence, network analysis is a tool that has often been used to test out a variety of social influence theories (e.g. SIP theory, social comparison theory, power etc). The network literature also provides a myriad of examples demonstrating how network variables predict individual outcomes such as employee attitudes, perceptions of the organization (e.g. Ibarra & Andrews, 1993; Krackhardt & Kilduff, 1990), and identities (e.g. Sweitzer, 2008) - outcomes very similar to our dependent variables. For instance, Krackhardt & Kilduff (1990) found that friendship

networks significantly shape job-related perceptions beyond traditional sources of influence such as formal position, departmental affiliation, and individual personal attributes. Thus, they concluded that ‘friends... tend to see the world similarly’ (p.150). Ibarra & Andrews (1993) also found attitudes and perceptions to be moulded by social interactions at the workplace: friendship ties produced similarity in world views and informal power hierarchies spread information and perspectives, structuring interactions between very different people.

Reiterating, social network analysis is suitable for the purpose of our investigation as it provides a close-up on dyadic and group exchanges, fits with constructionist and narrative conceptions of identity, is easily integrated with theories of social influence and has been successfully used to predict outcomes similar to ours. We therefore predict that members’ identities will be influenced by their social connections in a firm, spreading or diffusing along the network of social relations in a systematic fashion (e.g. Lamertz’s ‘identity communities’). This forms our general or umbrella proposition which will be formalized in the upcoming sections with different social theories and mechanisms to account for more detailed predictions.

Social influence

“Finding meaning in behavior and in a job environment is an information processing activity, and the information processed is frequently verbal” (Salancik & Pfeffer, 1978, 225). In answering the question of what influences an employee’s perceptions & valuations pertaining to CSR at the organization, we pay particular attention to SIP theory which posits that *“individuals, as adaptive organisms, adapt attitudes, behavior, and beliefs to their social context and to the reality of their own past and present behavior and situation”* (Salancik & Pfeffer, 1978, 226). The social environment is deemed essential in this theory as it provides cues on which

dimensions are being used in characterizing the work environment, the importance of each dimension and the way others are using each, and also a direct evaluation of the environment leaving it to the individual to create appropriate rationales (Meyer, 1994). Thus, the social context shapes attitudes, beliefs, needs, and behavior by directing an individual's attention to specific information in the environment and by providing guidance on how this information should be processed. Applying SIP theory to our study, we anticipate social influence on highlighting which CSR elements are central at the organization, on the perceived importance of those elements, and on the evaluation of the relevant CSR issues. SIP theorists further explain that social effects are especially prominent when information is missing or ambiguous (Festinger, 1954), when the stimuli are contextually relevant, and when conforming improves adaptability or 'fitting in' (Salancik & Pfeffer, 1978). Furthermore, SIP effects are also encouraged by role-relationships, such as communication of role-expectations from a superior, and by normative control from intensive interaction (Salancik & Pfeffer, 1978). The salience of social cues is also affected by group cohesiveness, conformity pressures, as well as high perceived similarity of others (Johanson, 2000). Finally, it is worth noting that both informational and normative social influence are relevant in SIP theory (e.g. Meyer, 1994).

To put SIP to life, we can picture a small marketing group that receives, via an internal memo to the entire organization, general directives from the CEO to make the organization more socially responsible. To the extent the group is familiar and cohesive and the request vague yet salient to the group (i.e. important enough to stand out in everyday functioning), SIP would predict a large extent of social influence on how the message gets interpreted. More resemblance in the interpretations of this message would be expected amongst the members of the small marketing group compared to the interpretations of others in the company (e.g. Johanson, 2000).

For example, the marketing group might be more interested in projecting a socially responsible image, in line with their marketing orientation and routine practices. According to SIP, such effects would be guided by social cues, group norms, and conforming pressures which influences information processing in a cohesive group.

In this study, SIP theory would predict a significant effect on organizational identification to the extent that it predicts significant social influence on its two components: CSR identity perceptions and/or CSR valuation. Also, to the extent that our prediction holds with agreement on CSR drive enhancing organizational identification, any social influence on Perceived or Ideal Drive would also affect organizational identification. Our study provides a test of these four variables in terms of applicability to social influence processes. Previous work with SIP theory called for a delimitation of SIP's applicability for different types of organizational perceptions (Meyer, 1994). Meyer (1994) revealed that social influence effects were more prominent for perceptions and judgements of local tasks and role attributions compared to organizational-level attributes. In line with SIP and other social theories, Meyer suggested that social influence on organizational-level attributes might not have been significant because of a lack of contextual relevance or meaning to participants. In line with his reasoning, more relevant or salient organizational-level attributes showed a stronger effect compared to more peripheral and less important ones (Meyer, 1994). Similar research, on the other hand, showed social influence to affect opinions of the organization more considerably compared to opinions of one's own work (e.g. Johanson, 2000). Johanson justified his results with the argument that social cues from colleagues might be more effective in shaping a 'correct' interpretation of organizational reality vs. the more complex and fluctuating job-related opinions. Furthermore, to the extent that organizational-level matters are more distant and ambiguous, thus more apt for interpretation

when compared to the more concrete job-related matters, Johanson's results seem well justified under SIP's theoretical contentions. This study then further tests SIP's applicability by examining if CSR identity perceptions & valuations (including perceived & ideal drive) fall within its reach.

With respect to CSR Identity Perceptions and Perceived Drive, we expect those individual perceptions to be suitable for social interpretation and influence as they are relatively ambiguous organizational-level types of perception (Salancik & Pfeffer, 1978). In addition, modern trends and increasing pressure on firms to be responsible (Chong, 2009) may have boosted CSR considerations to a higher level of awareness, thus making CSR contextually relevant in everyday firm operations and conversations and therefore a good candidate for social interpretation (e.g. Hogg & Terry, 2000). CSR Valuation and Ideal Drive are also expected to be good candidates for social interpretation and influence. Previous work with SIP has shown individual work attitudes (including affective responses such as job satisfaction and commitment (e.g. Johanson, 2000; Salancik & Pfeffer, 1978)), needs, and beliefs/opinions (e.g. Friedkin, 1984) to vary systematically with social influence. We extrapolate on these results and suggest that an organizational member's personal CSR valuation - a form of attitude or belief about the personal importance one places on working for a socially responsible firm - may similarly be contingent on social influence mechanisms. Salancik & Pfeffer (1978) explain that needs and attitudes are not necessarily individually-determined but can be a function of influence processes in a social context. SIP theory offers various explanations to account for this effect, but choosing the right explanation has been noted as a challenge (Salancik & Pfeffer, 1978). Of the proposed explanations for social influence on attitude development, and on organizational perceptions as well, Salancik & Pfeffer (1978) mention the constraints the social environment imposes on the

available and legitimate rationalizations for an individual's beliefs and behavior. The authors further explain that to maintain credibility and coherence with the social world, an individual chooses among socially acceptable justifications to shape cognition at key moments such as when an attitude is socially requested. They also explain that the form and content of attitude expressions and justifications depend on the request for the attitude, the purpose for the request, and any other factor that might affect the salience and availability of relevant information. In that way, the social context not only filters and guides the processing of information external to the individual but also shapes the interpretation of personal information and attitudes such as one's own past thoughts and actions (Salancik & Pfeffer, 1978). It is worth reminding that social influence may be normative as well as informational (e.g. Meyer, 1994) so that everyday understanding of events and conversations may be equally shaped by socially-disseminated information and/or by normative pressures to conform.

Self-evaluations in a social context also provide additional explanation to our premise of social influence on perceptions, needs, attitudes, and beliefs. Self-esteem can be contingent on fulfilling one's social roles and group expectations (Sluss & Ashforth, 2007) where social feedback and fitting-in become especially important when conformity pressure is high as with cohesive groups and similar others (Salancik & Pfeffer, 1978). As mentioned, CSR valuation is situated within one's personal identities, and like any identity, depends on feedback from the environment to get established and sustained (Burke, 1991). Our earlier distinction between identities and self-esteem was necessary for conceptual clarification; however, both are inextricably related such that positive feedback on a valued identity reinforces that identity and brings along positive self-esteem, while negative feedback provokes identity interruptions and arises feelings of distress (Burke, 1991). The social environment therefore not only guides the

development of one's identities and values, it also provides feedback on one's person, encouraging the shaping of personal attitudes and beliefs towards socially-desirable and shared norms (see sense-giving/breaking - Ashforth et al., 2008).

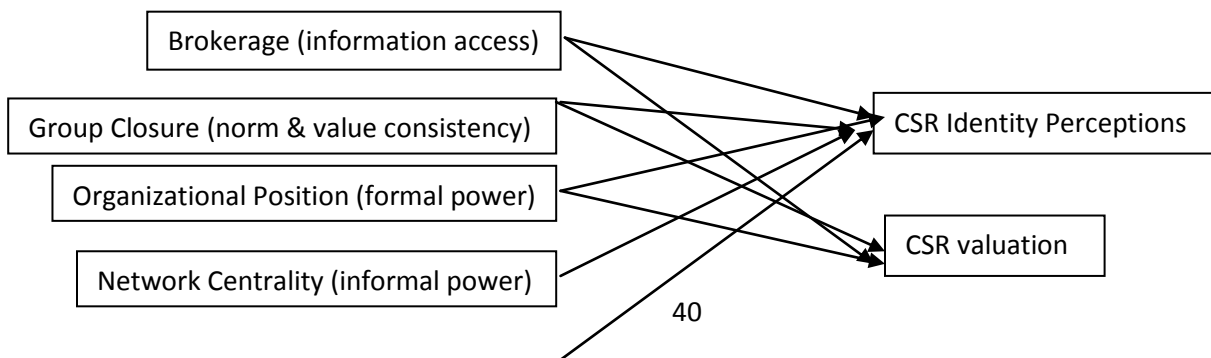
Even if there is no significant normative pressure and feedback to generate conformity on CSR valuation, informational influence may be at least equally relevant here. For example, an employee might describe to some co-workers a new CSR initiative along with its values and benefits, thereby inducing them to see value where otherwise non-existent and perhaps altering their personal CSR attitudes. In any case, based on SIP theory and related literature, we predict that social influence will have an effect on employees' CSR identity perceptions and CSR valuations; and to summarize, SIP effects may occur due to overt statements by others, social structuring of one's attentional and cognitive processes, social interpretation of situational cues and events, as well as influence on an individual's interpretation of his own personal needs, values, thought, and behavior (Salancik & Pfeffer, 1978). Moreover, the constantly operating processes of identity-confirmation (Milton & Westphal, 2005) and identity-control (Burke, 1991) render social feedback especially relevant in maintaining self-esteem and shaping personal identities.

It should be mentioned that SIP effects might be more applicable on perceptions of the underlying CSR drive at their firm compared to CSR Identity Perceptions. This is because underlying drive is a relatively more ambiguous concept as it requires integration of relevant impressions into a reasonable inference about corporate motives (e.g. was our waste-reduction initiative driven mainly by cost-reduction considerations?). When information is missing or ambiguous, uncertainty reduction is highlighted by SIT (Hogg & Terry, 2000), SIP (Salancik & Pfeffer, 1978) and social comparison theory (Festinger, 1954) as a strong motive for social

communication, interpretation, and identification. In that view, increasingly vague matters such as CSR motives might be better candidates for social influence where participants draw from socially shared or constructed meanings in an attempt to better understand their surroundings (see ‘sense-making’, Ibarra & Andrews, 1993).

Mechanisms

Authors using SIP theory have criticized its lack of articulation of mechanisms of social influence and have resorted to social network analysis to “provide the necessary tools for elucidating key social-information-processing mechanisms” (Ibarra & Andrews, 1993, 277). Several mechanisms of influence have been consistently associated with SIP, and those can be divided into the cohesion and positional perspectives (e.g. Johanson, 2000; Meyer, 1994). The cohesion approach involves attitudes and beliefs that spread across individuals through contagion via direct and indirect contact. Cohesive groups increase contagion by providing pressures to conform resulting in more similarities in behavior and opinions (Johanson, 2000). On the other hand, the positional or structural approach (Friedkin, 1984) does not require social contact and explains homogeneity in attitudes and behavior as a result of shared social positions in the social structure as a whole (e.g. roles). Johanson highlights structural equivalence as falling in the middle between relational and positional camps while ‘adaptation to similar social demands and expectations’, known as regular equivalence, is viewed as a purely positional mechanism (2000, 402).



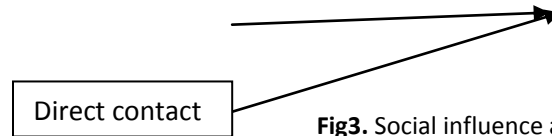


Fig3. Social influence and the identification model

Fig.3 illustrates the main mechanisms of social influence that we consider in this paper. With respect to identification, we do not consider social influence on identification directly as it is modeled as a function of its two components, CSR Identity Perceptions & Valuations, so that any influence on either component is interpreted as having an effect on identification. For the different social mechanisms illustrated, we use social network analytical methods to test inter-actor connections against our dependent variables. (In this model, Perceived & Ideal Drive are presumed to be part of CSR Identity Perceptions & Valuations, respectively.) Next, we move through the proposed model in Fig.3 and specify our network hypotheses.

-Direct Contact

Starting with the relational or connectionist aspect of social influence, we look at direct contact as our first mechanism of influence. Direct contact is the simplest and most basic social mechanism and is typically defined by the presence of a direct or indirect contact between 2 actors (i.e. 1st, 2^{nd or +} degree) (Meyer, 1994). This necessitates a strictly dyadic standpoint and is compatible with social comparison theory (e.g. Erickson, 1988; Friedkin, 1984) and SIP theory (e.g. Ibarra & Andrews, 1993; Meyer, 1994), where studies have shown simple, direct contact to be a significant carrier of social influence causing convergence in attitude among socially proximate individuals. Attitudes and perceptions are socially constructed from direct interactions where the social environment guides interpretations by providing cues as well as information on others' evaluations (Ibarra & Andrews, 1993). Further, direct network links are seen as conduits

for the exchange of culture and norms with social influence especially effective from comparisons with similar others, again mostly when one's opinions are uncertain (e.g. Festinger's, 1954; Krackhardt & Kilduff, 1990). Intensity and frequency of interaction also play a significant role in the impact of direct contact (Burt, 1980).

From a constructionist standpoint, two individuals that are in frequent contact with one another at the workplace will tend to commune in a shared construction of reality (Brown, 2006). One way members partake in joint reality construction is through identity-relevant narratives which are “*stories about organizations that actors author in their efforts to understand, or make sense of, the collective entities with which they identify*” (Brown, 2006, 734). Through verbal and symbolic exchanges, they will cue and guide one another's attention and interpretations of various matters, both internal and external to the individuals, together contributing to shared reality-construction that may very well produce homogeneity in worldviews given sufficient contact. Shared worldviews include perceptions and interpretations of the organization's activities along with relevant attitude and value formation. A feedback loop also affects identity exchanges in dyads so that any time both value similar loci (e.g. an aspect of the firm's CSR identity), both actors' identities are confirmed and justified with further identity-confirming perceptions, behavior, speech, symbols and so on (Milton & Westphal, 2005). Thus, and in line with Meyer (1994) and Johanson's (2000) results on organizational perceptions and attitude formation, we expect two actors in direct contact to report similar CSR Identity Perceptions & Valuations:

H(4) Actors in direct contact show similar reports for their CSR Identity Perceptions & CSR Valuations

-Closure

Next in line is another cohesion mechanism, group closure. A member of a group with high closure (e.g. a clique, where everyone is connected to everyone) experiences a tightly-knitted social arrangement that facilitates identity consistency, norm & value adherence, and homogeneity of attitudes (Coleman, 1988). Closure falls in the relational camp and is associated with group solidarity which promotes compliance to rules, upholding of norms and values, and reducing the need for control (e.g. Adler & Kwan, 2002; Coleman, 1988). According to Coleman, closure promotes shared identity and norms helping group members enforce and maintain desired standards with increased trustworthiness and respect of obligations and expectations (Coleman, 1988). Essentially, direct contact lies at the heart of closure but with the additional pressures of normative control and conformity which increase similarities in behavior and opinions (Johanson, 2000). The tighter and more frequent interactions between cohesive group members also lead to more shared reality-construction through common experiences, similar interpretations and sense-making (Brown, 2006; Ford, 1999).

Results with SIP research has generally produced consensus in regards to the effects of group closure on members' attitude homogeneity. Indeed, several researchers produced and reproduced the finding that group membership explains individual attitudes better than personal characteristics (e.g. Herman & Hulin, 1972; O'Reilly & Roberts, 1975). Other studies using social network analysis also showed homogeneity of organizational perceptions and attitudes to vary systematically with group closure (e.g. Friedkin's, 1984; Ibarra & Andrews, 1993). Research combining SIP and social network analysis also found organizational perceptions and attitudes to be strongly influenced by group closure (Johanson, 2000; Meyer, 1994) - members of the same group exhibiting more homogeneity compared to outsiders. In line with these findings,

we expect two actors with shared membership in the same groups to have similar CSR Identity Perceptions & Valuations:

H(5) Actors partaking in the same subgroups show similarity in their reports on CSR Identity Perceptions & CSR Valuations

-Brokerage

In contrast to closure's emphasis on norm and identity consistency, brokerage across structural holes connects otherwise unconnected actors and is typically a rich source of information (e.g. Adler & Kwan, 2002; Podolny & Baron, 1997). A broker's network is typically large and sparse with few redundant ties which bring along the benefit of a wider access to knowledge and resources (e.g. Burt, 1993). The fact that a broker, by definition, connects otherwise unconnected actors implies that a broker is potentially exposed to more diverse information compared to others who's networks have less breadth. The idea that linked actors share information and influence underlies the effect of brokerage which positions an actor between socially separated individuals allowing the broker to be exposed to the different views that are developed and shared within each detached branch.

The concept of brokerage combines both relational and structural perspectives. From a relational standpoint, a broker potentially capitalizes from the resources and information accessed to through the diverse dyadic relations developed in the network. Through direct dyadic contact, contagion operates as the most basic mechanism of influence behind brokerage, spreading information, ideas, behavior, and so on between people. From a strictly structural standpoint however, actors exhibiting high brokerage in the network may share certain characteristics (e.g. similar attitudes) only because they enjoy rich brokerage positions,

irrespective of the actual individuals they are connected to. In other words, individuals that broker a similar number of structural holes might be influenced solely by that structural distinction regardless of the relational influences or contagion that their connections may bring. This is a form of 'structural equivalence' (e.g. Erickson, 1988; Ibarra & Andrews, 1993; Kilduff & Tsai, 2003) which does not require individuals to be in direct contact in order to explain their convergence on some variable. Instead, structural equivalence focuses on the configuration of connections that each individual develops within a network, the premise being that individuals who connect similarly to other people will tend to develop similar cognitions and behaviors due to their unique social position (Erickson, 1988; Friedkin, 1984). However, isolating the effects of equivalence from those of direct contact or cohesion has sometimes produced non-significant results for equivalence. For example, Friedkin (1984) contrasted cohesion with structural equivalence in accounting for attitude homogeneity and his results showed a dominant effect for cohesion, leaving only a slight unexplained portion of variance that could be accounted for by structural equivalence. Thus, when direct contact effects were controlled for, structural equivalence lost most of its association with predicting homogeneity in attitudes. Meyer (1994) produced similar results when he controlled for cohesive ties rendering structural equivalence non-significant in predicting actors' perceptions and attitudes on various organizational matters. Johanson (2000) also found that equivalence lost much of its explanatory power when other variables were controlled for. In this vein, Friedkin argued that it is unlikely that 2 random sets of equivalent connections produce similar influences on two separated actors. Still, structural equivalence has been valued as a broad construct that includes cohesion effects and other mechanisms (Erickson, 1988; Friedkin, 1984).

In this study, and in line with previous results, we anticipate negligible effects for brokerage from a strictly structural perspective but expect significant effects based on the connectionist view. We therefore expect a strong broker to be exposed to diverse sources of information and opinions about the firm's CSR because of the breadth of connections enjoyed, and to reflect this by conveying a CSR view and valuation that more closely approximates the average view and valuation of her direct contacts or '*ego-alters*'. To the extent that ego's alters are diverse enough to represent a sample of the population (i.e. the whole network), ego will be subjected to social influence stemming from the entire network. However, since this is not always likely, we simply look at the average of an actor's ego-network to predict ego's reports on CSR perceptions & valuations. The more brokerage an actor enjoys in her ego-network, the more likely that she will be influenced by all the alters and therefore come to represent that group's average. As an illustration, picture an actor low on brokerage in her ego-network (n=5) in which she has 3 redundant connections (i.e. all 3 already connected to each other). Such an actor is part of a tight clique as part of her ego-network and is probably skewed towards the clique when it comes to representing the entire group. We also test the idea that breadth of connection in the entire network (network betweenness), not just in one's ego-network, might bring resemblance to the average reports of the entire network. The latter effect would occur via both direct and indirect linkages (Friedkin, 1986) so that the more an actor brokers or connects with the entire network, the more his reports are likely to resemble the network's average reports. Brokerage in one's ego-network and brokerage in the entire network are therefore expected to bring an actor closer to his ego-network's views and to the entire network's views respectively:

H(6) -(a)The more brokerage an actor enjoys in his ego-network, the closer the resemblance of his CSR Identity Perceptions & Valuations to the averages of his ego-network's; and (b) the more brokerage in the entire network, the closer the resemblance to network averages

Based on SIT/SCT, looking at the average response of the entire sample and of the different ego-networks is reasonable given that the theory entertains the idea of a member deriving a conception of the group and its characteristics based on an abstraction of the prototypical member of that group (e.g. Hogg & Terry, 2000). Ideally, this theoretical prototype has characteristics representing the average of the group in question, but the prototype is also contingent on everyday interactions and influences within the firm. *“Because members of the same group are exposed to similar social information, their prototypes usually will be similar and, thus, shared”* (Hogg & Terry, 2000, 124). Given high brokerage, a member will be influenced more or less ‘evenly’ by the ego-network and thus conceive a prototype that is better representative of the unit in question. The more an actor is connected with the entire sample, the more the conceived prototype will include input from the entire sample, thus better approximating the average view of the population.

It is worth noting here that group closure may generally have a stronger effect on CSR valuation compared to direct contact alone, and this because of increased pressures to conform to group norms and values as we already discussed (e.g. Johanson, 2000). Therefore, even if a broker shows CSR perceptions more similar to the average of his alters, a broker that is also a clique member may exhibit valuation that more closely approximates that of his or her group.

-Formal & Informal Power

Power influences stem from formal positions in the hierarchy (e.g. supervisor, project manager, director) as well as from central positions in the informal social network (e.g. in-degree, closeness, and betweenness centrality) (e.g. Brass & Burkhardt, 1993). Similar to Brass & Burkhardt (1993) who hypothesized an inter-relation between power behavior and powerful positions, we don't specify any temporal order between an actor's influence (behavior) and his/her social position, but simply regard a high position in the formal hierarchy and a central position in the informal network as indicative of an actor's power. Power here is viewed as a structural concept defined by an actor's social position, irrespective of the actual people one is connected to. And though beyond the stretch of this paper, we speculate that formal positions generally hold more power than informal positions (e.g. Ibarra & Andrews, 1993; Brass & Burkhardt, 1993) as they more likely include several of the six bases of power that are widely cited in the literature (reward, coercion, legitimate, expert, referent, and informational power (Raven, 1993)). The image of the strong legitimate manager who controls rewards, threatens with coercion, and embodies informational weight and expertise contrasts with the socially-savvy, charismatic actor who is well-liked and well connected in the network of friendship relations.

The main idea in this section is that powerful actors should exert a homogenizing influence on their immediate contacts' perceptions and attitudes, including their CSR perceptions and valuations. Although power is defined as structural, the mechanism through which a powerful actor spreads influences is relational and requires direct dyadic contact just like with contagion (power influence is essentially similar to direct contact but with more influence due to role-expectations and other factors such as the 6 bases of power mentioned above). The influence

of powerful actors on neighbouring CSR perceptions and valuations can be justified by multiple lines of reasoning.

Sluss & Ashforth (2007) discuss how actors with less power typically defer judgement to their role-relationship partner who has more power. They also discuss overidentification in a role-relationship, an extreme where one becomes dependent and heavily influenced by a more powerful person, to an extent where individuality is suppressed and one looks at the powerful other for appropriate behaviors, thinking, and even feelings (Sluss & Ashforth, 2007). Any dyadic relation is a potential role-relationship which brings an associated relational identity to its constituents. Regardless whether this identity describes a general role identity or a more personalized one (see above section on identities), it details specific norms of being and thinking that may very well generalize to an actor's collective identity (which includes the CSR identity) as well as contaminate his or her own personal identity and values. To reiterate, Sluss & Ashforth (2007) proposed that relational identification may generalize to identification with the salient groups and categories that the two individuals share, while Hitlin (2003) proposed that the relationship between our core values and identities is reciprocal or bidirectional. A power differential may sway the influence in a role-relationship to a single direction, thus only affecting the less powerful actor's views and attitudes via the role-relationship identity. It should be noted that role-relationship identities are ubiquitous and relevant to all the social influence mechanisms considered as they are part of each person's self-concept and are affected and defined by dyadic interaction. They are especially relevant here, however, as we discuss formal positions which bring forth role-relations with high power differentials such as between a senior manager and an entry-level employee.

The literature on power and identity also views identities and identification as heavily affected by political interests, power relations, and struggles for legitimacy (e.g. Rodriguez & Child, 2008). A powerful actor is motivated to actively exercise influence in order to advance the organization's and/or his or her own personal interests (Schein, 1977). In that view, a powerful actor can be quite influential on neighbouring perceptions and opinions - with sense-breaking, sense-giving (Ashforth et al., 2008), and reinforcement control (Bandura, 1969) as candidates for a potential processual model for power influence. Last but not least, a quick reference to Social-Learning Theory (Bandura, 1969) is useful here as the theory depicts individuals as highly motivated to copy and imitate others of high status who control rewards and resources. Thus, not only do power differentials more or less automatically translate into power influences such as in an employee's socialization into a subordinate role, but powerful individuals are also motivated to exercise their power to maintain and further their own and/or organization's interests, while inferior actors may be equally motivated to learn and get influenced by others of higher status. We therefore expect powerful actors to influence the CSR identity views and valuations of their direct contacts into convergence with their own:

H(7)-(a) Powerful actors influence their direct contacts' CSR Identity Perceptions & Valuations; and H(7)-(b) Formal positions of power show more influence compared to informal positions of power (centrality in the informal network)

-Network Content

Content refers to the type of informal relation to be surveyed and we differentiate between friendship, task-related or advice, and informal-communication relations (Burt, 1980). The type of relation can be particularly important in relation to certain outcomes, and in fact, research has shown that network mechanisms depend on network content in their effects on actors'

perceptions and attitudes (e.g. Brass & Burkhardt, 1993; Ibarra & Andrews, 1993). For example, in predicting job-related attitudes, proximity (i.e. direct contact) has been found to be more effective with the friendship network while centrality (a positional index of power) had more impact with the advice network (Ibarra & Andrews, 1993). The logic behind this effect lies in the actual relations modeled by each network type. Friendship ties are of a close and personal nature so that two actors in a friendship relation experience an intimate connection that encourages social influence. This is complemented by Festinger's (1954) contention that influence is more likely between similar individuals such as friends who typically select each other based on similarity. On the other hand, task-related ties are not as intimate and can be very impersonal so that merely working together does not necessarily put two actors in a favourable environment for influence. However, being central in the task-related network constitutes more power compared to centrality in the other networks since it places an actor in a vantage position with access to valued resources such as privileged information and expertise, thus maximizing the homogenizing influence of power (Brass & Burkhardt, 1993). As a result, to the extent that the friendship network involves more similarity and influence among friends, we expect direct contact and group closure to bring more homogeneity in views and valuations in the friendship network compared to their effects in the task-related/advice and informal-communication networks. And from a resource-based perspective, because the task-related and/or informal-communication networks are more instrumental and asymmetric in nature, we expect centrality in the instrumental networks to show a stronger result compared to centrality in the friendship network (Ibarra & Andrews, 1993). In line with previous findings and the above reasoning:

H(8) Contagion and Closure have a stronger effect in the Friendship network while Power has more impact in the instrumental networks (Task-related and Informal-Communication)

METHODOLOGY:

We used a survey, the most utilized data-gathering method in social network research, to obtain our data for this study. Our questionnaire (see Appendix-B) asked participants to give their responses on questions pertaining to our identity-related variables (i.e. CSR Identity Perceptions, CSR Valuations, CSR Drive, & Organizational Identification) and to their social connections at the group. We also gathered information on some secondary matters and demographic variables for use as controls. The research site was Sustainable Concordia (see below), a student-led organization at Concordia University, Montreal consisting of around 150 members who are dispersed between Concordia's SGW-downtown and Loyola campuses. A link to the survey was sent online to all the group members who either work onsite at one of three main locations - main downtown office, Concordia greenhouse, & Loyola R4 composting site -, or who work offsite through numerous projects and collaborations, some being administrative or faculty members at the university. The research design was two-fold and consisted of separate analyses at the individual and dyadic levels. First, we tested the effects of CSR identity perceptions, valuations, and drive on organizational identification at the individual level (i.e. each member's reports were tested against the dependent variable *identification* with the group), and second, we computed measures of dyadic similarity for each of the previous predictor variables (i.e. CSR identity perceptions, valuations, and drive) and used them as the dependent variables for our dyadic analysis; the independent or predictor variables in our dyadic analysis reflected dyadic proximity or similarity in positions in the social network (e.g. 2 actors in direct contact). Finally, we conducted a set of analyses at the individual level where we computed scores for each actor's extent of brokerage and centrality in the network and we tested those

against measures of convergence with the actor's neighbouring CSR Identity Perceptions & Valuations. In sum, the precursors to identification (i.e. CSR perceptions, valuations, & drive) were computed and used in several ways: first, straightforwardly as independent variables for predicting identification at the *individual*-level; second, as *dyadic* similarity (or difference) scores which were used as dependent variables against the dyadic independent variables (measures of dyadic proximity or positional similarity); and third, as dependent variables also, but at the *individual*-level, yielding a score of agreement between an individual and his group of direct contacts that we tested against individual brokerage and centrality scores (not for drive).

Research Site & Respondents

The study was carried out at Sustainable Concordia (SC), a student-driven group which sprang in 2002 as an initiative to drive Concordia down a path of sustainability. Through university-wide participation the project has achieved great success, and is now officially a multi-stakeholder partnership where students, staff and faculty work together to promote an ecologically aware, socially just, and economically responsible society. The group had CSR or sustainability (the terms can be used interchangeably) at the core of its organizational identity since it was founded on sustainability values and the mission of implementing those values in the community. Although SC is intertwined with and dependent on Concordia University, it is essentially a separate entity as it is managed independently, conducts its own operations and hiring, has its own budget, and operates community projects not necessarily exclusive to university audiences. SC represents an unusual organization since it focuses solely on CSR and has CSR at the center of its identity. Sustainable Concordia is also special because of its organization: it is a nexus that engages students, staff, faculty and administrators to work together in non-hierarchical, consensus-based decision-making processes to address issues of sustainable development on

campus. The key players in keeping this initiative moving forward are the Sustainability Coordinator, the Environmental Coordinator, and the student-run working groups (R4, allego, the Ambassadors, Blueprints for Change, the Campus Assessment, the Sustainability Action Fund, the Rooftop Greenhouse, and the John Molson Sustainable Business Group). As mentioned, the group consists of around 150 members who are spread amongst various locations. Our target was to gather responses from the entire membership, but after some deliberation with the central coordinators, a more compact sub-sample was defined which consisted of a central group of 60 members who were relatively more active at SC and who showed higher levels of involvement and contact within the organization.

Procedure

The survey was designed in consultation with the 2 central coordinators (the Sustainability & Environmental Coordinators) who helped compose and select the CSR items that made it onto the survey. Those items were extracted from the subject matter and sustainability assessments found on Sustainable Concordia's website, and they reflected the major CSR themes or areas of focus that the group partakes in.

The survey was originally made available online, and the link and request to complete it were sent out electronically by the Sustainability Coordinator to all group members (N=154 members). Those members included 22 Hub members, 37 coordinators, 15 board members, 49 Food Systems members, and 31 R4 coordinators. Two reminders were sent out to the sample by the Sustainability Coordinator at around 1-2 week intervals, and a link to the survey also appeared on the SC electronic newsletter. The second reminder included an incentive of \$5 to each member to fill out the survey. An item that collected the mailing address of respondents

was added to the survey and a total of 20 respondents obliged, 7 of which refusing to accept the incentive or deciding to donate it to Concordia or Sustainable Concordia (comparing the responses of the ‘incentive’ and ‘no-incentive’ groups showed no noticeable differences – see Table xix, Appendix-A). To boost response rates further, cold calling, emails, as well as onsite visits with paper copies of the questionnaire were performed for about 3 weeks (only four questionnaires were filled on paper and comparisons between paper and electronic responses showed virtually no differences - see Table xix, Appendix-A).

The end result was an overall response rate of 36% with **56** responses from the total of 154 targeted members. The central group that we defined consisted of 60 members from the original population (N=154) where **45** responses from our total of 56 fell in this group for a return rate of 75%. Still, all 56 responses were used when addressing the first 3, non-network hypotheses, whereas only the 45 central ones were utilized in constructing and analysing our social networks. The respondents were full-time & part-timers and consisted of coordinators, volunteers, interns, Concordia administrative staff, faculty members, and facilities management staff.

Measures:

Dependent Variables

Note: CSR identity perceptions & Valuations, as well as Perceived & Ideal Drive are both independent and dependent variables, depending on whether we are looking at the first set of analyses or the network analyses.

- CSR Identity Perceptions: we take a relatively eclectic approach that uses elements from case study, document analysis and perceptual measurements (Waddock & Graves, 1997) and we extract our 15 CSR items from the focal group’s CSR materials (website and mission statements,

employee handbook, and sustainability assessment) and through some interviews with SC coordinators (see Appendix-B). Each respondent was asked to report on his or her perceptions of Sustainable Concordia's CSR initiatives by rating each CSR item in terms of its importance to SC's identity on a 7-point Likert scale (1 representing 'not at all important to SC's identity' and 7 representing 'extremely important to SC's identity'). An example of an item on this scale is: rate the importance of the following to SC's identity: "increasing environmental awareness and responsible practices among students". The scale also included 3 items that represent the 3 central values embraced by the SC group - ecological integrity, economic prosperity, and social equity – and similarly asks to rate the importance of each with respect to SC's identity on a 7-point Likert scale. Cronbach's coefficient alpha for the 15 items was **.835**.

- Personal CSR Valuation: to reveal personal valuation or identification with the different CSR aspects of the group, we asked participants to consider the exact same 15 CSR items used for CSR identity perceptions, and to similarly rate each on the same 7-point scale, but this time with respect to their own person or identity. Cronbach's coefficient alpha for the 15 items was **.903**. We formulated the questions as follows: "how important to my identity is being part of a group/university that strongly values ...". The phrasing in our rating scale was modeled after Dollinger, Preston, O'Brien & DiLalla's (1994) identity scale (i.e. 1=not important to my sense of self/identity, and 7=extremely important to my sense of self/identity). In using the exact same items to uncover how participants perceive and personally value CSR at the group, we follow an already established way of conducting this type of inquiry such as with Foreman & Whetten (2002) who used this method to gauge the organizational identification of members at a co-op, and van Marrewijk & Werre (2003) who developed a CSR scale to identify and compare perceived and ideal CSR values in a firm. The same last three items used for the CSR perception

scale were also employed for personal valuation, again framed in reference to respondents' personal identity and ideal preferences (see Appendix-B).

- Perceived & Ideal Drive: for Perceived Drive, to uncover the dominant motivation or drive behind CSR, as perceived by each respondent, we included an ordinal measurement scale that asked respondents to pick the CSR drive that is most applicable to SC out of 4 possible choices (from van Marrewijk & Werre, 2003). The items constituted a rank ordering of motives from lower to higher reflecting a hierarchical view of CSR (e.g. Sethi, 1979; van Marrewijk & Werre, 2003); starting with the relatively primitive motives of profit maximization and compliance, and evolving towards higher 'caring' values in addition to win-together, synergistic motives - the latter two reflecting value systems such as responsiveness (Sethi, 1979) and synergistic & holistic ambitions (van Marrewijk & Werre, 2003). For Ideal Drive, the same ordinal scale was used but the question was framed so that participants chose the option that corresponds best with their preference for a dominant CSR drive at SC (see Appendix-B).

- Organizational Identification: organizational identification was measured with one of the two items that Bergami & Bagozzi (2000) used for which they reported an Alpha of .71. The items seemed to function equally well with tests of convergent validity and generalizability for both full-time and part-time employees in Bergami & Bagozzi's (2000) study. We selected the visual item and adapted it for this study where it asked participants to select the level of overlap between their identity and SC's identity, and this represented by two circles ranging from being completely separated (no identification) to being completely overlapping (very high identification). We used the visual item three times to measure identification with Concordia University, identification with Sustainable Concordia, and to measure the perceived overlap between Sustainable Concordia and Concordia University's identities (see Appendix-B).

Independent Variables

-Social Networks: network surveys typically ask respondents from a target sample to report on their ties with others. Each relation between two actors has a form and content. The form is the strength (measured by closeness, duration, and frequency) or simply the presence or absence of a relation and the content is the type of relation that is pondered (Burt, 1980). The content or type of relation can be virtually anything the researcher fathoms and has typically included friendship, strictly work or task relations, advice, social support, and group affiliation. In line with numerous network studies, we selected to focus on the instrumental, friendship, and informal-communication networks, and we chose to focus simply on the presence or absence of ties between actors for each relation type. The instrumental network, otherwise known as the task-related or advice network, was measured with a question composed of a combination of what Podolny & Baron (1997) and Ibarra & Andrews (1993) used to measure their instrumental networks: Podolny & Baron (1997) asked their respondents to name “*the work-related contacts from whom you regularly sought information and advice to enhance your effectiveness on the job*” while Ibarra & Andrews (1993) asked their respondents to name those “*who are important sources of professional advice, whom you approach if you have a work-related problem or when you want advice on a decision you have to make*”. Combining the two, we asked our participants to “*name those that you are most frequently and intensely in contact with to successfully accomplish your job, those who are important sources of professional advice and information*”. The friendship network was measured by asking participants to name those “*who are very good friends of yours, people who you see socially outside of work*” (Ibarra & Andrews, 1993). Our measure for the informal-communication network very closely resembled Podolny & Baron’s (1997) measure for their strategic information network which reflects a member’s social contacts

for obtaining general information and “goings-on” at the firm (what the authors informally termed as “gossip”). We asked participants to name those “*who you talk to at the workplace for any form of informal communication such as everyday news and events, gossiping, casual chatter, etc*) (see Appendix-B).

In measuring ties, respondents may be given a roster of all the names in the sample and asked to select those they are in direct contact with for a given relation, or they may be asked to recall the applicable names. Even though recognition is associated with higher reporting accuracy compared to recall (Marsden, 1990), we still opted for the recall method for pragmatic reasons. Our resultant raw network data was used to construct an $N \times N$ adjacency matrix for each relation type, and those matrices were used in computing the different network measures as indicated next. Such matrices are the starting point for most network analysis and represent who is ‘adjacent’ or next to whom in the defined social space (Hanneman & Riddle, 2005). Adjacency matrices may be symmetric or asymmetric (i.e. directed). A symmetric matrix has all its ties reciprocated (e.g. if Actor A selects Actor B as a friend, B also selects A, or in other words reciprocates). Real-world relations are often asymmetric where one person may feel close to another without that feeling being necessarily mutual or reciprocated (Hanneman & Riddle, 2005). Our original adjacency matrices reflected directed relations (i.e. asymmetric) where the rows in our adjacency matrices represented the source of directed ties and the columns the targets (Hanneman & Riddle, 2005). We did compute 2 symmetrised versions (symmetrised-minimum & symmetrised-maximum) of our original matrices to test alternative definitions of our relations: the first, a conservative approach that symmetrises the original matrices to include only ties that are reciprocated (replaces the values in the cells X_{ij} & X_{ji} by the smaller or ‘minimum’ value in either); and the second, a more permissive approach that automatically reciprocates each

tie (replaces both cells with the larger or ‘maximum’ value from either cells x_{ij} or x_{ji}). Such differing conceptualizations produced slightly different results in our analysis and were mainly used in differing operationalizations of subgroups and to double-check some odd results by using the more conservative version of the independent variable in question.

It is important to reemphasize that Direct Contact, Group Closure, & Structural Equivalence were operationalized at the dyadic level (i.e. two actors in direct contact, in similar subgroups, or in equivalent positions) where their associated dependent variables reflected dyadic similarity (or dissimilarity) on CSR perceptions, valuations, & drive. On the other hand, Brokerage & Centrality were operationalized at the individual level and their associated dependent variables reflected an individual’s difference in CSR perceptions & valuations in contrast to proximal network members.

- Direct Contact: with binary network data (tie present or not), the adjacency matrix only reveals direct connections between actors (Burt, 1980), and so our adjacency matrices essentially represented direct dyadic contact in the *friendship*, *task-related*, and *informal-communication* networks. Each NxN matrix (45x45) had its cells represent the presence or absence of direct contact between a given dyad – a dichotomous ‘0 for absence of, and 1 for presence of a tie’ (e.g. Meyer, 1994). The matrices were directed and so the rows represented outgoing directed ties while the columns represented incoming ties. We also computed what we termed the ‘Summed’ or ‘Joined’ matrix which added the relations from all three matrices, therefore representing any or multiple direct contact (multiplex ties) between dyads in the network. Multiplex ties are ties that connect actors on more than one relation type and are recognized as especially durable in the literature (Kilduff & Tsai, 2003). As noted above, we computed 2 symmetrised variations of

each of our direct contact or adjacency matrices: a symmetrised-minimum version and a symmetrised-maximum version.

- Group Closure/Cohesion: we considered 3 slightly varying conceptualizations of a cohesive group - *cliques*, *k-plexes*, & *n-clans* - and computed them through UCINET's subgroup algorithms for each of the 3 network matrices. First, similar to Meyer (1994), we used the most stringent criteria when defining a group, the clique – otherwise known as a "Maximal Complete Sub-Graph". A clique is a group of at least 3 actors that has all its members share the same relation (e.g. friendship) with one another.

Next, we computed K-Plexes which is one way of relaxing the stringent clique criteria (Hanneman & Riddle, 2005). K-Plexes allow actors to be members of a clique if they have ties to all but k other members. It requires that group members have ties to most other group members and tends to spot "*overlapping social circles*" when compared to the clique method (Hanneman & Riddle, 2005). Though we set K at a conservative value of "1", our K-Plexes gave differing results compared to the other conceptualizations.

N-Clans is another more relaxed variation to the strict clique definition. N-Clans allow actors to be members of a clique as long as they do have ties to some member *and* are no further away than n steps (usually 2) from all members of the clique. An extra criterion also requires that the 2-step connection pass through a member of the clique and not an outsider (Hanneman & Riddle, 2005). Thus, the friend of a clique member is also a member of the N-Clan. This variation is useful and integrates 'direct contact' into our closure hypothesis wherein homogeneity can be seen as stretching to the outer borders of a clique. We also computed two variations of the N-Clans, one using a symmetrised-maximum version of the matrices that maximizes ties (i.e. uses

both incoming & outgoing ties as indicative of tie presence), and another using a conservative symmetrised-minimum version that only regards reciprocated ties as actual ties (i.e. Actor A names B while B also names A for a given relation). This gave a range from a stringent definition of an N-Clan (i.e. only clique members with reciprocated ties + their reciprocated direct contacts) to a more relaxed version which considers any tie when computing the N-Clans. As expected, this gave a differing arrangement of n-clans and n-clan memberships, which is not surprising given that reciprocation rates were at 18, 19, and 12% for friendship, task-related, and informal-communication ties respectively, so that eliminating non-reciprocated ties took away a significant portion of the relations used to build our subgroups.

The actual independent variables that we used against our dependent similarity/dissimilarity dyadic measures were *overlapping group affiliation* matrices that UCINET produced for each of the different subgroups that we computed, for each relation type. An entry in an NxN *overlapping group affiliation* matrix is a count of the number of network subgroups in which both members of a dyad are members (0= no overlapping group memberships; 1 or more depending on the number of common memberships). Each overlapping group affiliation matrix reflected the number of common memberships for members of each dyad in the specific type of subgroup defined within a given network content. The more a dyad partakes in common subgroups, the more homogeneity we expect in its members' views and valuations.

- Brokerage: in line with well-established literature, brokerage is conceptualized as the extent to which an actor has access to a non-redundant network; or put differently, the number of structural holes in the overall network that one occupies (i.e. the extent one is connected to two otherwise unconnected actors). We captured brokerage through a variety of measures that UCINET computed for each actor in her ego network (an ego network consists of the focal actor,

the ego, and all the alters to which ego has direct ties). We used undirected networks and computed the following measures for each relation type: *Degree* (the number of direct ties that an actor enjoys in the matrix), *Number of Weak Components* (a weak component is a set of connected actors that are disjointed from another set of connected actors - ego is the only connection between otherwise separated sets of actors), *Brokerage* (reflects the number of times ego falls between otherwise unconnected actors), *Ego Betweenness* (indexes the percentage of all geodesic paths - i.e. the shortest path between 2 points - from neighbour to neighbour that pass through ego), and *Effective size* (the number of alters that ego has minus the average number of ties that each alter has to ego's other alters – a more redundant ego network has a smaller *effective size*) (Hanneman & Riddle, 2005). Finally, we also consider *Betweenness* in the entire undirected network and compute a score similar to *ego betweenness* but which reflects the extent that an actor falls on the geodesic paths between all other pairs of actors in the entire network (Hanneman & Riddle, 2005).

- Centrality (informal power): we followed Brass & Burkhardt (1993) in measuring centrality, their study being very relevant because they used position in the informal network (centrality) as an index of an actor's power and integrated both centrality and status considerations when computing the different centrality scores. *In-degree centrality* was measured for each respondent by simply counting the number of nominations an actor received for a relation type (Brass & Burkhardt, 1993). According to Brass & Burkhardt (1993), this asymmetric measure captures Burt's notion of status and Emerson's notion of the alternatives available to a position; the idea being that powerful leaders are objects of extensive relations from followers allowing many alternatives. Using UCINET also, we computed *Out-degree centrality* (the number of out-going

ties from an actor) which captures the idea of influence compared to in-degree which better represents prominence or status (Hanneman & Riddle, 2005).

A related measure is *Bonacich centrality* where centrality is conceptualized as a function of an actor's connectedness *and* the connectedness of his contacts. Bonacich argued that the more connections the actors in your neighbourhood have, the more central you are, but the fewer the connections the actors in your neighbourhood have, the more powerful you are (Bonacich, 1987). We focused less on the latter conceptualization and used UCINET's algorithm to compute a *Bonacich centrality* score for each actor using a positive Bonacich definition - the more connections an actor's contacts have the more potential for influence that such an actor enjoys (we also computed bonacich scores using the symmetrised-maximum version of our matrices which disregard tie direction in order to better capture the notion of accessibility and reach). The rationale for our choice is that in a small organization such as SC, it is very easy to spot who is connected to many highly central others and therefore perceptions of power might be more important to an actor's effective influence than being connected to relatively weak others.

Also in line with Brass & Burkhardt (1993), we computed *in-closeness* and *out-closeness centralities* which emphasize the distance of an actor to all others in the network (Hanneman & Riddle, 2005). Closeness reflects the degree of an actor's independent access to others (Brass & Burkhardt, 1993) and was calculated using UCINET's closeness algorithm which handles incoming and outgoing ties separately for the directed networks.

Finally, the same *Betweenness* measure of centrality which we used for *brokerage* in the entire network was used again as an indication of potential control for mediating the relationship between another two actors. It reflects "*the probability of a person falling on the shortest path*

between any two pairs of persons over all unordered pairs of persons... divided by $(n^2 - 3n + 2)/2$, the maximum value when n equals the number of persons in the organization” (Brass & Burkhardt, 1993, 455). All links were treated as reciprocated.

- Formal position: we gathered information on actors’ formal position with a survey item that explicitly asked respondents to write their formal title, and through information obtained from the central coordinators at SC. The positions were the following: member in the Board of Directors (BOD), Coordinator, Volunteer, Intern, Faculty, and Staff. A power score was computed for each actor based on formal title. One point was given for each of the titles BOD, Coordinator, Faculty, and Staff since those were superior in their scope of power and responsibilities compared to the others (some members occupied multiple positions such as BOD and coordinators, and so received 2 points). Additionally, we gave an extra point to the Environmental & Sustainability coordinators since those were special roles that held the organization together and involved coordinating among coordinators. We used another slightly different operationalization of formal power which did not assign any points for being a member of the Concordia Staff or Faculty (a variety that gave the two central coordinators another additional point for their potentially unique positions was also tried).

- Structural Equivalence: we used UCINET to compute NxN matrices showing the extent of structural equivalence between each dyad for a given relation type. The algorithm we chose is a correlation that compares the profile vectors of all pairs of actors producing a measure of profile similarity for each dyad. In other words, each entry in the matrix designates the extent to which two actors maintain similar patterns of relations with the same other actors in the network. Structural equivalence is not a purely structural measure in that it considers dyadic resemblance in the patterns of connections to the same other actors. More similarity in views for a dyad is

therefore explained by the actors' similar pattern of connections to those same actors, and not only by the similar social position occupied. Structural equivalence then includes the relational or proximity mechanisms operational in direct contact and closure while adding 'adaptation to similar social demands' as an extra layer of potential homogenizing influence (e.g. Friedkin, 1984; Johanson, 2000). Regular equivalence on the other hand factors out any relational contributions and depicts equivalence based only on similar adaptation pressures due to similar social connectedness or positions.

Controls

A lot of research on employee organizational perceptions and job attitudes has converged with respect to which controls they employed in their analyses. We followed suit and included a question in the survey that explicitly asked for information on each of the following controls (see Appendix-B): the individual variables *tenure* at the organization, *age*, *gender*, and *educational level* (e.g. Herman and Hulin, 1972; Salancik & Pfeffer, 1978); and the socio-structural variables of being in a specific *SC working group*, *university department*, & *job title/ role* (e.g. Ibarra & Andrews, 1993; Krackhardt & Kilduff, 1990; Herman & Hulin, 1972; Sweitzer, 2008) - which purportedly related more strongly to individual attitudes than personal variables did (e.g. O'Reilly & Roberts, 1975). We also asked respondents to rate the extent of their participation in CSR or CSR-related initiatives (on a 1-7 Likert scale) in order to control for the contribution of their past experiences on their current CSR views, valuations, and organizational identification. *Participation* in CSR activities directly provides information on the associated CSR initiative (e.g. participating in a recycling program conveys the perception that recycling is of relative importance to the group) while also affecting attitudes and beliefs about personal valuations (e.g. I care more about recycling now) - from an SIP perspective, Salancik & Pfeffer (1978) explain

that in order to maintain coherence, consistency, and social relationships, individuals select explanations for their past behavior that are congruent with facts about their commitments and situational factors. Finally, we also ask participants to rate the extent of their knowledge about Sustainable Concordia's initiatives. Controlling for *CSR knowledge* is a good idea since it may directly relate to both our dependent and independent variables: more knowledge about the group's sustainability activities may directly affect the perceived importance of the different CSR elements to the group's identity, and may very well affect organizational identification beyond those identity perceptions (e.g. even if I don't think encouraging car-pooling is important to SC's identity, I may still experience stronger identification with the group simply because of positive, feel-good associations) (see Appendix-B).

Analysis

We used both correlations and regressions through SPSS & UCINET in testing our relations. Our first set of analyses was at the individual level and addressed the question of how CSR Identity Perceptions, CSR Valuations, and Perceived & Ideal Drive relate to SC Identification. As typically suggested for such analyses in the behavioral sciences, all independent variables were centered before entering the analyses (by subtracting the mean of the independent variable from each of its values) to eliminate nonessential multicollinearity as well as to produce meaningful zeros for interpretation (Cohen, Cohen, West, & Aiken, 2003). Starting with H(1), the relation between CSR Identity Perceptions & SC Identification was explored through a regression which included the controls *Age*, *Tenure*, *CSR Knowledge*, and *CSR Participation*. Next, we tested our congruence hypothesis H(2) with the same method that Foreman & Whetten (2002) used which avoids computing a difference score and accumulating problematic standard error. The dependent variable, SC Identification, was regressed by first entering the set of control variables

and inputting the 2 independent variables into the equation. Next, the cross product of the two independent variables as well as the square of each independent variable was added to the equation (see Table2, Model 5). The congruence hypothesis would be supported if this last step results in increased explained variance in the dependent variable (the cubic form could be added if necessary).

We also tested for an ‘agreement’ effect for Perceived & Ideal Drive on SC identification, and that was carried out using an absolute difference score between perceived and ideal drive which was entered into a regression with controls. A difference score for Drive can be justified here since the responses for each variable consisted of one of only two reported responses (i.e. everyone chose either option 3 or 4 on the Drive scales). Therefore, subtracting perceived & ideal drive produced a dichotomous difference score that indicated agreement/convergence (0) or divergence (1) between an individual’s perceived and ideal drive.

Next, based on Baron & Kenny’s (1986) recommendations for testing moderation, we tested our hypothesis of Organizational Identification moderating the relation between CSR Identity Perceptions & Valuations by first running a straightforward linear regression, and then running a subsequent regression which added an interaction term representing the moderating relationship (SC Identif X CSR ID Percep). Moderation would be supported if the coefficient of the interaction term proves significant in the regression. We also conducted some post hoc analyses and looked at different potential interactions among the variables. A mediating role for CSR Valuation on the relation between CSR Identity Perceptions & SC Identification was tested and we followed Baron & Kenny (1986) who specified three criteria for mediation: (1) the independent variable should show a significant relation with the dependent variable; (2) the mediating variable should show a significant relation with the independent variable; and (3) the

mediator should suppress the independent variable when both are run against the dependent variable. The three criteria were each tested with a regression employing controls.

Moving along, we conducted a set of network analyses at the dyadic level with Direct Contact, Group Closure, and Structural Equivalence while we conducted another at the individual level for Brokerage and Formal & Informal Power (centrality). We start off with the dyadic set of analyses by detailing how the dyadic dependent matrices and controls were computed from our original individual-level data. We then proceed to explaining how those matrices were used in the analyses with our independent matrices which we described earlier (*i.e. Direct Contact, Closure, and Structural Equivalence matrices*). Our dependent matrices were computed with UCINET and consisted of dyadic *difference & similarity* matrices for each dependent variable (CSR Identity Perceptions & CSR Valuations). Based on our hypotheses, we expected to obtain similar views for 2 actors in proximal or equivalent social positions; *i.e. more similarity* in perceptions, valuations, & drive and *less difference* on those same variables between 2 actors in close social contact. Our results reflect this distinction in that dyadic difference scores ('DIFF') are expected to show a negative correlation with the independent variables (a smaller divergence in views) whereas dyadic similarity scores ("SIM") a positive correlation (more similarity in views). The 2 *difference* matrices were computed by first taking the average of each actor's responses for a variable (X), and then constructing a matrix representing the absolute difference of those average scores for each dyad $|X_1 - X_2|$. The similarity matrices, on the other hand, compared the complete set of responses on the 15 items for each dependent variable and were therefore more sensitive measures capturing more variation. The similarity matrices were essentially dissimilarity matrices that were inverted to reflect dyadic similarity. The original dissimilarity matrices were computed using UCINET's Euclidean Distance algorithm

$(\text{SQRT}(\sum(x_i - y_i)^2))$ which calculates a difference score for the set of responses of two actors for a given variable (i.e. a value reflecting the combination of the dyadic difference scores for each of the 15 items in a variable). Finally, another two matrices were computed for the network dependent variables pertaining to Perceived & Ideal CSR drive. The cells in our 2 binary matrices had a value of 1 whenever two actors agreed in their selections and 0 otherwise.

The controls for the analyses at the individual level were computed straightforwardly and used exactly as measured for *knowledge*, *participation*, *age*, *tenure*, & *education*, and transformed into a '0 or 1' dummy variable for *gender* (male= 0, female=1) and for position as a *BOD member*, *coordinator*, *intern*, & *faculty or staff member* (1=member, 0=otherwise). For the dyadic network analysis, computing the controls was a little more complicated where each control variable reflected a computation of similarity or difference between every dyad: for *age*, *knowledge* & *participation*, we computed a dyadic difference score reflecting absolute difference between two actors on each variable, the smaller the value, the more convergence or agreement between two actors on their age, CSR knowledge or participation; *tenure* was computed by multiplying the tenures of two actors so that larger values better represent common high tenure; *gender*, *BOD member*, *coordinator*, *intern*, *same SC subgroup*, *same other group*, *same department*, & *same education* were computed so as to reflect a dyadic's common membership in each category (0=not in the same category or group, 1=in the same category or group). The value was larger than 1 in the case where a dyad shared membership in more than one subgroup within a variable (e.g. both members in two different SC subgroups = 2).

In testing the hypotheses for the effects of *direct contact*, *cohesion*, and *structural equivalence*, a combination of QAP correlations (quadratic assignment procedure) and regressions (MRQAP – Multiple Regression via Double-Dekker Semi-Partialling) were run with

UCINET. MRQAP regresses a dependent matrix on one or more independent matrices, and assess significance of the r-square and regression coefficients. For each dependent variable, we start off by entering the dyadic matrices computed for each control variable (the ‘*difference*’ control variables are modified in the regressions, but not in the correlation tables, as positive variables where the signs have been inverted to simply indicate dyadic agreement on a variable – e.g. level of participation), and proceed by entering our independent matrix. Thus, for direct contact, we tested each of the relational NxN matrices; for cohesion, we used the dyadic co-membership matrix for each subgroup type; and for structural equivalence, we used the structural equivalence matrices which assigned scores for dyad convergence in position for each dyad. As mentioned, we expected negative correlations or regression coefficients for the ‘*difference*’ dependent matrices for CSR Identity Perceptions & Valuations (since more social influence produces a smaller difference score between 2 actors), and positive values for the ‘*similarity*’ dependent matrices computed for CSR Identity Perceptions, Valuations, and the two Drives. As an example, testing the effect of Direct Contact in the Friendship Network on CSR Identity Perceptions required entering the adjacency friendship matrix into a regression, with the control matrices, against either the similarity or difference dependent matrix depicting dyadic resemblance or difference in CSR Identity Perceptions. The computation compares presence or absence of a tie for a dyad with its corresponding dyadic value for similarity or difference on the dependent variable in question (while controlling for any variability associated with controls). A positive correlation or regression coefficient for Direct Contact with CSR Identity Perception *Similarity* would support our direct contact ‘homogenizing’ hypothesis.

Next, unlike the previous relations, brokerage & power effects were addressed at the individual level of analysis and so our hypotheses required a different strategy. While the

independent variables were essentially the individual brokerage and centrality scores described earlier, the dependent variables required some computation as they contrasted an actor's own reports with those of her neighbours'. For brokerage, we obtained, for each actor, a measure of discrepancy (absolute difference) between her reports and the average reports of her ego network, and this for each dependent variable for a given relation type (i.e. CSR Identity Perceptions & Valuations for each of the friendship, task-related, informal-communication, and summed matrices). We also obtained a similar score for each actor, but representing divergence from the entire network's average for each of the 2 dependent variables. Thus, we had two different sets of scores for each actor, one representing resemblance of perceptions & valuations to one's ego network and another representing resemblance to the network average. Consequently, we used correlations and linear regressions to test each dependent variable against individual brokerage scores (the regression enters the set of controls *Age*, *Tenure*, *CSR Knowledge*, and *Education Level* first, proceeded by actors' brokerage scores).

For informal and formal power, we undertook a similar approach but computed the dependent variables differently. The different centrality and formal power independent variables were run against an index of influence for each actor. Here, for each ego, the dependent variable averaged the extent of agreement between the ego and each of the ego's alters for a given variable (CSR perception scores & CSR valuation scores) for a given relation type. To compute this, we multiplied our relational binary matrices with each dependent, dyadic difference and similarity matrix, summed the values of each row in the resultant matrices, and divided by the degree (i.e. number of ties) for that actor in the corresponding relational matrix. For each actor and for each network type and variable, this essentially translates to taking the average of the difference (or similarity) dyadic scores between an actor and her direct contacts – powerful or

influential actors should show smaller average difference scores and larger average similarity scores in their ego networks compared to less powerful or influential actors. As an example, to analyze the extent of influence bonacich-central actors have on CSR Valuation, we look at the similarity of bonacich-central actors to their direct contacts (i.e. alters) in terms of CSR Valuation. This is done via correlations and linear regressions where the independent variable is the bonacich centrality scores of our actors and the dependent variable is either the similarity or difference scores on CSR Valuations which represent the average of the dyadic similarity or difference scores between each ego and her alters – we expect high centrality scores to be associated with high similarity scores or low difference scores.

We used slightly different sets of controls for the different groups of analyses: *Age*, *Tenure*, *Knowledge*, *Participation*, and *Same Department* were employed for Direct Contact, Cohesion, and Structural Equivalence; whereas *Age*, *Tenure*, *Knowledge*, and *Same Education* were used for Brokerage and Power; and lastly, *Age*, *Tenure*, *Knowledge*, and *Participation* were used for the first three hypotheses with SC identification. In choosing which controls to use in the regressions at the individual level, we selected only four because of our limited sample size. Participation could have been included in the Brokerage & Power regressions, but the other four seemed to be more relevant to our inquiry as they tapped into potential sources of influence beyond our focal variables. It took a combination of theory and experimentation to determine which controls to use. The chosen controls generally related to both independent and dependent variables and had more theoretical relevance to the hypotheses in question (e.g. education level may relate to similar extents of influence, while same department may predispose actors to similar mind sets and therefore responses).

RESULTS

CSR Identity Perceptions, Personal CSR Valuation & Organizational Identification

Table i (Appendix-A) reports descriptive statistics and correlations of the variables for all respondents (N=56). About 55% of the respondents were female. Average age was 29 and tenure 2 years. 22 had graduate degrees, 32 undergraduate, and 2 at a college level. The average for the CSR Identity Perception scale was 5.96 (SD=.59) out of a maximum of 7, which is an indication of a strong overall CSR identity. The average for Personal CSR Valuation was 5.94 (SD=.76), also indicating strong valuation from the membership for those CSR items perceived as strongly defining the group. In terms of CSR identity strength, *“to the extent that strong member identification is shared, it tends to result in a strong and stable organizational identity; weak identifications tend to lead to fragmented and changing organizational identities”* (Fiol, 2001, 694).

For perceived drive, 48% of respondents chose the highest value system which revolves around a synergistic, win-together approach to CSR, whereas the others all picked the next in line which focuses on values (human potential, social responsibility and caring for the planet) as the main drive behind CSR at group. In contrast, 64% of participants chose the higher value system when it came to their preferred ideal drive, while only 1 respondent selected profit maximization as the ultimate drive. Further, Perceived Drive positively correlated with CSR Identity Perceptions ($r=.422$, $p=.001$) while Ideal Drive positively correlated with Personal CSR Valuation ($r=.294$, $p<.05$) suggesting that the higher value system is associated with more engagement in CSR (CSR is more important to the group, or to my identity). Interesting to note is that the 2 items that received the lowest ratings for both CSR Identity Perceptions &

Valuations had to do with improving Concordia as a university (student enrolment, faculty, & curriculum) and ensuring that Concordia obtain its funding through equitable tuition & responsible investing. Moreover, of the 3 items that asked participants to provide ratings of importance for the *ecological, economic, & social dimensions*, the economic dimension received the lowest ratings for both perceptions & valuations (see Table ii, Appendix-A). Those ratings suggest that members' valuations generally agree with the CSR Identity at SC which they see as not very centered on the economic dimension as it is on the social & ecological ones. Also, traditional matters more central to the university's normal functioning such as obtaining funding and improving the curriculum are less central to the group and generally obtain less interest from the membership as well. Identification with the group had an average of 5.52 (SD=1.2) out of a maximum of 7, while identification with Concordia University was at 4.0 (SD= 1.38), indicating more personal alignment with and preference for association with SC compared to Concordia. The average participant had a rating of 5.43 (SD=1.33) for extent of knowledge about CSR initiatives at the group, and a rating 5.48 (SD=1.3) for extent of participation in CSR-related initiatives at the group (both out of a max score of 7); thus our average participant was fairly familiar and active with their group's sustainability activities.

In regards to our focal relations (Table i, Appendix-A), SC Identification (i.e. organizational identification) showed a marginal positive correlation with CSR Identity Perceptions and a strong one with CSR Valuation, as expected. The independent variables, CSR Identity Perceptions & CSR Valuation, were positively correlated as well. Perceived Drive was positively correlated with CSR Identity Perceptions & Ideal Drive was similarly correlated with CSR Valuation, suggesting that actors perceiving a higher value system operating at SC (which theoretically comprises the lower value systems) tend to generally perceive the sustainability

activities as more important to SC's identity. Similarly, those desiring a higher ideal value system tend to place more personal value on those same sustainability elements compared to their counterparts. Controls positively correlated with SC Identification were Knowledge, Participation & Age (marginal). Participation was also positively correlated with CSR Identity perceptions, suggesting the possibility that perceptions are shaped by the extent one participates in CSR activities. Knowledge and Participation were also strongly correlated, possibly because of a mutual relationship between the two (i.e. knowing brings about participating while participating also brings knowledge). Knowledge also seemed to interfere with CSR valuation's predictive power in the regressions (see regression tables below) suggesting multicollinearity and potential interaction (Baron & Kenny, 1986). Tenure positively related to Knowledge and Participation suggesting more time spent in the organization increased CSR experience and information, while Age positively related to Education Level and Concordia Identification suggesting age maturity to be associated with more education and valuation for the university. Interestingly, SC Identification was also positively related with Concordia Identification, in line with theory on generalization of a sub-identity to identification with the parent identity (see Discussion Section).

Moving to our first set of hypotheses, H(1) which predicted CSR Identity Perceptions to relate directly to Organizational Identification was only very mildly supported by a marginal positive correlation between CSR Identity Perceptions & SC Identification; however, as shown in Table1 (Model 2), when controls were employed in the regression against SC Identification, CSR Identity Perceptions lost its predictive power on the dependent variable.

Table 1: SC Identification Regressed on CSR Identity Perceptions H(1)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>
	<i>(beta)</i>	
<i>Tenure</i>	<i>-.194</i>	<i>-0.187</i>
<i>Age</i>	<i>0.394**</i>	<i>0.399**</i>
<i>Knowledge</i>	<i>0.295†</i>	<i>0.299†</i>
<i>Participation</i>	<i>.215</i>	<i>0.157</i>
<i>CSR Perc</i>		<i>0.178</i>
<i>R²</i>	<i>0.231**</i>	<i>0.260**</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Next, H(2) depicting a congruence effect of CSR Identity Perceptions & Valuations was not supported when a test for congruence was conducted. The only support for H(2) came from the positive correlations from each independent variable separately; however, when combined in a regression against SC Identification, only Personal CSR Valuation retained its predictive power ($B=.387$, $P<0.01$) while CSR Identity Perceptions turned obsolete (Table 2, Models 2 & 3) (a hint at mediation as we will see shortly). Rejection of H(2) was actually based on a regression employing controls where we added the interaction term (Model 4) and quadratic form of the variables (Model 5) but observed no significant regression coefficients or change in R^2 compared to baseline (Model 3). An ‘agreement’ effect was observed, on the other hand, for perceived & ideal drive on SC Identification. This result should be interpreted cautiously however, since we used a difference score between perceived & ideal drive as an index of agreement. Such a

difference score is probably low on accuracy as it combines the errors of its two components. Foreman & Whetten (2002) further note that a difference score might mask important contributions of both variables on the explained variance in the dependent variable. Nevertheless, the result for the difference score was significant when regressed with controls, and the overall model had an R^2 larger than when both variables were entered independently (Table 2, Model 7).

Table 2: SC Identification Regressed on Indep. Variables for Congruence & Drive Agreement Test H(2)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>	<u>Model 5</u>	<u>Model 6</u>	<u>Model 7</u>
	<i>(beta)</i>						
<i>Tenure</i>	-.194		-0.145	-0.132	-0.143	-.124	-0.133
<i>Age</i>	0.394**		0.323*	0.313*	0.306*	.036	0.345**
<i>Knowledge</i>	0.295†		0.224	0.22	0.21	.255	0.319†
<i>Participation</i>	.215		0.181	0.184	0.197	.206	0.151
<i>CSR Perc</i>		.064	0.055	0.061	0.071		
<i>CSR Val</i>		0.39**	0.258†	0.265†	0.263		
<i>CSR Perc X CSR Val</i>		.088		0.073	0.035		
<i>CSR Perc^2</i>					0.086		

<i>CSR Val²</i>								-0.013
<i>Drive Perceived</i>								0.068
<i>Drive Ideal</i>								0.175
<i>Drive Difference</i>								-0.367**
R²	0.231**	0.179**	0.305**	0.310**	0.315*	0.268*	0.361**	
F-change from baseline M-3				0.348	0.224			

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Finally, H(3-a) depicting a positive relation between CSR Identity Perceptions & Valuation was supported with a positive correlation between CSR Identity Perceptions & Personal CSR Valuation; entering CSR Identity Perceptions after the controls (see Table3, Model 2 below) showed a sustained significance with the dependent variable. H(3-b) was not supported and the moderating role of SC Identification on the relation between CSR Identity Perceptions & Valuation proved insignificant as indicated by Model 5 in Table3 showing an insignificant coefficient for the interaction term.

Table 3: CSR Valuation Regressed on CSR ID Perceptions & SC Identif as Moderator H(3-a) & H(3-b)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>	<u>Model 5 (linear moderation)</u>
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	<i>(beta)</i>				
<i>Tenure</i>	-.182	-0.162	-0.118	-0.118	-0.146
<i>Age</i>	0.281†	0.292*	0.153	0.199	0.199
<i>Knowledge</i>	.282	0.293†	0.184	0.223	0.229
<i>Participation</i>	.062	-0.095	-0.007	-0.131	-0.144
<i>CSR Perc</i>		0.478**		0.436**	0.44**
<i>SC Identification (mod)</i>			0.327*	0.235†	0.267†
<i>CSR Perc X SC Identif</i>					-0.112
<i>R²</i>	.117	.324**	0.279*	.365**	.375**
<i>F-change from baseline M-3</i>					0.768

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

As mentioned earlier, we noted a suppression effect of Personal CSR Valuation on CSR Identity Perceptions when both were regressed against SC Identification (Table4, Model 4). This led to a post hoc exploration and a confirmation for the mediating role of Personal CSR Valuation on the relation between CSR Identity Perceptions & SC Identification - for CSR perceptions to influence identification with the group, an actor has to personally value those CSR elements that he or she perceives. The 3 criteria for mediation suggested by Baron & Kenny (1986) were met as demonstrated by (1) a weak, albeit existing relation between CSR Identity Perceptions & SC Identification (Table4, Model 1); (2) a strong relation between CSR Identity Perceptions & CSR Valuation (Table4, Model 2); and (3) a suppression effect of the mediator on

CSR Identity Perceptions was observed in the regression against the dependent variable where the independent variable's coefficient turned highly insignificant upon entry of the mediator (Table4, Models 3 & 4).

Table 4: Post-Hoc Mediator - Dependent Regressed on Independent, Mediator Regressed on Independent, & Dependent on both Independent and Mediator Variables

<i>Dep. Variable</i>	<i>SC Identif</i>	<i>CSR Val</i>	<i>SC Identif</i>	<i>SC Identif</i>
<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
	<i>(beta)</i>			
<i>Tenure</i>	-0.187	-0.162		-0.145
<i>Age</i>	0.399**	0.292*		0.323*
<i>Knowledge</i>	0.299†	0.293†		0.224
<i>Participation</i>	0.157	-0.095		0.181
<i>CSR Perc</i>	0.178	0.478**	.052	0.055
<i>CSR Val</i>			0.387**	0.258†

R²	0.260**	.324**	.171**	0.305**
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- ** . Correlation is significant at the 0.01 level (2-tailed).
- * . Correlation is significant at the 0.05 level (2-tailed).
- † . Correlation is significant at the 0.1 level (2-tailed).

Thus, the data seemed to better fit an adjustment to our initial model so that an actor's perceptions of CSR at the group affect his or her organizational identification through the personal construct of valuing those identity perceptions (Fig.4). Personal CSR Valuation was also tested as a moderator of the CSRperception-SCidentification relationship (Table2, Models 2 & 4), but the results of the interaction terms were non-significant. Finally, we tested a feedback or reciprocation effect with SC Identification feeding back on its immediate antecedent, CSR Valuation, (Table3, Model 3) and the results supported that relation in line with our expectations (e.g. Ashforth et al., 2008; Dutton et al., 1994).

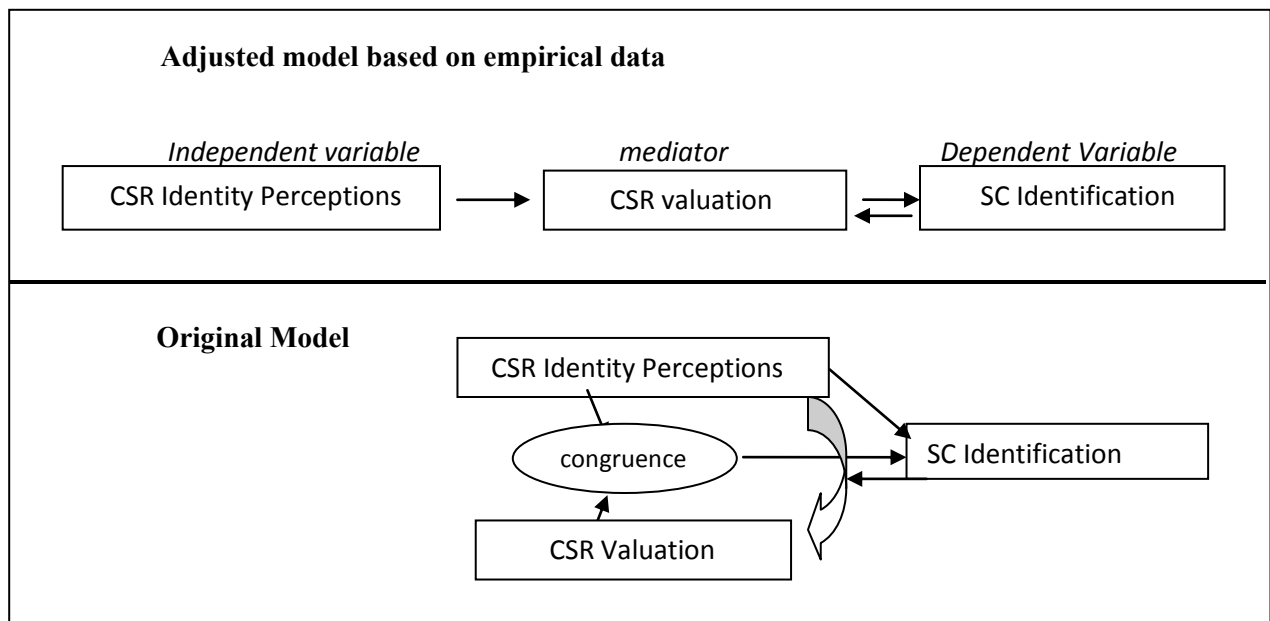


Fig.4 Adjusted Vs Original model

Network effects on CSR Identity Perceptions, Personal CSR Valuation, Perceived & Ideal Drive

Starting off with some structural considerations, from correlation Table iii (Appendix-A), we can see that coordinators had very strong associations with all 4 relational matrices (all at $p < .001$) while BOD members didn't; unlike board members, coordinators frequently named one another for contact in the friendship, task-related, and informal-communication networks. Relatedly, Coordinators related strongly with Age Difference – coordinators had similar age – while BOD members showed the opposite. BOD members came from similar educational backgrounds and represented a variety of SC subgroups, while Coordinators had similar levels of education.

Tenure, Participation Difference, CSR Knowledge Difference, and Age Difference were significantly correlated with all the relational matrices. On average, two actors in contact through any relation type would be expected to have a similar age, more tenure, and similar extents of participation & CSR knowledge. Knowledge Difference was also significantly related to CSR Identity Perception Difference, while being associated with the same university department was significantly related to Personal CSR Valuation Difference – although in a direction opposite to expected (i.e. same department predicts diverging personal valuations). Also worth mentioning, Knowledge & Participation both related strongly with same Department, while Age & Tenure were both strongly associated with one another. Finally, similarity in CSR Participation, Education Level, & Tenure (weakly) predicted similarity in Ideal Drive for an average dyad; and

from correlation Tablei, we suspect higher levels of participation and education to be associated with a higher Ideal Drive.

Table 5: Results of Hypotheses Summarized

Hypos	Description	Supported?	(Table; Model)
H(1)	CSR ID Perceptions predicts SC Identification	No	(1; 2)
H(2)	Congruence of CSR ID Percep. & Valua. predicts SC Identif.	No	(2; 4-5)
H(3-a)	CSR ID Perceptions predict CSR Valuation	Yes	(3; 2)
H(3-b)	SC Identification moderates between CSR ID Perc. & Valua.	No	(3; 5)
H(4)	Direct Contact brings similarity in views	Overall, No	Only (6.5; 2)
H(5)	Group Closure brings similarity in views	Overall, Yes	All over Table 7
H(6-a)	Ego-net brokerage brings similarity to alters' average views	Limited, Yes	Table 8.2
H(6-b)	Network brokerage brings similarity to network average	Overall, No	Table viii, App-A
H(7-a)	Informal Power influences alters' views into convergence	Yes	All over Table 9
H(7-b)	Formal Power exacts more influence than Informal Power	No	Table xiii, App-A

Note: Subsequent regression tables report only the significant results whereas the complete regression tables can be found in Appendix-A.

Direct Contact – only positive result for Friendship Matrix with Perceived Drive

From our correlation table iii (Appendix-A) we note that all the adjacency matrices were positively correlated with one another indicating a degree of multiplexity or overlap between relation types. It is also worth noting that actors in contact for any of the relations were more likely to be of a similar age & tenure and to have reported a similar level of CSR knowledge & participation. Friends were likely to come from similar university departments and to have similar levels of education. Finally, coordinators were significantly associated with each other

for all relation types (i.e. they were friends, co-workers, & casual acquaintances), although that didn't beget similar reports on any of the dependent variables. This absence of convergence could be partly due to working in different locations, on different projects, and with different people, thus lacking a unifying social context to encourage influence effects.

H(4) predicted convergence in a dyad's reports on CSR perceptions, valuations, & drive if the members of that dyad were in direct contact for a given relation type. Convergence was reflected by a smaller dyadic difference score or by a larger similarity score - therefore a negative or positive correlation with direct contact, respectively. As reported in Table iii (Appendix-A), none of the relational matrices correlated significantly with any of the difference or similarity dependent measures except for a weak positive correlation between the Summed matrix & CSR Identity Perception Difference - a direction counter to expected (the more connections between a dyad, the less difference we expected in perceptions). When regressions were run using the controls, none of the relational matrices showed any significance with those same dependent variables except for the Task and Summed matrices, both showing marginal significance against the dependent variable CSR Identity Perceptions Difference - again in a direction contrary to expected (Table 6.1, Models 2 & 4). This is a somewhat arbitrary finding given our predictions and is probably best not interpreted meaningfully, especially given weak coefficients ($p > .05$) and since the same independent matrices showed a result in the predicted direction (although insignificant) for the alternative similarity measure of perceptions - a more sensitive measure that considers agreement on the 15 CSR perception items instead of simply focusing on the difference between the average of the perception scores for each dyad. Furthermore, using a symmetrised-minimum version (only reciprocated ties) of the Task Matrix in the regression produced a non-significant result, but in the predicted direction.

With respect to underlying drive or motive behind CSR, the Friendship Matrix positively correlated with Perceived Drive and the Task Matrix positively correlated with Ideal Drive, of which only the first relation retained moderate significance when entered in regression with controls (Table 6.5, Model 1). Friends then perceived a similar CSR drive at the organization. This result is also to be interpreted cautiously given the relatively weak strength of the relation ($p > .05$), and since using a symmetrised-minimum version of the matrix gave no significance for that same regression. In sum, H(4) was generally not supported given the weak or absent results.

Table 6: Direct Contact Regression Results

6.1. Results of Regression Analyses on CSR perception difference (observations = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 4</u>
	<i>(beta)</i>		
<i>Age</i>	<i>0.044</i>	<i>0.033</i>	<i>0.023</i>
<i>Knowledge</i>	<i>-0.172*</i>	<i>-0.177*</i>	<i>-0.18*</i>
<i>Participation</i>	<i>0.049</i>	<i>0.049</i>	<i>0.049</i>
<i>Same Department</i>	<i>-0.004</i>	<i>0.001</i>	<i>0.000</i>

<i>Tenure</i>	<i>0.053</i>	<i>0.040</i>	<i>0.032</i>
<i>Friendship Matrix</i>			
<i>Task Matrix</i>		<i>0.066†</i>	
<i>Summed Matrix</i>			<i>0.091†</i>
<i>R²</i>	<i>0.027*</i>	<i>0.031*</i>	<i>0.035*</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

6.5. Results of Regression Analyses on Perceived Drive similarity (observations = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>
	<i>(beta)</i>
<i>Age</i>	<i>-0.003</i>
<i>Knowledge</i>	<i>-0.023</i>
<i>Participation</i>	<i>-0.012</i>
<i>Same Department</i>	<i>0.003</i>

<i>Tenure</i>	<i>0.008</i>
<i>Friendship Matrix</i>	<i>0.035[†]</i>
<i>Informal-communication Matrix</i>	
<i>Task Matrix</i>	
<i>Summed Matrix</i>	
<i>R²</i>	<i>0.002*</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Closure – some significant results in all networks & unexpected results in the informal-communication network

From Table iv (Appendix-A), it is interesting to note that all the subgroups were positively correlated with one another indicating a highly overlapping and well-connected overall network. Similar to direct contact, overlapping group affiliations were generally associated with actors having similar age & tenure, and having reported similar extents of CSR knowledge & participation.

H(5) predicted convergence in reports on *CSR perceptions, valuations, & drive* with overlapping group affiliation between a pair of actors in a dyad; the more overlapping group affiliations between members of a dyad, the closer their scores are expected to be as reflected smaller dyadic difference scores or larger dyadic similarity scores. Therefore, overlapping group affiliations were expected to correlate negatively with difference scores and positively with similarity scores. H(5) was generally supported with some significant results in all networks as follows. Table iv (Appendix-A) shows the general correlations while Table7 below details the significant regression results:

Starting with the Friendship Network, the only significant results were obtained with Perceived Drive. Perceived Drive did not correlate significantly with any subgroup common membership; however, regressions run with controls did produce significant results with clique and k-plex overlap (Table7.5, Models 2&3), extending the earlier finding with Direct Contact in the Friendship Network relating positively to Perceived Drive.

Next, the Informal-communication Network showed some contradictory closure effects: CSR Identity Perception Similarity correlated negatively with clique overlap in the informal-communication network, in a direction contrary to expected, and that relation maintained significance when run with controls (Table7.2, Model 2). Similarly, CSR Identity Perception Difference showed a marginal positive correlation with k-plex overlap in a direction contrary to expected, while at the same time yielding a marginal positive correlation with Personal CSR Valuation Difference (in the expected direction). When regressed with controls, only the former, unexpected relation maintained significance (Table7.1, Model 2), and so both clique and k-plex overlap in the informal-communication network showed a ‘divergence’ effect on CSR Identity Perception Similarity & Difference respectively. With respect to Drive, a positive correlation

was observed between Ideal Drive and n-clan overlap, a result that maintained significance upon regression with controls (Table 7.6, Models 3 & 4).

Returning to our contradictory findings with the perception difference & similarity measures, a few considerations are necessary. The relation between k-plex overlap and perception difference is to be interpreted cautiously since it occurs in a definition of a subgroup that is relatively lenient. Moreover, given that the reciprocation rates are low (around 18%), there is reasonable doubt that both the k-plex and clique definitions represent ideal conditions for cohesion effects to occur (i.e. sufficient interaction and social pressure among group members). Indeed, quite the opposite may be justified since those effects occurred in the informal-communication network where one may receive frequent nominations from others but be more invested in his or her own declared contacts (e.g. Actor A is named by B and C, of which B also names C, thus forming a clique ABC). In fact, when conservative versions of those subgroups were tested using only reciprocated ties, k-plex overlap produced no significant results on perception difference with K set at 1. Moreover, UCINET produced 46 & 184 k-plexes for the regular (k=1) and symmetrised-min (k=2) informal-communication matrices respectively. In either case, such a large number of k-plexes may render our results ambiguous and difficult to interpret. Even if being in the same k-plex with others does produce interpersonal influence beyond simple direct contact, simultaneously partaking in other k-plexes may easily nullify or reverse any homogenizing influences obtained. On the other hand, this was not the case for clique overlap in the informal-communication matrix which was limited to common membership in a small number of defined cliques (4 informal-communication cliques). Clique overlap showed sustained significance with perception similarity when tested with a symmetrised-minimum version ($B = -.114$, $p < .01$) pointing to a potentially authentic finding. One possible

interpretation for this offsetting finding is that informal-communication relations, by definition (i.e. gossiping, casual chatter etc), involve loose relations where individuals seek others that are essentially different from themselves to get the variety on the happenings at the organization. Another possibility is that respondents may have exhausted the names of their close ones for the two relations which preceded in the questionnaire, and not wanting to be too redundant, they went with whoever else they associate with for the question on informal-communication relations. The correlation between the matrices was strong however, indicating considerable overlap between the choices made for each. Furthermore, this possibility comes with the underlying idea that people who don't associate closely together tend to hold differing perceptions of the organizational identity.

Finally, the Task-related Network showed the strongest closure effects: first, significant correlations were observed between overlapping affiliations in k-plexes and CSR Identity Perception Difference & Similarity, as well as CSR Valuation Difference; the relation with perception difference was in a direction contrary to expected. When the regressions were run with controls, k-plex overlap maintained significance with the perception difference & valuations difference measures (Table 7.1, Model 3 & Table 7.3, Model 2 respectively) while the former maintained its contradictory positive relation (i.e. more overlap predicting more perception difference). We could speculate as earlier with different interpretations; however, when a k-plex variation was used with the symmetrised-minimum task network (i.e. reciprocated ties only) and k-values equal to 1 or 2, the result was corrected for the perception difference dependent variable ($B = -.075$, $p < .1$). Thus, k-plex overlap in the task network gave significant results with CSR Identity Perception Difference & CSR Valuation Difference measures. Next, overlapping affiliations in n-clans showed a marginal positive correlation with CSR Identity Perception

Similarity and a positive correlation with Personal CSR Valuation Similarity. When run in the regressions with controls, both relations maintained significance (Table7.2, Model 3 & Table7.4, Model 2 respectively) while CSR Valuation Difference now emerged as negatively related to overlapping affiliation in n-clans (Table7.3, Model 3). With respect to Drive, a positive correlation was observed between Ideal Drive & n-clan overlapping affiliation, and this relation maintained significance upon regression with controls (Table7.6, Models 3 & 4). It seems that while friendship closure predicted similarity in Perceived Drive, closure in the task-related and informal-communication communication networks predicted similarity in Ideal Drive.

TABLE 7: Regressions of Overlapping Group Affiliations - Closure H(4)

7.1. Results of Regression Analyses on CSR perception difference (obsv = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
	<i>(beta)</i>		
<i>Age</i>	0.044	0.025	0.017
<i>Knowledge</i>	-0.172*	-0.180*	-0.183*
<i>Participation</i>	0.049	0.048	0.043

<i>Same Department</i>	-0.004	0.003	0.014
<i>Tenure</i>	0.053	0.039	0.014
<i>Inf.comm. Kplex</i>		0.100*	
<i>Task Kplex</i>			0.149*
R²	0.027*	0.036**	0.047**

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

7.2. Results of Regression Analyses on CSR perception similarity obsv = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
	<i>(beta)</i>		
<i>Age</i>	0.007	0.016	-0.008
<i>Knowledge</i>	-0.113*	0.108†	-0.123*
<i>Participation</i>	0.047	0.051	0.030
<i>Same Department</i>	0.061	0.059	0.059

<i>Tenure</i>	0.144†	0.146†	0.135†
<i>Inf.comm. Clique</i>		-0.113**	
<i>Task NClan(min)</i>			0.111†
R²	0.030**	0.043**	0.042**

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

7.3. Results of Regression Analyses on CSR valuation difference obsv = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
	<i>(beta)</i>		
<i>Age</i>	-0.056	-0.042	-0.017
<i>Knowledge</i>	-0.085	-0.079	-0.053
<i>Participation</i>	0.029	0.032	0.052
<i>Same Department</i>	0.169**	0.160**	0.169**

<i>Tenure</i>	<i>0.003</i>	<i>0.023</i>	<i>0.030</i>
<i>Task Kplex</i>		<i>-0.075†</i>	
<i>Task NClan</i>			<i>-0.146†</i>
R²	<i>0.031*</i>	<i>0.036**</i>	<i>0.048**</i>

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

7.4. Results of Regression Analyses on CSR valuation similarity (obsv = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>
	<i>(beta)</i>	
<i>Age</i>	<i>0.041</i>	<i>-0.037</i>
<i>Knowledge</i>	<i>0.109†</i>	<i>0.045</i>
<i>Participation</i>	<i>0.014</i>	<i>-0.034</i>
<i>Same Department</i>	<i>-0.09</i>	<i>-0.09</i>

<i>Tenure</i>	-0.107	-0.161*
<i>Task NClan</i>		0.297**
R²	0.028*	0.097**

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

7.5. Results of Regression Analyses on Perceived Drive (observations = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
	<i>(beta)</i>		
<i>Age</i>	0.001	-0.003	-0.005
<i>Knowledge</i>	-0.022	-0.024	-0.025
<i>Participation</i>	-0.011	-0.011	-0.013
<i>Same Department</i>	0.004	-0.012	0.004

<i>Tenure</i>	<i>0.013</i>	<i>0.01</i>	<i>0.006</i>
<i>Friendship Clique</i>		<i>0.070†</i>	
<i>Friendship Kplex</i>			<i>0.041†</i>
R²	<i>0.001†</i>	<i>0.006**</i>	<i>0.002*</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

7.6. Results of Regression Analyses on Ideal Drive (observations = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
	<i>(beta)</i>			
<i>Age</i>	<i>0.035</i>	<i>0.015</i>	<i>-0.014</i>	<i>0.015</i>
<i>Knowledge</i>	<i>-0.084*</i>	<i>-0.098*</i>	<i>-0.124**</i>	<i>-0.097*</i>
<i>Participation</i>	<i>0.175*</i>	<i>0.166**</i>	<i>0.145*</i>	<i>0.154*</i>
<i>Same Department</i>	<i>-0.065†</i>	<i>-0.059</i>	<i>-0.066†</i>	<i>-0.068†</i>

<i>Tenure</i>	<i>0.11†</i>	<i>0.097†</i>	<i>0.072</i>	<i>0.095†</i>
<i>Inf.com. NClan</i>		<i>0.084†</i>		
<i>Task NClan</i>			<i>0.185*</i>	
<i>Task NClan(min)</i>				<i>0.141*</i>
<i>R²</i>	<i>0.039**</i>	<i>0.045**</i>	<i>0.043**</i>	<i>0.039**</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Brokerage – significant results for brokerage in the instrumental networks on Personal Valuation, and unexpected findings for friendship brokerage on increasing CSR Perception divergence from network average

Brokerage was tested at the individual level of analysis. Table vi (Appendix-A) shows the correlations of our different individual Brokerage indices with the corresponding controls and dependent variables. It is noticeable that CSR Knowledge, Tenure, & Participation (which are themselves correlated) related significantly with most Brokerage indices. This is in line with a broker’s hypothesized superior access to resources and information (e.g. Adler & Kwon, 2002)

and further suggests that those strategic positions take time (tenure) and energy (participation) to develop. Table vii which can be found in Appendix-A shows interesting correlations depicting more resemblance of an actor's ego-network to the entire network's average as a function of brokerage – i.e. more brokerage associated with a smaller distance between broker's ego-net average and the entire network average (mostly for CSR Identity Perceptions in the instrumental networks). These results demonstrate that a good broker indeed obtains access to the entire network through a large breadth of contacts.

H(6-a) postulated that a broker's CSR Identity Perceptions & Valuations resemble the average of his direct contacts' reports (i.e. ego-network average). H(6-b) also posits similar resemblance but to the entire network average. H(6-a) was partially supported with respect to brokerage and CSR Valuation scores. A negative correlation between brokerage and a difference score depicts this relation with increased brokerage relating to a decreased distance between a broker's reports and those of his ego-network or network average. H(6-b) was not supported since betweenness in the overall network did not relate to an actor's views more closely approximating the network average.

In the Friendship Network, the only dependent variable approaching significance in correlation with a Brokerage score was Perception's divergence from sample mean with the Brokerage index, maintaining its significance when regressed with controls (Table 8.1, Model 1 below). An ego's Brokerage score represents the number of pairs of alters that are not directly connected with another, and to predict more divergence from the entire sample's average for CSR perceptions is not easy to interpret. On the surface, it seems that the more one's friends are spread out (i.e. the more brokerage opportunities), the less one's CSR Identity Perceptions will accord with the group's average. This is contrary to expected as we proposed that each alter

contributes to differing perceptions, and therefore having diverse alters would bring diverse perspectives from the entire sample. To the extent that unconnected friends bring differing CSR perspectives from the entire network, higher brokerage scores seemed to act oppositely and bring more diverging perceptions from sample mean. It is very likely that more brokerage in the Friendship Network did not actually represent better access to the overall network, instead representing more localized access. We conducted a post hoc test of the premise that more Brokerage brings alters who better represent the sample's views, and as mentioned in the introduction of this section, this was indeed the case in the instrumental networks (i.e. informal-communication & task networks), although not in the friendship network. The results then are not very strange considering that brokerage in the friendship network does not bring an actor closer to the entire sample. Further, actors with high brokerage scores were also high in centrality (power) and were therefore not likely to be good candidates for incoming influence.

In the Informal-communication Network, only Valuation's Divergence from ego mean exhibited a negative correlation with 3 brokerage indices: Degree, Weak Components, and Effective Size (Table vi, Appendix-A). Effective Size and Degree retained predictive significance with the same dependent variable when regressed with controls, while Broker & Ego Betweenness emerged as significant predictors also when regressed against Valuation's Divergence from ego mean (Table 8.2, Models 1, 2, 3, & 4). Betweenness in the overall network also predicted similarity with one's ego-network average for CSR valuation, a result not very surprising given the strong correlation between the two measures Ego & Network Betweenness.

In the Task-related Network, the brokerage measures Degree and Effective Size showed a negative correlation with Valuation's divergence from ego-network's average and with Valuation's divergence from sample's average. The 4 relations maintained significance in the

regressions using controls (Table 8.2, Models 5 & 6; and Table 8.3, Models 1 & 2 respectively). Interestingly, in all networks, both CSR Perception & Valuation's divergence scores from their corresponding ego-network and entire network averages were strongly and positively correlated. In other words, for an average actor, each variable had divergence from his ego-network average that positively correlated with divergence from the sample's average. This implies that any actor's ego-network, on average, had perception & valuation scores similar to those of the network average. This suggests that any actor's ego-network, on average, either is varied enough to represent a sample of the entire network, or is positioned in a way that allows access and influence to/from the entire sample. The latter possibility sounds more reasonable given that the average number of alters an actor has for a given undirected network is 4.9, making it likely that an actor's alters branch out to reach the entire network (N=45). Going back to our main results in the Task-related Network, the more contacts an actor has and the less redundant his alters (i.e. more brokerage because of fewer connections between alters), the closer her CSR Valuations to the average of her work peers and to the average valuation of the network.

Table 8: Brokerage Regressions H(5)

8.1. DV: Perception Difference from Network Average

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>
	<i>(beta)</i>	
<i>Age</i>	-0.073	-0.077
<i>Tenure</i>	-0.037	-0.004
<i>Knowledge</i>	-0.276	-0.192
<i>Education</i>	0.105	0.065

<i>Friendship Brokerage</i>	<i>0.384*</i>
<i>Summed EgoBtwnness</i>	<i>0.302†</i>
R²	<i>1.152 0.886</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

8.2. DV: Valuation Difference From Ego-Network Average

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>	<u>Model 5</u>	<u>Model 6</u>
	<i>(beta)</i>					
<i>Age</i>	<i>-0.599**</i>	<i>-0.595**</i>	<i>-0.603**</i>	<i>-0.606**</i>	<i>0.092</i>	<i>0.073</i>
<i>Tenure</i>	<i>0.331*</i>	<i>0.330*</i>	<i>0.349*</i>	<i>0.355*</i>	<i>0.195</i>	<i>0.212</i>
<i>Knowledge</i>	<i>-0.127</i>	<i>-0.101</i>	<i>-0.154</i>	<i>-0.154</i>	<i>-0.201</i>	<i>-0.172</i>
<i>Education</i>	<i>0.274†</i>	<i>0.259†</i>	<i>0.312*</i>	<i>0.307*</i>	<i>0.019</i>	<i>0.010</i>
<i>Inf.Comm. Eff.Size</i>	<i>-0.313*</i>					

<i>Inf.Comm. Degree</i>							-0.363*
<i>Inf.Comm. Broker</i>							-0.282†
<i>Inf.Comm. EgoBtwness</i>							-0.282†
<i>Task Eff.Size</i>							-0.322†
<i>Task Degree</i>							-0.367*
R²		4.224**	5.33**	4.449**	4.435**	1.627	1.829

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

8.3. DV: Valuation Difference From Entire Network Average

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>
	<i>(beta)</i>	
<i>Age</i>	0.209	.226
<i>Tenure</i>	0.098	.085
<i>Knowledge</i>	0.010	-.016

<i>Education</i>	<i>-0.041</i>	<i>-.033</i>
<i>Task Degree</i>	<i>-0.331†</i>	
<i>Task Eff.Size</i>		<i>-.295†</i>
<i>R²</i>	<i>1.464</i>	<i>1.337</i>

** . Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

†. Correlation is significant at the 0.1 level (2-tailed).

Informal Power – significant effects for centrality in all networks & contradictory findings for Friendship betweenness centrality on CSR Valuation

First, CSR Knowledge, Participation, & Tenure were positively correlated with most centrality measures except between Tenure & centrality in the Informal-communication Network (see Table i, Appendix-A). This is similar to the results with Brokerage, and indeed, central and broker positions are positively correlated (Table x, Appendix-A). Education Level & Age were

significantly and positively correlated with Average CSR Perception Similarity measures in all the networks. To remind the reader, these measures compute an average for each ego for the different congruence scores obtained with each alter, thus forming an index of influence which reflects the extent one's alters resemble (or differ from) ego for a given variable. Higher Age & Education level then seemed to relate to more homogenizing influence on CSR Perceptions, in any network type, suggesting that more maturity and education increase one's influence on identity perceptions. Tenure had similar homogenizing influence on CSR Perceptions, but only in the Friendship Network, with the possible interpretation that prolonged friendships are the ones that bring about similarity in identity views. Interestingly, dyads with similar centralities did not show more resemblance on CSR perceptions or valuations except for showing a similar Ideal Drive, and this with some of the centrality scores across the 3 networks (Table xi, Appendix-A).

H(7) predicted more influence from actors with higher centralities in the network of relations. The dependent variable, extent of influence, was operationalized for each actor by computing an average similarity and difference score representing the average of the distances between an actor and each of his alters. Centrality should accordingly show a positive correlation with average similarity measures and a negative correlation with average difference measures – i.e. a central actor showing more similarity on average to each of his alters, or less difference on average to each of his alters. H(7) was generally supported, mainly with the Bonacich conceptualization of power in all the networks: the more central an actor and the more central her connections, the more influence she will exert on her contact's CSR Identity Perceptions & Valuations.

Centrality in the Friendship Network showed no significant correlations with the dependent variables (Table ix, Appendix-A); however, when inputted in regression with controls, Bonacich centrality proved significant with CSR Identity Perception Difference (Table 9.1, Model 1 below), while betweenness centrality showed significance with CSR Valuation Difference & Similarity scores, but in a direction counter to expected (Table 9.3, Model 1 & Table 9.4, Model 1 respectively). Thus, having many friends at the workplace, who also have many friends too (Bonacich definition), proved to be a position of influence on CSR Identity Perceptions whereby ego's friends, or alters, are more likely to report similar perceptions. On the other hand, with respect to CSR Valuation, falling frequently on the closest distance or geodesic path between any two actors in the friendship network (betweenness centrality) – a brokerage index indicating potential control or extent of mediation between any two other actors (Brass & Burkhardt, 1993) – was associated with more divergence in CSR valuations between the focal actor and each of his friends. Relatedly, a correlation test between friendship brokerage and extent of influence (see correlation Table xviii, Appendix-A) revealed solid positive associations between CSR Identity Perception Difference and all friendship brokerage indices – the more brokerage an ego enjoys among his friends, the more divergence in CSR perceptions between ego and each of his friends. If we combine the two striking findings just mentioned with the friendship network, the data indicates that the more an actor falls between others in the entire friendship network (i.e. is in a betweenness position), or in her own ego network (i.e. is in an ego-brokerage position), the more she differs in perceptions and valuations from her friends. On the flip side, these findings may be read such that the less an actor falls between others in the friendship network, or the less an actor falls in a brokerage position among her friends, the more convergence in views she experiences with each of her friends. This alternative view emphasizes the balance between the structural

potential for influence (i.e. betweenness centrality or brokerage in this situation) and effective influence through cohesion. At least in the friendship network, it seems that the balance is swayed towards more influence through a less diversified, more cohesive personal friendship network. Nonetheless, when one is friends with others who also have a lot of friends (bonacich centrality), the balance shifts to favour a positional basis of influence, but on CSR Identity Perceptions only and not Valuations.

Moving on, centrality in the Informal-communication Network showed only a positive correlation between bonacich centrality & CSR Valuation Similarity, a relation that was maintained in the regression with controls. Furthermore, when the regressions were run with controls, bonacich centrality in the symmetrised-maximum (undirected) network also gave a similar result with Valuation Similarity (Table9.4, Model 3 & 4).

In the Task Network, a significant negative correlation was observed between bonacich centrality & CSR Perception Difference (see Table ix, Appendix-A), and that relation was maintained in the regression with controls (Table9.1, Model 2 & 3). Regressions with controls also showed bonacich centrality in the symmetrised-maximum (undirected) matrix to have significant regression coefficients with both CSR Valuation Difference & CSR Valuation Similarity (Table9.3, Model 2 & Table9.4, Model 4). Thus, to the extent one is central in the undirected task & informal-communication networks while being also connected to central others (positive bonacich definition), our results indicated a homogenizing influence on one's alters with respect to CSR perceptions (only in task network) & valuations. Bonacich power computed using the symmetrised-maximum networks proved to be a good reflection of influence probably by representing an actor's connectivity and reach since all incoming and outgoing relations are included as effective ties that contribute to influence.

Finally, centrality in the Summed Network showed a significant negative result for OutCloseness with CSR Identity Perception Difference (Table ix, Appendix-A), and that relation maintained significance in the regression with controls (Table9.1, Model 4). Outcloseness is the normalized number of steps it takes to reach every actor in the network in an outward direction, and it seems that easier access to the entire network is associated with an ego’s alters resembling ego in their perceptions of CSR at the group. A closely related measure, Incloseness centrality, also emerged as significant in the regression against CSR Identity Perception Similarity (Table9.2, Model 1). Incloseness is identical to outcloseness except it focuses on incoming relations and therefore better represents the notion of status (Hanneman & Riddle, 2005). Last but not least, bonacich centrality also proved significant in the regression with CSR Valuation Similarity (Table9.4, Model 5), in line with the bonacich results in the other networks.

Table 9: Informal Power Regressions (H6-a)

9.1. DV: Perceptions Average Difference from Ego-Alters

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
	<i>(beta)</i>			
<i>Knowledge</i>	<i>0.387*</i>	<i>0.040</i>	<i>0.041</i>	<i>-0.118</i>

<i>Age</i>	-0.186	0.028	0.036	0.049
<i>Tenure</i>	0.257	-0.012	-0.012	0.042
<i>Education</i>	0.081	-0.003	-0.004	0.191
<i>Friendship Power</i>	-0.323†			
<i>Task Power</i>		-0.344†		
<i>Task SymPower</i>			-0.352†	
<i>Summed Outcloseness</i>				-0.406*
R²	1.873	0.981	0.991	1.494

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

9.2. DV: Perceptions Average Similarity to Ego-Alters

<u>Indep. Variables</u>	<u>Model 1</u>
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(beta)

<i>Knowledge</i>	-0.187
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<i>Age</i>	<i>0.289†</i>
<i>Tenure</i>	<i>0.19</i>
<i>Education</i>	<i>0.413**</i>
<i>Summed Incloseness</i>	<i>0.315*</i>
<i>R²</i>	<i>4.453**</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

9.3. DV: Valuations Average Difference from Ego-Alters

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>
	<i>(beta)</i>	

<i>Knowledge</i>	-0.211	-0.039
<i>Age</i>	0.075	0.091
<i>Tenure</i>	-0.052	0.196
<i>Education</i>	-0.042	-0.001
<i>Friendship Btwness</i>	0.457*	
<i>Task SymPower</i>		-0.326†
<i>R²</i>	0.946	1.152

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

9.4. DV: Valuations Average Similarity to Ego-Alters

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>	<u>Model 5</u>
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	<i>(beta)</i>				
<i>Age</i>	0.446*	0.26	0.23	0.125	0.272
<i>Tenure</i>	-0.048	0.409*	0.465*	0.028	0.245
<i>Knowledge</i>	-0.158	-0.363*	-0.397*	-0.354†	-0.455**
<i>Education</i>	0.131	-0.085	-0.099	0.113	0.203
<i>Friendship Btwness</i>	-0.425*				
<i>Inf.Comm. Power</i>		0.308†			
<i>Inf.Comm. SymPower</i>			0.341†		
<i>Task SymPower</i>				0.397*	
<i>Summed Power</i>					0.316†
<i>R²</i>	1.919	2.559*	2.614*	1.961	3.105*

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Formal Power – no significant results

In this section, we only consider the definition of formal power which was based on BOD members, Coordinators, and the 2 Central Coordinating position since adding staff & faculty produced an insignificant power variable. Formal power was strongly and positively related with most centrality indices in all the networks (Table x, Appendix-A) and was also positively related with CSR Knowledge & Tenure – actors holding formal positions of power were typically central with longer tenures and high extents of knowledge about the CSR initiatives at the group. The only formal influence effect observed was a puzzling, albeit weak positive correlation with CSR Perception Difference in one's Friendship ego network (Table xiii, Appendix-A). A possible interpretation here is that being in a powerful formal position does not translate to an increased influential effect on one's friends, who are not susceptible to formalities, but instead leads an actor towards convergence with the stereotypical characteristics of the role or position occupied (Hogg & Terry, 2000), away from similarity with friends. The data does not support such a 'socialization into roles' view, however, as our dyadic correlations did not show similar formal positions to significantly predict convergence in CSR-related views (Table xi, Appendix-A); this could be due to the short average tenure of role incumbents in their positions, not allowing enough time for socialization to be effective. In any case, the contradictory result with formal power & friendship is marginally significant and is therefore to be interpreted with reservation especially since formal position does not appear to cause much power differential in our horizontal organization. In line with predictions, Formal Position did show influence results in the right direction, although insignificant, in the instrumental and summed networks.

Structural Equivalence – significant findings with the instrumental networks & contradictory findings with the informal-communication network on valuations

First off, dyadic agreement on CSR knowledge & participation had strong correlations with Structural Equivalence in all networks (Table xiv, Appendix-A) – actors in similar structural positions reported similar extents of knowledge and participation with CSR at their group. Interestingly, Structural Equivalence in the Friendship Network also correlated with similar Age, Tenure, and Department – agreement on those 3 variables may thus predict similar friendship profiles between any 2 actors.

Structural equivalence is analyzed at the dyadic level where two actors with similar profiles of connections to other actors are expected to show convergence in their views. We used the same dyadic similarity & difference dependent variables that we used with Direct Contact & Closure in testing Structural Equivalence (i.e. similarity & difference on CSR perceptions, valuations, & drive). First, Structural Equivalence in the Friendship Network showed no significant homogenizing results. Second, the Informal-communication Matrix showed a significant negative correlation with CSR Perception Difference, a result that maintained significance in the regression (Table10.1, Model 2 below). An unexpected marginal correlation was observed with CSR Valuation Difference, and this result strengthened upon entry in the regression (Table10.3, Model 2). This suggested that actors occupying similar positions in the informal-communication network differ in their Personal CSR Valuation ratings. Caution is advised in interpreting such a finding as further scrutiny with structural equivalence in the symmetrised-minimum version nullifies this spurious-seeming effect. However, the same occurs for other significant findings if we compute equivalence with reciprocated-only matrices which are extremely limited in ties. Being connected to similar others in the informal-communication

network may in fact be related to differing CSR Valuations (2 actors with similar acquaintances may share very different social environments, including workplace and friends).

Structural Equivalence in the Task-related Network showed a negative correlation with CSR Perception Difference. And similar to the effect in the informal-communication network, this relation remained significant upon entry in the regression with controls (Table 10.1, Model 3). For CSR Perception Similarity however, an unexpected marginal negative correlation was observed with Structural Equivalence in the Task Network; but this result turned insignificant in the regression with controls. On the other hand, CSR Valuation Similarity showed an expected positive correlation with Structural Equivalence, and that relation maintained significance when regressed with controls (Table 10.4, Model 2). The Joined Matrix showed structural equivalence results similar to those of the Task-related Matrix and so it seems that having similar general or work-related connections to others encourages similarity in CSR perceptions & valuations at SC. No significant findings were observed for Structural Equivalence on Perceived or Ideal Drive.

Table 10: Structural Equivalence Regressions

10.1. Results of Regression Analyses on CSR perception difference (# of observations = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>	<u>Model 4</u>
	<i>(beta)</i>			
<i>Age</i>	0.044	0.051	0.037	0.044
<i>Knowledge</i>	-0.172*	-0.162*	-0.134*	-0.138*
<i>Participation</i>	0.049	0.054	0.058	0.060
<i>Same Department</i>	-0.004	-0.008	-0.004	-0.011
<i>Tenure</i>	0.053	0.055	0.042	0.052
<i>Inf.Comm. SE</i>		-0.080†		
<i>Task SE</i>			-0.151*	
<i>Joined SE</i>				-0.148*
<i>Summed Power</i>				
<i>R²</i>	0.027*	0.033**	0.048**	0.048**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

10.3. Results of Regression Analyses on CSR valuation difference (# of observations = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>
	<i>(beta)</i>	
<i>Age</i>	-0.056	-0.067
<i>Knowledge</i>	-0.085	-0.099†
<i>Participation</i>	0.029	0.022
<i>Same Department</i>	0.169**	0.175**
<i>Tenure</i>	0.003	0.00
<i>Inf.Comm. SE</i>		0.121*
<i>R²</i>	0.031*	0.045**

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

10.4. Results of Regression Analyses on CSR valuation similarity (# of observations = 1980)

<u>Indep. Variables</u>	<u>Model 1</u>	<u>Model 2</u>	<u>Model 3</u>
	<i>(beta)</i>		
<i>Age</i>	<i>0.041</i>	<i>0.048</i>	<i>0.041</i>
<i>Knowledge</i>	<i>0.109†</i>	<i>0.068</i>	<i>0.081</i>
<i>Participation</i>	<i>0.014</i>	<i>0.005</i>	<i>0.005</i>
<i>Same Department</i>	<i>-0.09</i>	<i>-0.089</i>	<i>-0.084</i>
<i>Tenure</i>	<i>-0.107</i>	<i>-0.095</i>	<i>-0.106</i>
<i>Task SE</i>		<i>0.161*</i>	
<i>Joined SE</i>			<i>0.121†</i>
<i>R²</i>	<i>0.028*</i>	<i>0.052*</i>	<i>0.042*</i>

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

In concluding our results section, it should be noted that the network of summed relations (i.e. the Summed Matrix) approximated a core-periphery structure (Lamertz, 2009) - see fig.6 below. Actors similar in 'coreness' (i.e. they are positioned similarly with respect to a core-periphery dichotomy) may be more homogeneous in their identity views, in line with the characteristics of such a structure which typically holds a strong unified core and a fragmented periphery (Lamertz, 2009). Explorations on overall structure could be an interesting venue for future research. Finally, in terms of the different roles or groups that members occupied, no noteworthy homogenizing effects were found for common membership in similar positions (i.e. BOD member, coordinator, intern, faculty or staff) or groups (i.e. same university department, SC working subgroup, or other Concordia subgroup). This is reasonable given that the organization is relatively small, focused or narrow in purpose, and well connected, which promotes homogeneity in views and decreases compartmentalization as evidenced by the low variance in our dependent variables across the sample.

DISCUSSION

The main purpose of this investigation was twofold: (1) to examine the idea of a CSR identity increasing identification with the organization, and (2) to understand how a CSR identity (or any other identity) comes to be shared by the organizational membership. As mentioned, our organization, Sustainable Concordia (SC), has CSR or sustainability at the heart of its organizational identity as it was built on sustainability values with the main goal of promoting a socially responsible university and a sustainable community. For the purposes of our first objective, exploring the effects of a CSR identity on organizational identification was limited

since the OI is mostly the CSR identity; and so we invest most of this discussion on *how* this CSR identity or OI is identified with and how social influences affect this process. Ensuing use of the term *identification* pertains to organizational identification in principle, but it may well be interpreted as referring to the CSR Identity since both are treated as practically equivalent for our organization. Finally, we also play with the idea of CSR contributing to identification with Concordia University as a parent OI. We start this discussion by walking through our hypotheses and discussing our main findings and we culminate with a model that summarizes and integrates our results providing a broader perspective and a big-picture analysis of this study.

The original hypotheses concerning how CSR Identity Perceptions, Valuations and Organizational Identification interact were generally not supported. First, the proposition that CSR identity perceptions contribute directly and independently to organizational identification (CSR Identification) was supported weakly by an almost significant correlation which did not hold upon regression with controls. The control variable representing extent of CSR Knowledge at SC remained significant suggesting interaction with our predictor (Baron & Kenny, 1986) – knowledge about CSR initiatives at the group seems to supersede any effect that variation in members' CSR identity perceptions may have on their identification. This is not necessarily interpreted as a causal effect of knowledge since knowledge and identification may simply be co-varying as a result of some predisposition to CSR. However, the idea of CSR perceptions or 'extent of knowledge' being related with identification fits our theory in relation to perceived attractiveness (Dutton et al., 1994). To the extent that CSR knowledge or CSR identity perceptions contribute to attractiveness of the organizational identity, and thus to more identification, it seems that CSR knowledge supersedes identity perceptions as it probably reflects a member's superior awareness of concrete examples and details about CSR at the group.

Relatedly, participation in CSR also related positively to knowledge, identity perceptions, and identification; however, participation's correlation with knowledge ($r=.693$, $p<.001$) was at least twice that of the other relations lending support to the view that CSR knowledge is effectively a solid reflection of awareness and engagement in CSR at the group. At the end, our contention that CSR identity perceptions predict identification (via increasing identity-attractiveness) was not well substantiated, and it appears that 'extent of knowledge of CSR at the group' better fulfills our speculation. Intuitively, extensive knowledge usually reflects interest and commitment to a subject matter while at the same time gathering knowledge typically raises interest and commitment too. It is also likely that *familiarity breeds liking* when it comes to sustainability at SC – the more one is familiar with SC's initiatives, the more one comes to associate with their sustainability identity.

Next, our second hypothesis predicting an interaction or 'congruence effect' of CSR perceptions & valuations on identification was not supported indicating that simultaneous agreement on both independent variables was not a determining factor for identification. This makes sense as a member perceiving *low* importance of CSR to the group coupled with *low* personal valuation for the identity (i.e. an example of congruence) will likely not report higher identification with the group. Relatedly, we did find that agreement between perceived & ideal drive did predict stronger identification with the group. If we overlook the computational problems mentioned before with the difference measure, it is very likely that the data is pointing to a real agreement effect for underlying drive. Unlike the interaction between identity perception & valuations, convergence on drive simply means that a participant regards the underlying drive or value system at the group to be aligned with his preferred value system. Only the higher 2 of the available 4 choices were selected by participants indicating an 'elevated'

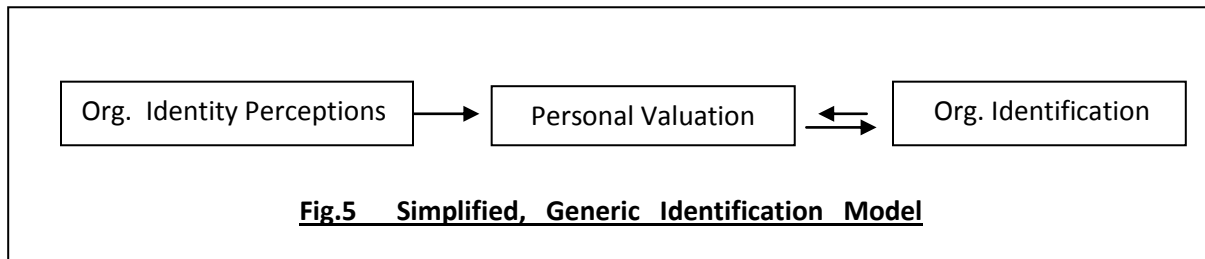
value system at SC where initiatives are seen to be driven by either sustainability values (social, economic, & ecological), or by a win-together approach where any solution needs to simultaneously combine the three perspectives to be considered functional. Any congruence is ‘good’ congruence when it comes to drive, and perceiving an ideal value system as actually operating at one’s organization may indeed promote identification. Interestingly, those selecting the higher value system for perceived drive generally showed stronger CSR identity perceptions, while those selecting the higher value system for ideal drive showed stronger CSR valuations. A simple and plausible explanation is that members with an inclination to the higher value system observed and cared more for sustainability activities at their group.

Next, our third hypothesis predicting a moderating influence of identification on the relation between CSR perceptions & valuation was only supported for the latter effect. Indeed, CSR perceptions and valuations were strongly positively correlated, but this is not necessarily best interpreted as a causal connection - the possibility that enthusiastic SC members reported highly on all variables is not unlikely. Still, the effect supports Hitlin’s (2003) theorizing which complements SIT and Identity theory by incorporating values at the level of personal identity. Hitlin (2003) and others (e.g. Ashforth et al., 2008) had discussed the ‘feedback’ effect of a social identity on a member’s personal identity, and our results could be interpreted as a feedback effect stemming from both CSR perceptions *and* identification. Generally perceiving CSR as important to SC’s identity may very well boost personal valuation for those same matters as we had suggested. Identification did not moderate this perception-valuation relationship, but the results did suggest a similar feedback effect on CSR valuations, in line with theory on a reciprocal interaction between identification and its antecedents (e.g. Dutton et al., 1994).

As reported earlier, when CSR Identity Perceptions was entered into the regression with Personal CSR Valuation, suppression of perception's significance was observed suggesting a potential mediating role for CSR valuation on the relation between perceptions & identification. Our post hoc analysis backed up the mediation model illustrated in Fig.4 which also fits with a recognized theory on identification. SIT proposes 2 pathways to identification: recognition of alignment with the organization (affinity), and/or change towards aligning with an identity (emulation) (Ashforth et al., 2008). In both cases, an alignment with the organization is depicted as underlying identification with a social identity. Hitlin (2003) explicitly describes this alignment at the level of the core values embedded in one's personal identity whereas others talk about congruence (e.g. Foreman & Whetten, 2002; Ibarra, 1999) and values (e.g. Ashforth & Mael, 1989; Turner, 1975) as typically accompanying identification. Thus, being aware of an identity (CSR Identity perceptions) does not automatically translate to identification - regardless of its attractiveness or one's knowledge about it* - unless one personally experiences some alignment in values with the observed identity. This is a very intuitive statement that is suggested by the literature and is seemingly supported by our model. Furthermore, our model fits the process model of identification proposed by Ashforth et al. (2008). Their model illustrates a cyclical process of identification where an individual receives input from the organization (sensegiving), does some interpretation at the level of identity narratives, enacts the identity, only to receive more input (sensebreaking or self-confirming feedback), and the cycle continues. Our model can be generalized (Fig.5) and interpreted similarly: representing any organizational input that affects how we view the organization, organizational identity perceptions relate to personal valuation, either through affinity or emulation, and only then have an effect on identification which feeds back on valuation. Any factors affecting identity perceptions or valuations (parallel

*Note: Knowledge turns insignificant when entered with Valuation in the regression against identification. This indicates that knowledge interacts with Valuation which surpasses any effects that knowing about CSR might have on identification.

to sensebreaking or sensegiving) would have an ensuing effect on identification. The rest of this discussion supplements this model with social influence mechanisms operating on CSR perceptions & valuations, yielding a more comprehensive illustration.



It should be mentioned that our sample, not surprisingly, did not produce the variation in responses that may arise in a larger organization that is more diverse in activities and specialization of its workforce. Although people at SC represented a variety of ages and backgrounds, they were mostly young Concordia students from the social sciences or arts programs who have not yet been intensively socialized into a profession (Sweitzer, 2008). Furthermore, our central group of members (N=45) interacted relatively closely together and did not show dispersions into separated subgroups, what Lamertz (2009) termed “*identity communities in complex organizations*” (p.2). Instead, our overall network as illustrated in fig.6 below more closely approximated a core-periphery or a fully connected structure (Lamertz, 2009).

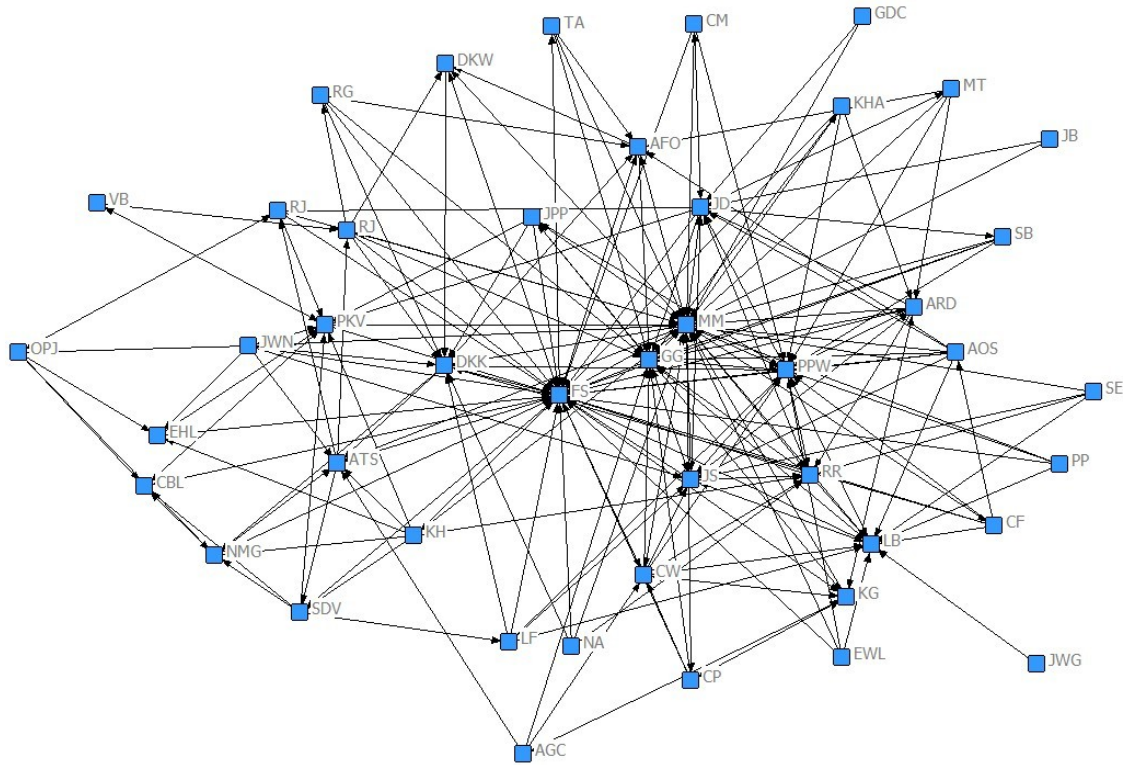


Fig.6 SC network depicting all 3 relation types (N=45)

As a result, we could not reproduce what other researchers found with respect to the polyphonic nature of OI meanings (e.g. Humphreys & Brown, 2002, 2008; Lauring & Thomsen, 2009). Moreover, our method was not as suitable to uncover such effects as those studies which typically employed a discursive methodology (e.g. Coupland, 2002) that is more appropriate to unveil subtleties in the daily shared narratives of organizational members. Having said that, our study was successful in testing and demonstrating social influence on CSR identity perceptions & valuations and Table 11 summarizes our main findings:

Table 11. Social influence results summarized

	Dir.Contact	Closure	Brokerage	Power	Strc Equiv
CSR Perception	----	I ⁻ , T	F ⁻ (netavg)	F(bonac), T(bonac), S(in&outclos)	I, T, S
CSR Valuation	----	T	I, T(ego&net), S	F ⁻ (btw), I(bonac), T(bonac), S(bonac)	I ⁻ , T, S
Drive Perceived	F	F	N/A	N/A	----
Drive Ideal	----	I, T	N/A	N/A	----

Friendship (F), Informal (I), Task (T), & Summed (S) Matrices

Negative sign indicative of effect contrary to expected

Brokerage: congruence with ego or network avg; no mention = ego avg

Power: centrality measure with power effect; bonacich, betweenness, or out/in-closeness

----- no significant effect

From the above table, we can easily see that our general proposition of social influence was supported: there is significant social influence on our perceptual and attitudinal (valuation) variables regarding CSR at the organization. Our study therefore adds CSR identity perceptions and personal CSR valuations to the list of phenomena that are effectively applicable to SIP theory (Salancik & Pfeffer, 1978). The first is a perceptual construct about OI, while the second a personal, yet social construct depicting personal importance for membership in a group with a specific OI – a type of social attitude. To those, we also add perceptions and preferences/valuations for the drive underlying the organization’s activities which we found to be socially influenced, especially via cohesion. Perceptions of the organization & individual attitudes have been shown to be subject to social influence through mechanisms such as contagion and structural equivalence (e.g. Johnason, 2000; Meyer, 1994), and social theories such as SIP has provided good rationales on how such processes occur. Whether comparing oneself to relevant others such as friends or coworkers (social comparison theory: Festinger, 1954), playing out a role-relationship in a given dyadic relation (identity theory: e.g. Sluss &

Ashforth, 2007), or identifying with a valued social collective (SIT e.g. Hogg & Terry, 2000), SIP theory proves useful in providing complementary explanations to the different phenomena observed. SIP deals with perceptions & opinions/attitudes about what is external to the individual, as well as with perceptions & attitudes that are relevant to the self. In either case, which dimensions are used for evaluation or description (i.e. processing) is influenced by the social environment which consists of context and people; the social environment also guides the individual on how to use those dimensions and figuring the importance of each (Salancik & Pfeffer, 1987). In our study for example, the lowest ratings for both CSR Identity Perceptions and Personal CSR Valuation were given to the two items concerning the improvement of Concordia as a university (i.e. teachers, enrolment etc) and the encouragement of university funding from equitable tuition and socially-responsible investing. Although these items were clearly emphasized in the sustainability assessment (SC's report on their accomplishments & objectives) and substantiated by the central coordinators as important to the group, participants gave them the lowest ratings for both identity perceptions & personal valuations. Not to read too much into it, but this appears to be an example of a socially-shared (or lack of) perception & individual preference for an issue that is relevant to the group. SIP would provide good explanation for how such consensus tend to emerge, and indeed we can run our imagination and picture everyday life at SC were the social context slowly puts things into place, through direct feedback, through subtle suggestions, recounting of stories and details, the eyes suddenly wide open with interest, and a casual uninterested nod. SIP adds that social influence is effective to the extent that an individual is committed, in need to develop socially acceptable or legitimate rationalizations, and to the extent a stimulus or piece of information is salient and relevant. It follows that groups are better carriers of social influence than direct contact since they add to

direct contact the pressure to conform, increasing an individual's need to process within 'legitimate' norms and increasing frequency of contact and commitment. Stronger results with closure make sense especially since closure essentially includes direct contact and this is what previous studies have shown also (e.g. Johnason, 2000; Meyer, 1994).

Direct Contact was our weakest mechanism of influence as it was only effective on Perceived Drive through the network of friendship relations – *H(5) not supported*. As expected, that relationship was also significant with closure in the friendship network which showed a stronger effect on the dependent variable. The question arises on why this effect appeared in the friendship but not the other networks. Not observing any direct contact (proximity) effects with the other more instrumental networks is in line with predictions about their specialization in exchange-based effects (power) through centrality (e.g. Ibarra & Andrews, 1993). The fact that the nature of the question is ambiguous and linked to perceptions of an underlying value system (van Marrewijk & Werre, 2003) could be behind better agreement among friends who perhaps get more chances to have in-depth discussions on matters of relevance to the organization compared to non-friends (Granovetter, 1973). The potential for influence and persuasion is favoured by intensive interaction (Ibarra & Andrews, 1993) which increases the likelihood for social information processing to operate such as through increased transmission of social cues (Salancik & Pfeffer, 1978). Moreover, '*friends tend to see the world similarly*' and they also tend to pick each other based on similar personal characteristics and worldviews (Ibarra & Andrews, 1993; Krackhardt & Kilduff, 1990). An enhanced effect with closure extends this idea to a group of friends or coworkers who experience more intensive interaction and are bound by group norms and conformity pressures.

Closure complements the basic premise of direct contact (structural cohesion) - that “*social homogeneity is fostered by face-to-face interaction and short communication channels through intermediaries*” – and places individuals within subgroups that increase the likelihood of face-to-face interaction and short communication channels through intermediaries (Friedkin, 1984, 236). Where direct contact involves contact and exchange between only two individuals, closure represents more of a system-wide influence that places two individuals in one or more subgroups bound by group norms and conformity pressures. Closure was without a doubt a significant mechanism of influence and H(6) was therefore supported. Closure was operational mostly through the Task-related network for homogeneity on CSR perceptions & valuations, lending support to SIP and social comparison’s idea of salience and relevance for a stimulus to be a good candidate for social interpretation. To explain, the task/advice network is probably better suited to capture influence on matters pertaining to OI since the social transactions within are centered on work-related issues which cue or render salient work-related matters (i.e. OI-related matters) making them more contextually relevant and apt for negotiation and interpretation. Had the group’s identity not focused on CSR, we might have observed less significance here on CSR perceptions & valuations since CSR would have been cued less frequently in social exchanges. Social cues not only put a stimulus on the forefront for interpretation (Salancik & Pfeffer, 1987), they also trigger or activate social identities (e.g. Ashforth et al., 2008; Hogg & Terry, 2000). For instance, to the extent that a member at SC embodies a ‘sustainability’ identity (i.e. defines the self through a personal orientation to ‘sustainability’), that identity will be activated by everyday contextual cues making it more salient and open for social influence – hence an extended reach of influence on personal identity and valuation. Intriguingly, closure in the informal-communication network showed the

unexpected result of decreasing homogeneity in CSR perceptions among co-members in informal-communication subgroups. Though we offered the earlier explanation that the informal-communication network could represent connections between differing people who typically diverge in their views on organizational matters (Ibarra & Andrews, 1993), informal-communication closure did show a homogenizing effect with N-Clans on Ideal Drive. Friedkin (1984) warned of the challenge of defining subgroups so as to maximize actor homogeneity and minimize heterogeneity. It appears that pulling the strings too tight with cliques or letting them loose with n-clans produced contradictory results, especially given that the informal-communication network does not represent close associations or enduring bonds to begin with.

However, these conflicting results could be stemming from a fundamental difference between Ideal Drive and CSR Identity Perceptions. Identity perceptions (cognitive) are a little more tangible and complex to exchange between actors. They involve discussion and shared experience of the perceived features of a more or less concrete social entity, SC. On the other hand and similar to valuations (affective), ideal drive is more subtle and could be effectively conveyed with buzz words such as ‘win-together’, ‘triple bottom-line’ or ‘sustainability values’ which may tap into emotions and thus influence one’s preference for an ideal CSR motive. While selecting the Perceived Drive might entail some recollection and conscious interpretation of the group’s past activities (cognitive), Ideal Drive probably involves a more instinctive and affective choice based on what an individual thinks is a better state of affairs. Closure in the informal-communication network, indeed in the task-related network too (i.e. instrumental networks), might be a good medium to relay subtle reactions and attitudes about what *should* drive sustainability initiatives. As mentioned, the use of language in everyday meaning-creation (e.g. Brown, 2006; Ford, 1999) is an example of how personal preferences for an ideal drive might be

socially shaped in such a structure. *“Words hide the world. They blur together elements that exist apart, or they break elements into pieces, bind up the world, contract it into hard little pellets of perception”* (Millhauser, 2008; 108). A simple emphasis on the word ‘win-together’ when exchanging opinions and stories could be behind our effect for ideal drive. Further, whether a sustainability initiative should also make financial sense is a question that probably arises frequently in the group, to which a positive answer would better align with a win-together drive. To illustrate, when that question was asked at SC’s office, a reply from one of the central coordinators affirmed: *“it would be nice if everything made financial sense, and we would certainly wish that it does, in the long run, but we are not terribly limited by this requirement”*. Similar interpretations for such an affirmation seem to be favored by members working in close contact with one another who end up sharing in the views of their colleagues regarding an ideal state of affairs. Still, it appears that such work-related contact does not affect Perceived Drive equally, probably since it is harder to determine what the actual CSR drive is given two equally plausible choices. Friends on the other hand, seem to construe organizational reality more similarly, at least at the level of an underlying value system where they might assert to one another without reservation what they think the organizational reality is like.

H(6-a) was partially supported with a brokerage effect on ‘CSR Valuation's similarity with ego-average’ but not for CSR Identity Perceptions (in fact, an opposite result emerged with ‘perception’s similarity with net-average’ for Brokerage in the friendship network). Our contention that a good broker winds up representing the views & valuations of his or her ego-network was partially supported, and the brokerage effect held on perceived valuation in the Task, Informal-Communication, & Summed networks (the latter likely representing the combination of the other 2 significant matrices). What was surprising was the lack of

significance with CSR perceptions since the ‘weak-tie’ argument (Granovetter, 1973) suggests that brokerage’s weak ties would be especially effective in carrying information across distances and therefore bringing knowledge about CSR initiatives that may turn up in identity perceptions. In reality, knowledge did correlate positively and across-the-board with brokerage scores in support of the weak-tie hypothesis; however, when it came to the actual identity perceptions, no increased homogeneity was observed with one’s ego-network. It is possible that the result was effective for strong brokers but lacked the flip side of the equation – i.e. poor brokers did not show any systematic variation in their perceptions simply because variance is limited and because they are still connected and influenced by their ego-networks which include strong brokers (who also tend to be relatively central and influential actors). It is also likely that shared identity perceptions need grounded experience to develop, not just water-cooler conversations, and therefore tend to develop in shared ecologies such as cohesive sub-groups where SIP would predict increased influence due to the sharing of situational and social cues. This is in line with SIT and Ashforth et al.’s (2008) process model of identification which seems to require a stable platform for ‘sensebreaking & sensegiving’ to have a real effect on a member’s organizational impressions.

On the other hand, the fact that brokerage showed decreased divergence or more similarity with ego-network’s average CSR valuation is not unexpected but still requires explaining. Valuation, a form of personal attitude involving values and likely affect, is a good candidate for social influence based on SIP’s contentions (e.g. Johanson, 2000). We can easily picture how attitudes may become contagious between people given appropriate social cuing which is plentiful considering the pervasiveness of CSR at SC. For example, an event or new project-X is discussed and some people provide input with exclamations; an undecided, vague,

indifferent perhaps, opinion now is in striking resemblance to what was heard in exclamations and is rehearsed verbally to another member who asks about project-X. Since our finding was based on an averaged valuation score of all 15 survey items, it follows that our resemblance index only reflects a general agreement with the ‘tone’ of ego-network’s valuation (i.e. an impression of how much ego-members personally care for CSR at the group). Social influence might be very effective on carrying such a general tone of passion or caring for CSR at the group, and therefore minimal social contact suffices for contagion to occur. This further helps in explaining why the result was applicable not only for the task but the informal-communication network too, in addition to the effect holding up for similarity with the ‘network’s average valuation’ in the task network. The latter effect provides only partial support to H(6-b) since the ‘network’ effect was only observed with the task matrix, and since it was not observed with the network betweenness centrality measure. The task matrix may be special in that resembling one’s ego-network may effectively translate to resembling the whole network given high brokerage. Correlation results between brokerage & the difference between a broker’s ego-network and the entire network’s average (Table vii, Appendix-A) indeed support such a claim – a broker in the task network effectively reaches the entire network through breadth of connections in his ego-network. In any case, SIT and other identity theories suggest that individuals naturally look to fit in the social environment that they inhabit - for personal motives such as belonging, self-coherence, affiliation etc, and for functional motives such as adaptation, p-o fit, tenure etc (Ashforth et al., 2008). Socialization at the workplace and influence from coworkers is therefore inevitable. And since relations at the workplace probably revolve mainly around the informal-communication & task-related connections, brokerage in those networks appears to be a good structural variable in reflecting homogenous socialization, at least with

respect to one's alters transmitting CSR valuations evenly to ego. An actor high in brokerage – i.e. with a sparse and non-redundant ego-network – is more likely to reflect the overall valuation of his direct contacts compared to an actor whose ego-network is limited and breaks into one or more subgroups. As we saw with closure, actors who partake in similar subgroups are more likely to show similarities in attitudes, and therefore we can expect a balance between brokerage and closure where strong group closure would override a broker's resemblance to his ego-network's average valuation, swaying his valuation towards resembling that of his subgroup mates.

Moving along to informal power and centrality, both CSR identity perceptions and CSR valuations exhibited power influence and therefore H(7-a) was generally supported. The effects held for Bonacich centrality in the friendship, task-related & informal-communication networks and for the in/outcloseness centrality measures in the summed network. In reference to H(8), straightforward interpretation gives that the effects of power held in all networks, although more directly and inclusively (i.e. both CSR perceptions & valuations) with the instrumental networks - in line with our prediction. Power was expected to yield more homogenizing influences in the task-related network as it better fits the instrumental networks' resource-based and exchange orientation to social relations which provides a better conduit for asymmetrical influence (e.g. Brass & Burkhardt, 1993; Ibarra & Andrews, 1993; Kilduff & Tsai, 2003). Further, the task/advice network embeds actors in work-related role-relationships (identity theory; e.g. Sluss & Ashforth, 2007) resembling formal roles which increase the potential for self-categorization under uneven distributions of power (Turner, 1978). As if friendship dissolves this 'formal' barrier and brings more intimate exchanges, less personal interaction and more instrumental ties in the task-related network maintain or even increase positional barriers, thus being better suited

to capture power effects as effectively observed with task-related influence on both CSR perceptions *and* valuations. On the other hand, the friendship network did show stronger cohesion effects on perceived drive but not on CSR perceptions & valuations which were more subject to influence through the task-related network. Perhaps the fact that we are considering stimuli of contextual relevance to everyday work life is behind our stronger findings for perceptions & valuations in the task-related network; similarity in perceptions of drive might require more intensive interaction and explicit sharing of ideas which friendship relations encourage. All in all, H(8) was only weakly supported by stronger power effects in the task-related network.

Although bonacich centrality actually predicted influence on CSR perceptions in the friendship network, betweenness centrality in the friendship network (brokering between one's friends) showed an opposing result predicting more divergence in valuations between a focal actor and her friends. This seemingly unusual effect is closely tied to another striking outcome which was revealed when correlating brokerage scores with the influence dependent variables that were used for our power analysis (see Table xviii, Appendix-A). From those correlations, only brokerage in the friendship network showed a significant, but reversed effect (chiefly with Effective Size & Brokerage) of increasing the difference in CSR perceptions between an ego and each of her friends. As discussed in the results section, it seems that brokering between one's friends – i.e. having a sparse and non-redundant collection of friends while falling frequently in a mediating position among them (betweenness centrality) - contributes to divergence in views from one's friends. We offered the flip-side interpretation that it is the lack of sparseness and betweenness – namely, a more cohesive friendship ego-network – that is causing more convergence in views, in line with a closure effect. Moreover, friendship relations probably lack

the same work-related contextual cues that are effective with the other networks and that encourage social influence on the salient perceptual and attitudinal matters. Instead, ego's friends that are dispersed across the network might be much more influenced through their relatively instrumental relations in the other two network types and end up with differing views regardless of their friendship contact.

Steering back to centrality and influence, a bonacich conceptualization of centrality (Bonacich, 1987) seemed particularly well-suited to represent an influential position in our networks. Bonacich centrality basically represents degree centrality but with the added consideration for alters' centralities. Thus, it is not only important to consider the extent an actor is connected but the extent to which her connections are themselves connected (Bonacich, 1987). Our positive choice for the bonacich-beta implies that the more an ego's alters are connected, the more potential power and influence is accorded to ego's position. This makes intuitive sense and is backed up by our empirical data. A bonacich conceptualization extends a resource-dependency framework which views power as contingent on access to and control over resources (e.g. Brass & Burkhardt, 1993) to considering actors as potential resources. If not contributing directly to an ego's power through bringing more knowledge and expertise for example, being connected to central others may simply make ego appear more powerful and therefore make her effectively more influential. Brass & Burkhardt (1993) showed that an actor's centrality predicted how others perceived that actor's power, and we extend their findings to suggest that bonacich centrality may operate similarly by determining how others perceive an actor's power. An interesting question may be asked here regarding whether a bonacich-central actor is actually an influential actor or whether her position facilitates influence through others' perceptions of her power. A central position does affect an actor's power, but powerful actors also end up in

powerful positions which represent the structural means by which they may exercise their influence (Brass & Burkhardt, 1993). In any case, it appears that being connected to highly-connected others is a special position which allows influence to spread outwards from that node to shaping neighbouring views. We tested the idea of *central actors resembling one another in their views* as a possible explanation to our bonacich effect, but dyadic similarity in centrality did not consistently predict similarity in views. Our power effect therefore mainly stems from the relations between a bonacich-central actor and her relatively less central contacts, in line with identity theory's view on asymmetrical influence in power-laden role-relationships (Sluss & Ashforth, 2007). SIP theory can also help us understand how such influences spread, and this by allusion to asymmetric control on social cuing, on setting the standards on what is important, as well as on defining what is 'legitimate' in terms of the available rationalizations for an actor's thoughts and behavior (Salancik & Pfeffer, 1978).

Finally, our results did show an informal power effect for incloseness & outcloseness centrality in the summed network on CSR identity perceptions. The two measures consider both direct and indirect linkages in determining how close an actor is to the entire network for incoming and outgoing relations respectively. Because the effect occurred in the summed network, a plausible interpretation is that the easier it is to be reached by and to reach all members through any relation type, the more an actor's position facilitates outward influence on alters' organizational perceptions. This also implies that actors with only a few direct links, but that are connected to highly-central others, will also be influential on their alters' perceptions because of their extended reach (similar to the Bonacich conceptualization). Being in such a vantage position probably also increases perceptions of trust and reliability of an actor where his accounts on what the organization is doing and what the organization is about are deemed

reliable and given more weight - in a sense creating the impression of an information hub which explains why the effect holds for identity perceptions in particular.

Thus, to closure & brokerage, we add centrality as a third mechanism to help us understand how social inter-connections shape individual actors' views & valuations of the CSR Identity. Indeed, actors form their views & valuations of the CSR Identity, at least in part, in reference to their social connections, but that influence is not homogeneous and is dictated by the different network mechanisms as revealed by our results: partaking in the same subgroups with others brings convergence in perceptions & valuations; brokering among members exposes an actor to different views and culminates in an average valuation similar to that of one's neighbours; and being central while enjoying contacts that are themselves central translates to a position of outward influence on neighbouring perceptions & valuations. Contextual relevance and salience seem to be defining features of our social influence effects (SIP theory) which mostly appeared in the work-related networks (working together and sharing in stories, gossiping etc) vs. the friendship network which stood out with a closure effect on perceived drive (an ambiguous variable that is probably better dissected and shared with intensive interaction among friends). Moreover, a disparity in influence effects was observed between our two dependent variables, CSR identity perceptions & valuations, hinting at potentially differing processes of social negotiation for each variable. Our results indicate that CSR identity perceptions require more 'grounded' experiences and substantial interaction for two actors to share in similar views of the organization (closure), whereas CSR valuations are relatively more contagious as they were effectively conveyed through weaker brokering ties. Also, CSR identity perceptions & valuations were influenced by well-connected actors who seem to be perceived as reliable or representative of the general CSR views at the organization. In sum, whereas an individual's

CSR valuations were influenced ubiquitously by surrounding valuations, her CSR identity perceptions were shaped by more intensive interaction and by influence from powerful and seemingly reliable actors. The nature of the variables is likely behind this distinction: identity perceptions being a cognitive variable with a concrete and external focus which requires explicit information and exchange of opinions; and valuation being an affective, internal variable that is related to personal values and which is probably best conveyed indirectly or even unconsciously.

Closure, Brokerage, and Informal Centrality all tap into sources of influence emanating from position in the overall network, but which still requires connectivity between the sources and the targets of influence for the effects to be realized. This evokes the structural vs. processual interactionist distinction we have previously discussed. Overall, our empirical data fits a symbolic interactionist view which suggests social inter-penetration via communication, reality-construction and identity formation; *“these processes result in an ongoing, reciprocal interaction between system and individual, structure and process, context and interaction, and macro and micro”* (Sluss & Ashforth, 2007, 12). But where strict processual interactionists focus on the social situation/context, the structural interactionists center more on structural elements such as roles or role-identities (Gecas, 1982). Although the two perspectives obviously interact in real situations, as evidenced by the successful use of SIP in complementing structural theories and concepts with appropriate processual explanations, this is a useful distinction for understanding our influence model. A structural perspective to our model was essential since it depicted an actor’s position in the network proving effective in accounting for social influence effects such as with dyadic co-variation in views (closure and structural equivalence), ego resemblance to his alters’ average valuations (brokerage), as well as ego influence on alters’ views (centrality). However, assigning these effects under a purely structural label would be mistaken since a

structural perspective essentially looks at the effects of position independently from processual or relational elements (e.g. Friedkin, 1984; Ibarra & Andrews, 1993; Johanson, 2000). From a strictly structural standpoint, we would be looking at the isolated contributions of an actor's position on her subjective reports, not on her actual relations with other actors. From a strictly structural standpoint, we would want to isolate the contribution of a position on an actor's reports, a position such as a strong brokerage position or a position of high potential power, etc. Although not our main focus in this study, such 'purist' structural effects were generally not shown to be significant for brokerage and central positions; although brokerage & centrality showed effects with respect to neighbouring views, they did *not* show systematic effects on the focal actor's views (i.e. actors similar in brokerage or centrality did not hold similar views). Our structural equivalence variable which was significant in the instrumental networks is not a purely structural measure either as it considers the extent a dyad is connected to the *same* other actors - if those actors are substituted with another similarly-configured or 'structurally equivalent' set of actors, the results observed would likely change as they are dependent, in part, on the relations with the actual people in the comparison set. In fact, the results slightly changed when a 'regular equivalence' conceptualization (Johanson, 2000) was tested and equivalence in the task network was no longer a predictor of convergence in valuations (the effect remained for perceptions), although it now predicted similarity in perceived drive. This makes intuitive sense since being in a similar structural position in the network should relate more closely to organizational perceptions as actors are subjected to similar organizational stimuli from their environment (e.g. information); however, for personal attitudes or values to be affected similarly is a far stretch as it is mostly the social context (i.e. people) that carries value-laden influences reinforcing particular views and opinions. To put things into perspective, our model relies on both structural

and processual elements in that it uses structural measures to represent actors' positions in the network of relations *and* relational measures to tie those measures into meaningful comparisons with other actors in the network. As an example, closure is constructed from each actor's belonging in a set of subgroups (a structural description), but is put to life by processual-driven theorizing - i.e. *increased cohesion promotes homogeneity*. Thus, we tested this combination and found the extent of overlapping group affiliations between two actors to predict resemblance on their CSR identity views & valuations.

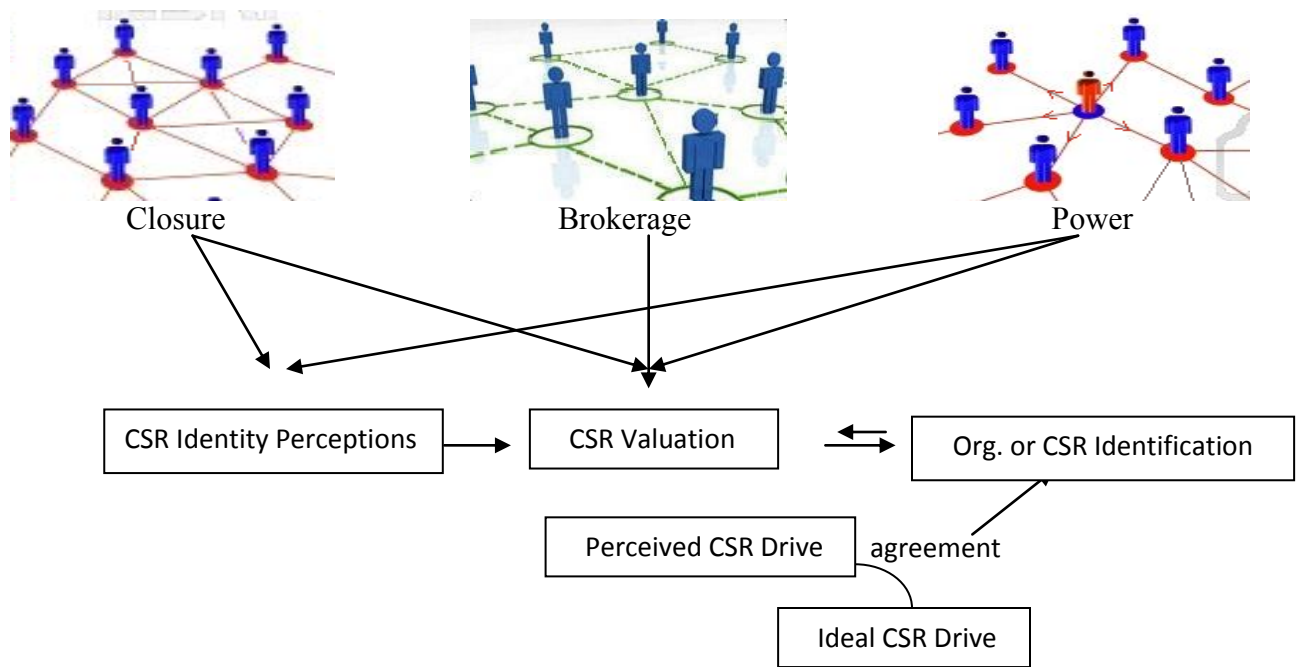


Fig.7 Combined Identification Model

Fig.7 paints the resulting overall model based on our empirical data. Our three prominent network mechanisms affect identification indirectly through a combination of social influence on CSR Identity Perceptions, CSR Valuations, and Perceived & Ideal CSR drive (closure influencing drive is not depicted in Fig.7 for clarity of presentation). Put differently, the way

organizational members connect with one another affects the way they identify with their organization, and this through influencing each other's perceptions of the CSR Identity and its underlying drive *and* through influencing each another on the extent they personally care for that CSR identity and its underlying drive. Closure in similar subgroups operates beyond simple direct contact and contributes to shaping similar CSR identity perceptions & valuations. Closure also contributes to similarity in perceived and ideal drive and so contributes indirectly to organizational identification through drive as well. Brokerage adds to the picture by showing that an actor's CSR valuations are also affected by all her direct contacts' valuations – the more one's ego-network is large and sparse, the more that influence is homogenous and causes convergence in valuation with the entire ego-group average. With respect to valuation then, we can see how closure & brokerage do not necessarily work in the same direction: a broker who is also a member of a few especially-cohesive subgroups will likely reflect a view that more closely approximates the few subgroups' and not the entire ego-network. Centrality (mainly bonacich) contributes to both perceptions and valuations, but via outward influence from an actor to her direct contacts. Centrality also interacts with the other mechanisms such that a broker that is high in bonacich centrality will probably result with an ego-network that is relatively homogenous in views – through a reciprocal 'ego-alter's' influence for valuations and an ego-outward influence for perceptions (i.e. ego's direct contacts will reflect his perceptions while all will share in similar attitudes). A central actor is also linked to other central actors and is part of different network subgroups. We can imagine a situation where two connected, central actors either converge or diverge in views, thereby helping to either consolidate the neighbouring views into a unified perspective or fragmenting them into different or possibly competing camps. Based on the bonacich conception, actors connected to central others are themselves influential too, and so

we can envision how influence can spread a certain identity interpretation or personal preference across the entire network in just two or three steps from a central ‘conceiver’. This idea is particularly relevant to our sample since the modeled network approximates a core-periphery or fully connected structure (e.g. Lamertz, 2009) where influence from the centre quickly reaches the entire population. In fact, to the extent our sample reflects a fully connected network, it is quite accurate to have observed a strong and relatively homogenous CSR identity with little variance (Lamertz, 2009).

From a broader perspective, the model depicted in fig.7 provides the details of a general phenomenon that we uncovered in this study: an actor’s position in the overall network matters when it comes to perceptions of the organizational identity, valuing that identity, and identifying with it (at least with respect to the CSR Identity). If we place an individual in a specific position in the network, we should be able, in theory, to estimate what her views and identification with the organization will be like given sufficient socialization in that position (of course assuming we have a good idea of the perceptions & valuations of the other actors in the network). In a different sense, if we know an actor’s position in the overall network – i.e. his brokerage potential, his centrality, his contact’s centrality, who one is connected to, who one partakes in the same subgroups with, etc – we may have a good idea as to which actors his views & valuations will be shaped after. This is our most valuable account stemming out of this research. Actors do not exist in isolation but are part of and influenced by a social system that spreads information, ideas, and values.

We were able to zoom in on this phenomenon and clarify how perceptions & valuations are exchanged in several ways in allusion to a few widely-used network mechanisms (i.e. closure, brokerage, centrality, and structural equivalence). In contrast to closure and centrality,

brokerage effects seemed to premise more strongly on a processual influence on affect, not cognitions, as a broker experiences influence on valuations from his immediate contacts compared to a more essential role of structure for the closure and centrality effects on both perceptions & valuations (i.e. closure & centrality by definition depict particular positions in the network of relations which in turn explain how social influence operates among individuals, whereas our brokerage effect simply describes a form of affective contagion stemming from one's ego-network). A tentative conclusion here is that CSR perceptions, which are of a cognitive nature, are better conveyed through relations that are anchored in structural foundations facilitating the exchanges necessary for effective transmission; whereas CSR valuation, an affective state related to personal values, is straightforwardly transmitted relationally as with brokerage's effect where one comes to resemble his sparse and non-redundant ego-network simply based on direct inter-personal contact without interference from closure or other effects that occur with a more dense ego-network (note: brokerage still involves a structural element which describes the quality of an actor's ego-network –i.e. large and sparse; however, the mechanism is dominantly processual).

Our most valuable finding is more general, however, and the social mechanisms come as secondary helping us understand how an actor's position in relation to his social world affects his perceptions & valuations. An actor's position in the network can tell us several things including whether the actor is likely to influence others around him (centrality), whether he is likely to be influenced by those around him (brokerage & closure), who specifically is likely to strongly influence him (closure), and who will resemble him regardless of direct contact (structural equivalence). Further, not only is an actor's position in terms of his direct contacts important, but position in the overall network is equally important since we know that an actor's contacts are

themselves influenced by their position too. For example, being close to the core of the network brings similarity with a view that is probably widely shared at the center since actors are highly interconnected there and typically connected to highly central others as well. On the other hand, being positioned at the periphery implies that one's contacts are not as central and connected as they would be at the core, and so it is more likely that a peripheral actor reflect a localized view that differs from the core's. Exploring the differences in views and valuations between the core and periphery may be an interesting venue for future research, and the framework developed in this study does suggest a core-periphery effect in line with our emphasis on position in the overall network as indicative of an actor's perceptions and valuations of OI.

In concluding this section, although this study was not able to convincingly demonstrate that a CSR identity helps enhance identification with any organization, we were able to show that this was the case for our sampled organization. The organizational identity at Sustainable Concordia was, practically speaking, the CSR or sustainability identity and so our findings cannot be generalized to other organizations. As an exploratory parallel however, SC could be viewed as the CSR centre of the parent organization which is Concordia University; and we did find that identification with SC significantly predicted identification with Concordia University (see correlation Table i, Appendix-A). In that view, we may cautiously suggest that identification with a CSR sub-identity may encourage identification with an organization's global identity (generalization; Ashforth & Johnson, 2001). We did show, with more robustness, that CSR identity perceptions do not automatically translate to identification with the group; indeed, members of an organization have to exhibit some valence with what constitutes the CSR identity for identification to be effective. We also showed that affecting the process of identification is social influence through members' connections in the informal organizational network. In

following the well-recognized narrative conception of identity formation (e.g. Ashforth et al., 2008; Brown, 2006; Ford, 1999), our study thus corroborated the view of a CSR identity being a product of the social world (identities also shape the social world), and we were able to depict that influence in a CSR-identification model that combines relational and positional network mechanisms. This model may be applicable to similar flat, project or team-based organizations and it may also be used as a general organizational identification model, of course under the assumption that CSR identity perceptions are socially transmitted like any other OI perception and that personal CSR valuations operate like valuations for any other OI element.

Finally, the drive behind CSR may be an interesting venue for organizations to focus on. We produced preliminary findings showing perceived & ideal drive to be socially influenced, while our findings also showed individual-organization agreement on drive to enhance organizational identification. An interesting link can be drawn here with a paper on ‘achieving a sustainable competitive advantage through organizational identity’ (Fiol, 2001). Fiol revisits her decade-old resource-based argument which held that a strong OI may help sustain a firm’s competitive advantage, and instead she suggests a revision that centers on the view of needing a fluid, constantly-evolving identity held together by strong core values to successfully adapt to our rapidly changing world. Fiol describes a balance of constantly shifting situated identifications coupled with deep identification with core organizational values as a way to achieve that flexibility while maintaining coherence. The underlying values or value-system that drive CSR may constitute a solid set of values for any firm to adopt in order to keep a unified sense of purpose and direction within its identity. CSR values also bring many other benefits as discussed in this paper; however, as evidenced by our study, more clarity and efficiency in transmitting those values to the membership would be required as those are not necessarily easily

perceived or uniformly interpreted. Moreover, our study suggests that member's valuations are shaped through social contact – particularly work-related cohesion for ideal drive – and so managers may capitalize on known task interdependencies to promote an ideal drive in line with what the organization is advocating.

CONTRIBUTIONS & RECOMMENDATIONS

Our study contributes to the literature in that it was a novel attempt at exploring CSR identity at an organization from a network perspective. Previous studies explored identities from a network perspective (e.g. Peteraf & Shanley, 1997; Sweitzer, 2008), but not CSR identities. Therefore, this would be the first empirical inquiry that combines three separate literatures that are pertinent in organizational studies: identity, CSR, & social influence (social network analysis). A model was developed that integrates social network mechanisms with identification with a sustainability identity; and this, to the best of our knowledge, constitutes a novel attempt at linking social influence (SIP, self-comparison) and identity theories (SIT, identity theory) to the CSR domain. We were able to show that a CSR identity, at least in part, is socially transmitted, thus adding CSR identity perceptions & valuations to the different phenomena that adhere to the predictions of social influence theories (Salancik & Pfeffer, 1978). We also showed that a focus on values is essential to the process of identification, lending support to the view espoused by some identity researchers (e.g. Ashforth et al., 2008; Hitlin, 2003) of values underlying social identity formation.

On a more practical note, the study contributes to solving the problem of the transfer of meanings from management conceptions to the subjective interpretations and identifications of

organizational members (e.g. Humphreys & Brown, 2008; Luring & Thomsen, 2009). Our model provides a platform to make suggestions to SC and to other similar organizations on how to improve the adoption of OI by the entire membership. Knowing that the informal social interconnections among members contribute significantly in shaping their views and identifications with a CSR OI, organizational leaders can be advised to shift their focus away from formal divisions and positions towards strategizing on how to best utilize the organization's social network to successfully reach and influence the entire membership. For example, in times of change or adjustments (e.g. in an all-too-common merger), management may focus their induction on 'agents of change' that are more central in the social network. Even if it is not very clear as to which are the most central members, a start may be to focus on those who are most central in terms of work-related interdependencies (i.e. actors whose work is particularly important to the work of many others). Management may also identify and seek strong brokers to gather impressions on the valuations of the membership. The fact that such players are typically central too makes them key in gauging the general acceptance of the OI as well as to launch any efforts at shaping organizational views. When it comes to promoting a new leader, our model may suggest considering the potential impact that a certain actor may have in the informal network – a highly central actor would be suitable as she is already regarded as powerful while her contacts also likely converge with her on organizational identity views and valuations. Further, integrating people into subgroups with opinion leaders and encouraging friendships at work is certainly a good idea which organizations typically adopt (e.g. cinq-a-septs, corporate dinners etc) helping to fortify and unify the membership's views and enhance identification. Finally, to the extent that SC is representative of a small, well-connected, non-hierarchical and highly participative organization, it seems that this type of structure encourages a strong identity,

especially in the case of a CSR identity which generally appeals to the membership and provides meaning and feel-good associations (Rupp et al., 2006). We therefore encourage any company to adopt a flat and ‘light-weight’ structure if feasible, which is a lot of what modern organizations are looking like, and to integrate a CSR identity into their OI so that CSR values may constitute a solid foundation on which to base the organization’s activities and situated identities (Fiol, 2001). The benefits of CSR are not only at the level of unifying the organizational identity and increasing members’ solidarity and satisfaction (e.g. Chong, 2009; Johnson & Ashforth, 2007; Morsing & Shultz, 2006), CSR also contributes to the bottom-line and has been associated with increasing competitive advantage, reducing costs, engaging consumers, and attracting & retaining employees (e.g. Bhattacharya et al., 2008; David et al., 2005; Lindgreen et al., 2009; Perez, 2009; Shrivastava, 1995).

LIMITATIONS & CONCLUSION

This study has several limitations mainly associated with the sample studied and the generalizability of findings. First, our sample was particular in that it was relatively small and homogenous and had sustainability as the main aspect to its identity. An ideal sample for this type of research would have been larger, shown more variability in responses, and consisted of multiple hierarchical levels allowing a better examination of the contribution of formal divisions and organizational roles. Also, an ideal sample would be from an organization that is well versed in CSR but that has a defining non-CSR identity such as a food manufacturing company. Running our model with such a sample would allow a more definitive conclusion as to the role of a CSR identity in enhancing organizational identification. Further, our general model with

identification, including the social influence effects observed, might have been more substantial given a larger and more diverse sample, and we might have been more confident in considering our opposing results as real social phenomena – e.g. closure in our informal-communication network predicting a decrease in homogeneity in CSR identity perceptions & structural equivalence in the informal-communication network too predicting decreased homogeneity in CSR valuations. Such conflicting findings may be an interesting venue for future research, namely, to examine how different relation types in a firm's social network carry influence on different types of individual outcomes (e.g. values through friendships, OI perceptions through casual, informal contact etc).

Another limitation stems from a few of the responses obtained from our participants which seemed likely to carry a bias towards inflated ratings. Since we could not eliminate the possibility that those answers represented true personal accounts, the data were kept in the analysis and might have therefore clouded our results. Another potentially problematic aspect was measuring and analyzing our concept of CSR drive. The scale that we developed was derived from research but was essentially novel in the way that we used it - a customary and rigorous scale might have been more appropriate. Furthermore, using a difference score for perceived & ideal drive is not without its problems, as we discussed, and the limited variability in responses obtained on this scale (participants only chose between two of the available four options) might be an indication that the scale did not adapt particularly well to the reality of CSR motives at SC. Therefore, although the results with drive' make intuitive sense, they are to be interpreted conservatively while future research may find that area of exploration to be interesting and further examine the contribution of an underlying value-system to the domains of CSR & organizational identification.

A final limitation has to do with our boundary specification strategy for our network (Marsden, 1990). While focusing on a central group of members we might have overlooked important contributions to our results from a relatively peripheral set of actors. Also, because tenure is relatively short at SC, many potentially influential actors had very recently left the group and were not successfully tracked down for data gathering. Coupled with the few non-responses from our targeted central group, this likely resulted in some important missing links in our social network producing a distorted representation of the actual network.

In concluding, what we have achieved in this study is an entry into a type of investigation that may prove useful to organizations and academia from a functional perspective. A lot of questions may arise on the applicability of what we have proposed and potential extrapolations to organizational problems such as how to manage companies with high turnover rates; how to best undergo downsizing or expansion; how to make it easier to socialize newcomers into an organization, and how to improve adaptability and flexibility while improving retention rates. Ultimately, the question might come back to whether a win-together, sustainable approach that permeates all organizational activity is a viable solution moving forward. We suggested that firms espouse CSR values as a binding set of values to weave a strong OI (Fiol, 2001), and we provided some guidance as to how to implement and promote strong identification among the membership; however, it would be somewhat odd for upper management to expect to capitalize from progressive CSR values and to expect their organizational members to adopt or identify with those values when they are not realistically grounded in the firm's activities. What a lot of firms are doing is focusing on branding, marketing, communications, and positive public impact to enhance competitive advantage and maintain a positive image (e.g. Bhattacharya, 2008; Hartman et al., 2007). But such a focus reflects a lack of foresight and true grasp of the meaning

of long-term viability. Other areas such as employee well-being, ethical management of foreign subsidiaries, community involvement, and environmental preservation fall into many companies' profile of practices & strategy; but is it possible or viable to make the leap towards true sustainability - in line with a superior value-system that evaluates every dollar gained against its 'true' cost which includes the social, environmental, and economic burdens created (Carroll, 2000; van Marrewijk & Werre, 2003) -, thus assessing organizational performance against a new standard of performance? 'True' sustainability might be a distant ideal for many organizations and organizational members, but more steps towards that ideal are definitely needed and our study is positioned to offer some guidance as to better aligning an organization's progress with sustainability against the valuations and ideal value-systems of its membership.

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APPENDIX A

Table I: Correlation between Independent Variables, Controls, & Identification Dependent Variable

<i>Variables</i>	<i>Mean</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1 SC identification	5.52	1.21	-	.369**	0.09	0.162	0.233†	.410**	.301*
2 Concordia Identif	4.00	1.39		-	-0.104	0.155	-0.125	.328*	-0.216
3 DrivePerceived	3.48	0.50			-	0.098	.422**	0.142	0.012
4 Driveldeal	3.61	0.59				-	0.07	.294*	0.056
5 CSR ID Perceptions	5.96	0.59					-	.468**	0.196
6 CSR Valuations	5.94	0.76						-	0.208
7 Knowledge	5.43	1.33							-
8 Participation	5.48	1.31							
9 Tenure	2.05	1.89							
10 Age	29.13	13.92							
11 Education	3.32	0.66							
12 Gender	0.54	0.50							
13 BOD member	0.40	0.49							
14 Coordinator	0.69	0.46							
15 Intern	0.04	0.21							
16 Faculty or Staff	0.13	0.34							

<i>Variables</i>	<i>8</i>	<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>
1 SC identification	.265*	0.065	0.249†	-0.053	-0.196	0.147	0.017	-0.172	0.142
2 Concordia Identif	-.281*	0.014	.336*	0.012	-0.234†	0.129	-.329*	0.083	.440**
3 DrivePerceived	0.027	-0.161	-0.086	0.017	0.038	-0.162	0.148	0.014	-0.236
4 Driveldeal	0.014	0.05	-0.069	0.003	-0.074	-0.262†	-0.102	0.134	-0.079
5 CSR ID Percep	.303*	0.061	-0.098	-0.197	.293*	-0.075	.311*	-0.263†	-0.143
6 CSR Valuations	0.132	-0.006	0.173	-0.077	0.02	0.085	-0.095	0.011	0.193
7 Knowledge	.693**	.335*	-0.199	-0.097	0.085	0.153	0.16	-0.179	-0.128
8 Participation	-	.356**	-0.215	-0.035	0.042	0.169	0.219	-0.107	-0.195
9 Tenure		-	0.211	0.136	0.038	0.146	0.052	-0.185	0.252†
10 Age			-	.346**	-.350**	.317*	-0.287†	-0.092	.467**
11 Education				-	-0.198	0.271†	-.357*	0.088	.502**
12 Gender					-	-0.079	-0.098	0.16	0.018
13 BOD member						-	-.509**	-0.173	.501**
14 Coordinator							-	-.321*	-.584**
15 Intern								-	-0.085
16 Faculty or Staff									-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table II: Average Responses on CSR-Identity Perceptions & Valuation Scales

<i>Items</i>	<i>Avg perc for each item</i>	<i>Avg valuation for each item</i>	<i>Difference</i>
1	6.05	6.13	-0.07
2	5.30	5.68	-0.38
3	6.63	6.09	0.54
4	4.71	5.00	-0.29
5	5.00	5.23	-0.23
6	5.80	6.21	-0.41
7	6.70	6.46	0.23
8	6.49	6.07	0.42
9	6.86	6.18	0.68
10	5.91	5.71	0.20
11	5.79	6.07	-0.29
12	6.09	6.00	0.09
13	6.68	6.45	0.23
14	5.21	5.70	-0.48
15	6.20	6.18	0.02
<i>mean</i>	5.96	5.94	0.26

Table iii **Relational Matrices, Dependents & Controls**

<i>variable</i>	1	2	3	4	5	6	7
1 Friendship MATRIX	-	0.416**	0.430**	0.572**	0.019	0.010	-0.005
2 Informal MATRIX		-	0.490**	0.608**	0.042	-0.026	-0.021
3 Task MATRIX			-	0.664**	0.062	-0.057	-0.049
4 Summed MATRIX				-	0.084†	-0.038	-0.050
5 CSRPERCDIFF					-	0.533**	0.103†
6 CSRPERCSIM						-	0.171*
7 CSRVALUDIFF							-
8 CSRValuSIM							
9 Drive Perceived							
10 Drive Ideal							
11 BOD member							
12 Coordinator							
13 Intern							
14 Faculty/Staff							
15 AGEDIFF							
16 KNOWLEDGEDIFF							
17 PARTICIPDIFF							
19 TENUREproduct							
20 SAMEDEPARTMENT							
21 SAMEEDUCATION							
22 SAMEotherGROUP							
23 SAMEscGROUP							

<i>variable</i>	8	9	10	11	12	13	14
1 Friendship MATRIX	0.016	0.033	0.011	0.001	0.13**	-0.007	-0.027
2 Informal MATRIX	0.028	-0.005	0.03	-0.02	0.107**	0.016	-0.033
3 Task MATRIX	0.004	0.013	0.068†	-0.065	0.16**	-0.038	-0.038
4 Summed MATRIX	0.032	0.008	0.067	-0.065	0.222**	-0.01	-0.055
5 CSRPERCDIFF	-0.134†	0.108**	0.063	-0.005	-0.071	0.064	-0.048
6 CSRPERCSIM	0.307**	-0.030	0.040†	0.072	-0.067	0.064	0.01
7 CSRVALUDIFF	0.762**	-0.017	-0.064	0.053	-0.055	0.013	-0.008
8 CSRValuSIM	-	-0.006	0.112†	0.038	0.048	0.009	-0.001
9 Drive Perceived		-	-0.021	0.005	-0.013	-0.023	0.044
10 Drive Ideal			-	-0.086†	-0.049	0.034	-0.033
11 BOD member				-	0.285**	-0.03	0.29**
12 Coordinator					-	-0.1†	0.117**
13 Intern						-	-0.015
14 Faculty/Staff							-

(Table iii contd)

<i>variable</i>	15	16	17	19	20	21	22	23
1 Friendship MATRIX	0.099**	0.099**	0.088**	0.141**	0.070*	0.050†	0.020	0.007
2 Informal MATRIX	0.123**	-0.057†	-0.046†	0.064†	0.021	0.041	0.026	0.019
3 Task MATRIX	0.119**	0.098**	-0.069†	0.175†	-0.016	0.036	0.016	-0.030
4 Summed MATRIX	0.181**	0.119**	-0.091†	0.198**	0.026	0.052	0.038	0.013
5 CSRPERCDIFF	-0.049	0.143*	0.009	0.016†	-0.018	0.053	0.037	0.050
6 CSRPERCSIM	0.003	0.053	-0.029	0.133†	0.065	0.063	0.054†	-0.078
7 CSRVALUDIFF	0.043	0.036	-0.019	0.020	0.152*	-0.026	0.023	0.042
8 CSRValuSIM	-0.065	-0.074	-0.037	-0.103†	-0.073	0.071	-0.037	-0.092
9 Drive Perceived	0.003	0.023	0.018	0.008	-0.001	-0.02	-0.035	-0.02
10 Drive Ideal	-0.046	0.005	-0.144*	0.095	-0.031	0.127*	-0.007	-0.03
11 BOD member	0.226*	0.175**	0.017	0.096	0.129†	-0.074	0.055	0.159**
12 Coordinator	0.408**	-0.021	-0.016	0.034	0.035	0.203*	0.044	0.059
13 Intern	-0.046	0.09†	-0.046	-0.067	0.002	0.037	-0.014	0.315**
14 Faculty/Staff	0.211**	-0.031	0.082†	0.117†	-0.06	0.037	0.062	-0.055
15 AGEDIFF	-	-0.031	0.193†	0.199†	-0.099	0.278**	0.019	-0.176*
16 KNOWLEDGEDIFF		-	0.417**	-0.192*	0.205**	0.018	-0.055	0.160**
17 PARTICIPDIFF			-	-0.105	0.211**	-0.017	-0.043	-0.069
19 TENUREproduct				-	0.111†	-0.011	0.091†	-0.111†
20 SameDepartment					-	0.125*	0.016	-0.026
21 SAMEEDUCATION						-	-0.041	-0.010
22 SAMEotherGROUP							-	-0.010
23 SAMEscGROUP								-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table III: Regressions & Direct Contact
III.I. Results of Regression Analyses on CSR perception difference (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	<i>0.027*</i>	
	<i>Age</i>		<i>0.044</i>
	<i>Knowledge</i>		<i>-0.172*</i>
	<i>Participation</i>		<i>0.049</i>
	<i>Same Department</i>		<i>-0.004</i>
	<i>Tenure</i>		<i>0.053</i>
Model 2	Ctrls + Friend Matrix	<i>0.028*</i>	
	<i>Friendship Matrix</i>		<i>0.021</i>
Model 3	Ctrls + Informal Matrix	<i>0.029*</i>	
	<i>Informal Matrix</i>		<i>0.042</i>
Model 4	Ctrls + Task Matrix	<i>0.031*</i>	
	<i>Age</i>		<i>0.033</i>
	<i>Knowledge</i>		<i>-0.177*</i>
	<i>Participation</i>		<i>0.049</i>
	<i>Same Department</i>		<i>0.001</i>
	<i>Tenure</i>		<i>0.040</i>
	<i>Task Matrix</i>		<i>0.066†</i>
Model 5	Ctrls + Task Matrix	<i>0.025*</i>	
	<i>Task Matrix (symmetrized)</i>		<i>-0.021</i>
Model 6	Ctrls + Summed Matrix	<i>0.035*</i>	
	<i>Age</i>		<i>0.023</i>
	<i>Knowledge</i>		<i>-0.18*</i>
	<i>Participation</i>		<i>0.049</i>
	<i>Same Department</i>		<i>0.000</i>
	<i>Tenure</i>		<i>0.032</i>
	<i>Summed Matrix</i>		<i>0.091†</i>

III.II. Results of Regression Analyses on CSR perception similarity (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	<i>0.030**</i>	
	<i>Age</i>		<i>0.007</i>
	<i>Knowledge</i>		<i>-0.113*</i>
	<i>Participation</i>		<i>0.047</i>
	<i>Same Department</i>		<i>0.061</i>
	<i>Tenure</i>		<i>0.144†</i>
Model 2	Ctrls + Task Matrix	<i>0.032**</i>	
	<i>Task Matrix</i>		<i>0.042</i>
Model 3	Ctrls + Summed Matrix	<i>0.031**</i>	
	<i>Summed Matrices</i>		<i>0.019</i>
Model 4	Ctrls + Friend Matrix	<i>0.030*</i>	
	<i>Friendship Matrix</i>		<i>0.000</i>
Model 5	Ctrls + Informal Matrix	<i>0.031*</i>	
	<i>Informal Matrix</i>		<i>-0.02</i>

III.III. Results of Regression Analyses on CSR valuation difference (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	<i>0.031*</i>	
	<i>Age</i>		<i>-0.056</i>
	<i>Knowledge</i>		<i>-0.085</i>
	<i>Participation</i>		<i>0.029</i>
	<i>Same Department</i>		<i>0.169**</i>
	<i>Tenure</i>		<i>0.003</i>
Model 2	Ctrls + Task Matrix	<i>0.032**</i>	
	<i>Task Matrix</i>		<i>-0.036</i>
Model 3	Ctrls + Summed Matrix	<i>0.033**</i>	
	<i>Summed Matrix</i>		<i>-0.042</i>
Model 4	Ctrls + Friend Matrix	<i>0.031**</i>	
	<i>Friendship Matrix</i>		<i>-0.006</i>
Model 5	Ctrls + Informal Matrix	<i>0.031**</i>	
	<i>Informal Matrix</i>		<i>-0.015</i>

III.IV. Results of Regression Analyses on CSR valuation similarity observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.028*	
	<i>Age</i>		0.041
	<i>Knowledge</i>		0.109†
	<i>Participation</i>		0.014
	<i>Same Department</i>		-0.09
	<i>Tenure</i>		-0.107
Model 2	Ctrls + Task Matrix	0.028*	
	<i>Task Matrix</i>		0.005
Model 3	Ctrls + Summed Matrix	0.030*	
	<i>Task Matrix</i>		0.037
Model 4	Ctrls + Friend Matrix	0.029*	
	<i>Friendship Matrix</i>		0.023
Model 5	Ctrls + Informal Matrix	0.029*	
	<i>Informal Matrix</i>		0.025

III.V. Results of Regression Analyses on Perceived Drive similarity (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.001 [†]	
Model 2	Ctrls + Friendship Matrix	0.002*	
	<i>Age</i>		-0.003
	<i>Knowledge</i>		-0.023
	<i>Participation</i>		-0.012
	<i>Same Department</i>		0.003
	<i>Tenure</i>		0.008
	<i>Friendship Matrix</i>		0.035 [†]
Model 3	Ctrls + Informal Matrix	0.001 [†]	
	<i>Informal Matrix</i>		-0.005
Model 4	Ctrls + Task Matrix	0.001*	
	<i>Task Matrix</i>		0.014
Model 4	Ctrls + Summed Matrix	0.001 [†]	
	<i>Summed Matrix</i>		0.009

III.VI. Results of Regression Analyses on Ideal Drive similarity (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.039**	
Model 2	Ctrls + Friendship Matrix <i>Friendship Matrix</i>	0.039**	-0.011
Model 3	Ctrls + Informal Matrix <i>Informal Matrix</i>	0.04**	0.017
Model 4	Ctrls + Task Matrix <i>Task Matrix</i>	0.041**	0.043
Model 4	Ctrls + Summed Matrix <i>Summed Matrix</i>	0.041**	0.039

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table IV: Cliques, Dependents & Controls

<i>Variable</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1	CSRPERCDIFF	-	-0.533**	0.103†	-0.134†	-0.108**	0.063	-0.049	0.143*
2	CSRPERCSIM		-	-0.171*	0.307**	-0.030	0.040†	0.003	0.053
3	CSRVALUDIFF			-	-0.762**	-0.017	-0.064	0.043	0.036
4	CSRValuSIM				-	-0.006	0.112†	-0.065	-0.074
5	Drive Perceived					-	-0.021	0.003	0.023
6	Drive Ideal						-	-0.046	0.005
7	AGEDIFF							-	-0.031
8	KNOWLEDGEDIFF								-
		<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>
1	CSRPERCDIFF	0.009	0.016	-0.018	-0.029	-0.043	0.021	0.018	0.093†
2	CSRPERCSIM	-0.029	0.133†	0.065	0.007	-0.112**	0.021	-0.017	0.027
3	CSRVALUDIFF	-0.019	0.02	0.152*	-0.025	0.003	-0.023	-0.024	-0.067†
4	CSRValuSIM	-0.037	-0.103	-0.073	0.009	0.027	-0.013	0.028	0.060
5	Drive Perceived	0.018	0.008	-0.001	0.069	0.010	0.015	0.024	0.028
6	Drive Ideal	-0.144*	0.095	-0.031	0.018	-0.032	0.005	0.037	-0.034
7	AGEDIFF	0.193*	0.199†	-0.099	-0.051*	-0.074**	-0.086**	-0.118**	-0.159
8	KNOWLEDGEDIFF	0.417**	-0.192**	-0.205**	-0.043	-0.05	-0.061†	-0.121**	-0.095**
9	PARTICIPDIFF	-	-0.105	-0.211**	-0.041	-0.063†	-0.079*	-0.110**	-0.081*
10	TENUREproduct		-	0.111	0.055	0.015	0.126*	0.179**	0.115†
11	SAMEDEPARTMENT			-	0.024	0.006	-0.008	0.057	-0.010†
12	CliqueOverlapFriend				-	0.192*	0.482**	0.432**	0.303**
13	CliqueOverlapInfor					-	0.375**	0.189**	0.294**
14	CliqueOverlapTask						-	0.357**	0.461**
15	KPlexFriend							-	0.437**

	(TableIV cntd)	17	18	19	20	21	22	23	24
1	CSRPERCDIFF	0.138*	0.041	-0.044	0.041	0.032	0.021	-0.028	-0.056
2	CSRPERCSIM	0.085†	0.034	0.029	0.045	0.020	0.025	0.026	0.114†
3	CSRVALUDIFF	-0.088*	0.018	-0.023	0.060	-0.002	0.070	-0.123	-0.013
4	CSRValuSIM	0.028	0.011	0.018	-0.029	0.090	0.026	0.248*	0.064
5	Drive Perceived	0.078	0.010	0.034	-0.002	0.111†	0.080	0.195*	0.164*
6	Drive Ideal	-0.017	-0.011	0.035	-0.016	-0.012	0.014	-0.020	0.000
7	AGEDIFF	-0.122**	-0.227**	-0.069†	-0.220**	-0.239*	-0.235**	-0.259*	-0.170*
8	KNOWLEDGEDIFF	-0.112**	-0.238**	-0.107**	-0.231**	-0.209*	-0.195**	-0.310**	-0.167**
9	PARTICIPDIFF	-0.108**	-0.210**	-0.112**	-0.193**	-0.219**	-0.184**	-0.320**	-0.226**
10	TENUREproduct	0.234**	0.206*	0.141*	0.210*	0.095	0.071	0.191†	0.090
11	SAMEDEPARTMENT	-0.047	0.123†	0.088*	0.089	0.026	0.113†	0.128†	0.091†
12	CliqueOverlapFriend	0.208**	0.293**	0.587**	0.209**	0.2**	0.215**	0.139**	0.169**
13	CliqueOverlapInfor	0.121*	0.176**	0.223**	0.132*	0.121*	0.194**	0.156**	0.188**
14	CliqueOverlapTask	0.567**	0.322**	0.382**	0.26**	0.235**	0.207**	0.188**	0.409**
15	KPlexFriend	0.308**	0.641**	0.506**	0.585**	0.25**	0.242**	0.256**	0.249**
16	KPlexInfor	0.692**	0.452**	0.303**	0.4**	0.506**	0.46**	0.336**	0.362**
17	KPlexTask	-	0.388**	0.227**	0.319**	0.419**	0.311**	0.343**	0.436**
18	NClanFriends		-	0.430**	0.901**	0.377**	0.389**	0.422**	0.322**
19	NClanFriends(SYM-			-	0.311**	0.219**	0.268**	0.187**	0.206**
20	NClanFriend(SYM-				-	0.361**	0.372**	0.415**	0.314**
21	NClanInfor					-	0.706**	0.561**	0.356**
22	NClanInfor(SYM-						-	0.455**	0.267**
23	NClanTask							-	0.414**
24	NClanTask(SYM-								-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

TABLE V: Regressions of Overlapping Group Affiliations (Closure)
V.I. Results of Regression Analyses on CSR perception difference (observations = 1980)

		R²	Beta (stdized)
Model 1	Controls	0.027*	
	<i>Age</i>		0.044
	<i>Knowledge</i>		-0.172*
	<i>Participation</i>		0.049
	<i>Same Department</i>		-0.004
	<i>Tenure</i>		0.053
<u>FRIENDSHIP MATRIX</u>			
Model 2	Ctrls + Clique	0.028*	
	<i>Clique</i>		-0.029
Model 3	Ctrls + K-plex	0.028*	
	<i>K-Plex</i>		0.020
Model 4	Ctrls + N-Clan	0.030*	
	<i>N-Clan</i>		0.061
Model 5	Ctrls + N-Clan(min)	0.029*	
	<i>N-Clan(min)</i>		-0.043
Model 6	Ctrls + N-Clan(max)	0.03*	
	<i>N-Clan(max)</i>		0.061
<u>INFORMAL MATRIX</u>			
Model 7	Ctrls + Clique	0.029*	
	<i>Clique</i>		-0.042
Model 8	Ctrls + K-Plex	0.036**	
	<i>Age</i>		0.025
	<i>Knowledge</i>		-0.180*
	<i>Participation</i>		0.048
	<i>Same Department</i>		0.003
	<i>Tenure</i>		0.039
	<i>K-Plex</i>		0.100*
Model 9	Ctrls + N-Clan	0.029*	
	<i>N-Clan</i>		0.049
Model 10	Ctrls + N-Clan(min)	0.028*	
	<i>N-Clan(min)</i>		0.036
Model 11	Ctrls + N-Clan(max)	0.029*	
	<i>N-Clan(max)</i>		0.048

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Model 12	Ctrls + Clique <i>Clique</i>	<i>0.027*</i>	<i>0.017</i>
Model 13	Ctrls + K-Plex <i>Age</i> <i>Knowledge</i> <i>Participation</i> <i>Same Department</i> <i>Tenure</i> <i>K-Plex</i>	<i>0.047**</i>	<i>0.017</i> <i>-0.183*</i> <i>0.043</i> <i>0.014</i> <i>0.014</i> <i>0.149*</i>
Model 14	Ctrls + N-Clan <i>N-Clan</i>	<i>0.027*</i>	<i>-0.014</i>
Model 15	Ctrls + N-clan(min) <i>N-clan(min)</i>	<i>0.03*</i>	<i>-0.053</i>
Model 16	Ctrls + N-Clan(max) <i>N-Clan(max)</i>	<i>0.027*</i>	<i>-0.014</i>

V.II. Results of Regression Analyses on CSR perception similarity observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.030**	
	<i>Age</i>		0.007
	<i>Knowledge</i>		-0.113*
	<i>Participation</i>		0.047
	<i>Same Department</i>		0.061
	<i>Tenure</i>		0.144†
<u>FRIENDSHIP MATRIX</u>			
Model 2	Ctrls + Clique	0.03*	
	<i>Clique</i>		0.001
Model 3	Ctrls + K-plex	0.032**	
	<i>K-Plex</i>		-0.042
Model 4	Ctrls + N-Clan	0.031*	
	<i>N-Clan</i>		0.015
Model 5	Ctrls + N-Clan(min)	0.032**	
	<i>N-Clan(min)</i>		-0.042
Model 6	Ctrls + N-Clan(max)	0.03*	
	<i>N-Clan(max)</i>		-0.06
<u>INFORMAL MATRIX</u>			
Model 7	Ctrls + Clique	0.043**	
	<i>Age</i>		0.016
	<i>Knowledge</i>		0.108†
	<i>Participation</i>		0.051
	<i>Same Department</i>		0.059
	<i>Tenure</i>		0.146†
	<i>Clique</i>		-0.113**
Model 8	Ctrls + K-Plex	0.031*	
	<i>K-Plex</i>		0.018
Model 9	Ctrls + N-Clan	0.031*	
	<i>N-Clan</i>		0.018
Model 10	Ctrls + N-Clan(min)	0.028*	
	<i>N-Clan(min)</i>		-0.036
Model 11	Ctrls + N-Clan(max)	0.029**	
	<i>N-Clan(max)</i>		-0.049
<u>TASK MATRIX</u>			
Model 12	Ctrls + Clique	0.03*	
	<i>Clique</i>		0.005
Model 13	Ctrls + K-plex	0.034**	
	<i>K-plex</i>		0.067
Model 14	Ctrls + N-Clan	0.031*	
	<i>N-Clan</i>		0.012

Model 15	Ctrls + N-clan(min)	0.042**	
	<i>Age</i>		-0.008
	<i>Knowledge</i>		-0.123*
	<i>Participation</i>		0.030
	<i>Same Department</i>		0.059
	<i>Tenure</i>		0.135†
	<i>N-clan(min)</i>		0.111†
Model 16	Ctrls + N-Clan(max)	0.031*	
	<i>N-Clan(max)</i>		0.012

V.III. Results of Regression Analyses on CSR valuation difference observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.031*	
	Age		-0.056
	Knowledge		-0.085
	Participation		0.029
	Same Department		0.169**
	Tenure		0.003
<u>FRIENDSHIP MATRIX</u>			
Model 2	Ctrls + Clique	0.032**	
	Clique		-0.025
Model 3	Ctrls + K-plex	0.032**	
	K-Plex		-0.022
Model 4	Ctrls + N-Clan	0.032**	
	N-Clan		0.026
Model 5	Ctrls + N-Clan(min)	0.032**	
	N-Clan(min)		-0.030
Model 6	Ctrls + N-Clan(max)	0.037**	
	N-Clan(max)		0.082
<u>INFORMAL MATRIX</u>			
Model 7	Ctrls + Clique	0.031**	
	Clique		0.009
Model 8	Ctrls + K-Plex	0.034**	
	K-Plex		-0.055
Model 9	Ctrls + N-Clan	0.031*	
	N-Clan		0.019
Model 10	Ctrls + N-Clan(min)	0.037**	
	N-Clan(min)		0.082
Model 11	Ctrls + N-Clan(max)	0.031**	
	N-Clan(max)		0.020
<u>TASK MATRIX</u>			
Model 12	Ctrls + Clique	0.031**	
	Clique		0.010
Model 13	Ctrls + K-Plex	0.036**	
	Age		-0.042
	Knowledge		-0.079
	Participation		0.032
	Same Department		0.160**
	Tenure		0.023
	K-Plex		-0.075†

Model 14	Ctrls + N-Clan	0.048**	
	<i>Age</i>		-0.017
	<i>Knowledge</i>		-0.053
	<i>Participation</i>		0.052
	<i>Same Department</i>		0.169**
	<i>Tenure</i>		0.030
	<i>N-Clan</i>		-0.146 [†]
Model 15	Ctrls + N-Clan(min)	0.031**	
	<i>N-Clan(min)</i>		-0.014

V.IV. Results of Regression Analyses on CSR valuation similarity (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.028*	
	<i>Age</i>		0.041
	<i>Knowledge</i>		0.109†
	<i>Participation</i>		0.014
	<i>Same Department</i>		-0.09
	<i>Tenure</i>		-0.107
<u>FRIENDSHIP MATRIX</u>			
Model 2	Ctrls + Clique	0.028*	
	<i>Clique</i>		0.010
Model 3	Ctrls + K-plex	0.029*	
	<i>K-Plex</i>		0.035
Model 4	Ctrls + N-Clan	0.028*	
	<i>N-Clan</i>		0.010
Model 5	Ctrls + N-Clan(min)	0.029*	
	<i>N-Clan(min)</i>		0.026
Model 6	Ctrls + N-Clan(max)	0.03*	
	<i>N-Clan(max)</i>		-0.040
<u>INFORMAL MATRIX</u>			
Model 7	Ctrls + Clique	0.029*	
	<i>Clique</i>		0.020
Model 8	Ctrls + K-Plex	0.031*	
	<i>K-Plex</i>		0.056
Model 9	Ctrls + N-Clan	0.33*	
	<i>N-Clan</i>		0.076
Model 10	Ctrls + N-Clan(min)	0.028*	
	<i>N-Clan(min)</i>		0.012
Model 11	Ctrls + N-Clan(max)	0.033*	
	<i>N-Clan(max)</i>		0.076
<u>TASK MATRIX</u>			
Model 12	Ctrls + Clique	0.028*	
	<i>Clique</i>		-0.011
Model 13	Ctrls + K-Plex	0.029*	
	<i>K-Plex</i>		0.034
Model 14	Ctrls + N-Clan	0.097**	
	<i>Age</i>		-0.037
	<i>Knowledge</i>		0.045
	<i>Participation</i>		-0.034
	<i>Same Department</i>		-0.09
	<i>Tenure</i>		-0.161*
	<i>N-Clan</i>		0.297**

Model 15	Ctrls + N-Clan(min)	<i>0.032*</i>	
	<i>N-Clan(min)</i>		<i>0.059</i>

V.V. Results of Regression Analyses on Perceived Drive (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	<i>0.001[†]</i>	
	<i>Age</i>		<i>0.001</i>
	<i>Knowledge</i>		<i>-0.022</i>
	<i>Participation</i>		<i>-0.011</i>
	<i>Same Department</i>		<i>0.004</i>
	<i>Tenure</i>		<i>0.013</i>
<u>FRIENDSHIP MATRIX</u>			
Model 2	Ctrls + Clique	<i>0.006^{**}</i>	
	<i>Age</i>		<i>-0.003</i>
	<i>Knowledge</i>		<i>-0.024</i>
	<i>Participation</i>		<i>-0.011</i>
	<i>Same Department</i>		<i>-0.012</i>
	<i>Tenure</i>		<i>0.01</i>
	<i>Clique</i>		<i>0.070[†]</i>
Model 3	Ctrls + K-plex	<i>0.002[*]</i>	
	<i>Age</i>		<i>-0.005</i>
	<i>Knowledge</i>		<i>-0.025</i>
	<i>Participation</i>		<i>-0.013</i>
	<i>Same Department</i>		<i>0.004</i>
	<i>Tenure</i>		<i>0.006</i>
	<i>K-Plex</i>		<i>0.041[†]</i>
Model 4	Ctrls + N-Clan	<i>0.001[†]</i>	
	<i>N-Clan</i>		<i>-0.01</i>
Model 5	Ctrls + N-Clan(min)	<i>0.002[†]</i>	
	<i>N-Clan(min)</i>		<i>0.038</i>
Model 6	Ctrls + N-Clan(max)	<i>0.001[†]</i>	
	<i>N-Clan(max)</i>		<i>-0.014</i>
<u>INFORMAL MATRIX</u>			
Model 7	Ctrls + Clique	<i>0.001[†]</i>	
	<i>Clique</i>		<i>0.012</i>
Model 8	Ctrls + K-Plex	<i>0.002[*]</i>	
	<i>K-Plex</i>		<i>-0.035</i>
Model 9	Ctrls + N-Clan	<i>0.001[†]</i>	
	<i>N-Clan</i>		<i>-0.007</i>
Model 10	Ctrls + N-Clan(min)	<i>0.001[†]</i>	
	<i>N-Clan(min)</i>		<i>0.02</i>
Model 11	Ctrls + N-Clan(max)	<i>0.001[†]</i>	
	<i>N-Clan(max)</i>		<i>-0.007</i>

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Model 12	Ctrls + Clique <i>Clique</i>	<i>0.001†</i>	<i>0.016</i>
Model 13	Ctrls + K-Plex K-Plex	<i>0.029*</i>	<i>0.034</i>
Model 14	Ctrls + N-Clan <i>N-Clan</i>	<i>0.001†</i>	<i>-0.017</i>
Model 15	Ctrls + N-Clan(min) <i>N-Clan(min)</i>	<i>0.001†</i>	<i>0.005</i>
Model 16	Ctrls + N-Clan(max) <i>N-Clan(max)</i>	<i>0.001†</i>	<i>-0.017</i>

V.VI. Results of Regression Analyses on Ideal Drive (observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.039**	
	<i>Age</i>		0.035
	<i>Knowledge</i>		-0.084*
	<i>Participation</i>		0.175*
	<i>Same Department</i>		-0.065†
	<i>Tenure</i>		0.11†
<u>FRIENDSHIP MATRIX</u>			
Model 2	Ctrls + Clique	0.039**	
	<i>Clique</i>		0.008
Model 3	Ctrls + K-plex	0.039**	
	<i>K-Plex</i>		-0.004
Model 4	Ctrls + N-Clan	0.04**	
	<i>N-Clan</i>		-0.033
Model 5	Ctrls + N-Clan(min)	0.039**	
	<i>N-Clan(min)</i>		0.011
Model 6	Ctrls + N-Clan(max)	0.041**	
	<i>N-Clan(max)</i>		-0.046
<u>INFORMAL MATRIX</u>			
Model 7	Ctrls + Clique	0.04**	
	<i>Clique</i>		-0.02
Model 8	Ctrls + K-Plex	0.039**	
	<i>K-Plex</i>		0.003
Model 9	Ctrls + N-Clan	0.045**	
	<i>Age</i>		0.015
	<i>Knowledge</i>		-0.098*
	<i>Participation</i>		0.166**
	<i>Same Department</i>		-0.059
	<i>Tenure</i>		0.097†
	<i>N-Clan</i>		0.084†
Model 10	Ctrls + N-Clan(min)	0.043**	
	<i>N-Clan(min)</i>		0.063
<u>TASK MATRIX</u>			
Model 11	Ctrls + Clique	0.001†	
	<i>Clique</i>		0.016
Model 12	Ctrls + K-Plex	0.041**	
	<i>K-Plex</i>		0.040

Model 13	Ctrls + N-Clan	0.066**	
	<i>Age</i>		-0.014
	<i>Knowledge</i>		-0.124**
	<i>Participation</i>		0.145*
	<i>Same Department</i>		-0.066†
	<i>Tenure</i>		0.072
	<i>N-Clan</i>		0.185*
Model 14	Ctrls + N-Clan(min)	0.039**	
	<i>Age</i>		0.015
	<i>Knowledge</i>		-0.097*
	<i>Participation</i>		0.154*
	<i>Same Department</i>		-0.068†
	<i>Tenure</i>		0.095†
	<i>N-Clan(min)</i>		0.141*

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table VI: Brokerage Correlations with Dependent & Control Variables

A- Friendship Matrix Brokerage									
<i>variable</i>	1	2	3	4	5	6	7	8	9
1 PercDiff NetMean	-	0.033	.522**	-0.035	0.23	0.171	0.174	0.259†	0.17
2 ValDiff NetMean		-	0.226	.811**	-0.099	-0.062	-0.073	-0.136	-0.149
3 FpercDiff EgoMean			-	0.121	0.178	0.125	0.113	0.219	0.083
4 FvalDiff EgoMean				-	-0.165	-0.158	-0.027	-0.237	-0.225
5 F Effective Size					-	.966**	.728**	.958**	.923**
6 F degree						-	.723**	.898**	.844**
7 F #WeakComponents							-	.605**	.626**
8 F brokerage								-	.953**
9 F Egobtness									-
10 F Netbtwness									
11 Knowledge									
12 Patricipation									
13 Age									
14 Tenure									
15 Education									

<i>variable</i>	10	11	12	13	14	15
1 PercDiff NetMean	0.156	-0.127	0.033778	-0.069	0.018	0.009
2 ValDiff NetMean	-0.072	0.04	0.041434	0.276†	0.029	0.162
3 FpercDiff EgoMean	0.043	0.195	0.142521	0.024	0.172	0.261
4 FvalDiff EgoMean	-0.087	-0.039	-0.00213	-0.041	-0.019	0.107
5 F Effective Size	.896**	.504**	.516**	-0.122	.396**	-0.111
6 F degree	.814**	.573**	.582**	-0.123	.396**	-0.172
7 F #WeakComponents	.690**	.487**	.441**	-0.089	.351*	0.032
8 F brokerage	.869**	.437**	.539**	-0.082	.385**	-0.035
9 F Egobtness	.941**	.421**	.434**	-0.074	.443**	-0.082
10 F Netbtwness	-	.455**	.458**	-0.109	.342*	-0.102
11 Knowledge		-	.660**	-0.054	.356*	0.111
12 Patricipation			-	-0.037	.406**	0.078
13 Age				-	.327*	.319*
14 Tenure					-	0.098
15 Education						-

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

† Correlation is significant at the 0.1 level (2-tailed).

B- Informal Martix Brokerage

<i>variable</i>	1	2	3	4	5	6	7	8	9
1 PercDiff NetMean	-	0.033	.841**	0.037	0.223	0.187	0.238	0.227	0.201
2 ValDiff NetMean		-	0.026	.344*	-	-0.203	-0.209	-0.094	-0.208
3 lpercDiff EgoMean			-	0.055	0.133	0.113	0.168	0.213	0.117
4 lvalDiff EgoMean				-	-	-.310*	-0.192	-.304*	-0.189
5 l Effective Size					-	.980**	.949**	.421**	.946**
6 l degree						-	.922**	.370*	.913**
7 l broker							-	0.253†	.983**
8 l #WeakComponents								-	0.234
9 l Egobtwness									-
10 l Netbtwness									
11 Knowledge									
12 Participation									
13 Age									
14 Tenure									
15 Education									

<i>variable</i>	10	11	12	13	14	15
1 PercDiff NetMean	0.117	-0.127	0.034	-0.069	0.018	0.009
2 ValDiff NetMean	-0.223	0.04	0.041	0.276†	0.029	0.162
3 lpercDiff EgoMean	0.064	-0.153	-0.046	-0.027	-0.036	-0.075
4 lvalDiff EgoMean	-0.207	-0.018	-0.098	-.420**	0.062	0.206
5 l Effective Size	.862**	0.292†	.348*	-0.14	0.183	-0.124
6 l degree	.835**	.318*	.381**	-0.158	0.17	-0.155
7 l broker	.795**	0.285†	.310*	-0.088	0.245	0.019
8 l #WeakComponents	.333*	-0.137	0.072	-0.049	-0.207	-0.291†
9 l Egobtwness	.864**	0.289†	.320*	-0.097	0.26†	-0.003
10 l Netbtwness	-	0.199	.341*	-0.122	0.2	-0.08
11 Knowledge		-	.660**	-0.054	.356*	0.111
12 Participation			-	-0.037	.406**	0.078
13 Age				-	.327*	.319*
14 Tenure					-	0.098
15 Education						-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

C- Task Matrix Brokerage

<i>variable</i>	1	2	3	4	5	6	7	8	9
1 PercDiff NetMean	-	0.033	.779**	0.023	0.226	0.197	0.227	0.127	0.039
2 ValDiff NetMean		-	-0.016	.909**	-0.252†	-	-0.201	-0.158	-0.159
3 TpercDiff EgoMean			-	-0.005	0.110	0.059	0.130	0.204	-0.019
4 TvalDiff EgoMean				-	-0.286†	-.300*	-0.231	-0.105	-0.178
5 T Effective Size					-	.992**	.967**	0.260†	.850**
6 T degree						-	.943**	0.223	.818**
7 T broker							-	0.202	.904**
8 T #WeakComponents								-	.302*
9 T EgoBtwness									-
10 T NetBtwness									
11 Knowledge									
12 Participation									
13 Age									
14 Tenure									
15 Education									

<i>variable</i>	10	11	12	13	14	15
1 PercDiff NetMean	0.037	-0.127	0.034	-0.069	0.018	0.009
2 ValDiff NetMean	-0.131	0.040	0.041	0.276†	0.029	0.162
3 TpercDiff EgoMean	-0.009	-0.155	-0.074	0.088	-0.116	0.049
4 TvalDiff EgoMean	-0.128	-0.087	-0.015	0.208	0.038	0.157
5 T Effective Size	.818**	.307*	.369*	-0.107	.366*	0.008
6 T degree	.787**	.370*	.417**	-0.144	.377*	-0.018
7 T broker	.849**	0.263†	0.287†	-0.067	.336*	0.048
8 T #WeakCmponents	.365*	-0.167	0.187	-0.144	-0.101	0.088
9 T EgoBtwness	.976**	0.220	0.238	-0.059	.355*	-0.019
10 T NetBtwness	-	0.235	0.269†	-0.053	.381**	-0.058
11 Knowledge		-	.660**	-0.054	.356*	0.111
12 Participation			-	-0.037	.406**	0.078
13 Age				-	.327*	.319*
14 Tenure					-	0.098
15 Education						-

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).
 † . Correlation is significant at the 0.1 level (2-tailed).

D- Summed Network Brokerage

	<i>variable</i>	1	2	3	4	5	6	7	8	9
1	PercDiff NetMean	-	0.033	.876**	0.057	0.239	0.209	0.247	0.109	0.269†
2	ValDiff NetMean		-	0.031	.918**	-0.255†	-0.252†	-0.214	0	-0.205
3	SpercDiff EgoMean			-	0.023	0.154	0.108	0.192	0.129	0.215
4	SvalDiff EgoMean				-	-0.281†	-0.29†	-0.245	0.108	-0.223
5	S Effective Size					-	.990**	.949**	-0.04	.932**
6	Sdegree						-	.920**	-.085	.897**
7	Sbroker							-	-.088	.996**
8	S #WeakCmpnts								-	-.056
9	S Egobtwness									-
10	S Netbtwness									
11	Knowledge									
13	Age									
14	Tenure									
15	Education									

	<i>variable</i>	10	11	13	14	15
1	PercDiff NetMean	0.099	-0.127	-0.069	0.018	0.009
2	ValDiff NetMean	-0.204	0.04	0.276†	0.029	0.162
3	SpercDiff EgoMean	0.065	-0.148	0.035	-0.021	0.048
4	SvalDiff EgoMean	-0.214	-0.091	0.113	0.043	0.114
5	S Effective Size	.864**	.334*	-0.129	.326*	-0.091
6	Sdegree	.826**	.401**	-.153	.333*	-.120
7	Sbroker	.898**	0.278†	-.069	.318*	.037
8	S #WeakComponents	-.014	-.461**	-.148	-.304*	.051
9	S Egobtwness	.898**	0.252†	-.069	0.294†	.055
10	S Netbtwness	-	.244	-.060	.361*	.014
11	Knowledge		-	-.054	.356*	.111
13	Age			-	.327*	.319*
14	Tenure				-	.098
15	Education					-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table: VII Correlation between Brokerage & 'Resemblance of EgoNet to Network Average'

<i>Variable</i>	1	2	3	4	5	6	7	8	9	10
1 Feffsize	-	.966	.958**	.728**	.923**	.896**	.770**	.773**	.750**	0.15
2 Fdegree		-	.898**	.723**	.844**	.814**	.743**	.761**	.696**	0.162
3 Fbrokerage			-	.605**	.953**	.869**	.831**	.823**	.847**	0.179
4 Fweakcomp				-	.626**	.690**	.510**	.491**	.506**	0.187
5 Fegobetween					-	.941**	.750**	.732**	.756**	0.151
6 FbetweenNet						-	.653**	.637**	.627**	0.137
7 Ieffsize							-	.980**	.949**	.421**
8 Idegree								-	.922**	.370*
9 Ibroker									-	0.253
10 Iweakcomp										-
11 Iegobtwn										
12 IbtwnNet										
13 TeffSizer										
14 Tdegree										
15 Tbroker										
16 TweakComp										
17 Tegobtwn										
18 TbtwnNet										
19 Seffsize										
20 Sdegree										
21 Sbroker										
22 Sweakcomp										
23 Segobtwn										
24 SbtwnNet										
25 Friendperc										
26 Friendval										
27 Informalperc										
28 Informalval										
29 Taskperc										
30 Taskval										

(Table VII CtnD)

Variable	11	12	13	14	15	16	17	18	19	20
1 Feffsize	.752	.654**	.745**	.767**	.684**	0.135	.555**	.537**	.816**	.829**
2 Fdegree	.698	.638**	.704**	.742**	.618**	0.142	.503**	.498**	.784**	.818**
3 Fbrokerage	.831	.675**	.811**	.822**	.785**	0.081	.622**	.575**	.859**	.859**
4 Fweakcomp	.529	.503**	.595**	.602**	.530**	0.29	.467**	.500**	.627**	.619**
5 Fegobetween	.773	.676**	.757**	.759**	.734**	0.107	.656**	.627**	.796**	.784**
6 FbetweenNet	.661	.611**	.630**	.631**	.590**	0.115	.530**	.523**	.692**	.681**
7 leffsize	.946	.862**	.912**	.914**	.879**	0.192	.743**	.693**	.964**	.955**
8 ldegree	.913	.835**	.890**	.905**	.842**	0.186	.703**	.661**	.945**	.949**
9 lbroker	.983	.795**	.945**	.933**	.963**	0.16	.813**	.749**	.941**	.916**
10 lweakcomp	0.23	.333*	0.195	0.179	0.175	0.134	0.105	0.099	.349*	.327*
11 legobtwn	-	.864**	.957**	.942**	.971**	0.215	.875**	.819**	.945**	.918**
12 lbtwnNet	-	-	.843**	.835**	.789**	.449**	.810**	.805**	.857**	.838**
13 TeffSizer	-	-	-	.992**	.967**	0.26	.850**	.818**	.965**	.941**
14 Tdegree	-	-	-	-	.943**	0.223	.818**	.787**	.968**	.959**
15 Tbroker	-	-	-	-	-	0.202	.904**	.849**	.916**	.879**
16 TweakComp	-	-	-	-	-	-	.302*	.365*	0.208	0.167
17 Tegobtwn	-	-	-	-	-	-	-	.976**	.778**	.737**
18 TbtwnNet	-	-	-	-	-	-	-	-	.748**	.708**
19 Seffsize	-	-	-	-	-	-	-	-	-	.990**
20 Sdegree	-	-	-	-	-	-	-	-	-	-
21 Sbroker	-	-	-	-	-	-	-	-	-	-
22 Sweakcomp	-	-	-	-	-	-	-	-	-	-
23 Segobtwn	-	-	-	-	-	-	-	-	-	-
24 SbtwnNet	-	-	-	-	-	-	-	-	-	-
25 friendperc	-	-	-	-	-	-	-	-	-	-
26 friendval	-	-	-	-	-	-	-	-	-	-
27 informalperc	-	-	-	-	-	-	-	-	-	-
28 informalval	-	-	-	-	-	-	-	-	-	-
29 Taskperc	-	-	-	-	-	-	-	-	-	-
30 Taskval	-	-	-	-	-	-	-	-	-	-

		(Table 21	VII 22	Ctnd) 23	24	25	26	27	28	29	30
Variable											
1	Feffsize	.741**	-0.086	.722**	.695**	-0.092	0.024	-0.253	-0.128	-.423**	-0.168
2	Fdegree	.679**	-0.096	.654**	.635**	0.002	0.134	-0.219	-0.155	-.468**	-0.143
3	Fbrokerage	.840**	-0.119	.827**	.768**	-0.107	-0.075	-0.287	-0.106	-.348*	-0.199
4	Fweakcomp	.540**	0.009	.540**	.584**	0.178	0.224	-0.12	-0.175	-.405**	-0.058
5	Fegobetwee	.765**	-0.122	.752**	.796**	-0.125	-0.112	-0.237	-0.097	-.343*	-0.196
6	FbetweenNe	.623**	-0.094	.610**	.675**	-0.145	-0.022	-0.148	-0.108	-.382**	-0.232
7	leffsize	.923**	-0.016	.906**	.816**	0.011	0.008	-0.255†	-0.141	-0.292	-0.134
8	ldegree	.889**	-0.017	.870**	.772**	0.028	0.08	-0.206	-0.191	-.327*	-0.126
9	lbroker	.987**	-0.08	.983**	.864**	-0.038	-0.088	-.302*	-0.101	-0.27	-0.16
10	lweakcomp	0.24	0.225	0.241	0.237	0.169	0.007	0.204	-0.228	0.045	0.056
11	legobtwn	.977**	-0.066	.970**	.910**	-0.054	-0.086	-0.288†	-0.1	-.297*	-0.153
12	lbtwnNet	.792**	0.095	.772**	.864**	0.063	0.029	-0.157	-0.113	-.336*	-0.079
13	TeffSizer	.967**	-0.046	.958**	.898**	-0.015	-0.061	-0.271	-0.09	-.371*	-0.143
14	Tdegree	.951**	-0.09	.936**	.870**	0.012	-0.012	-0.273	-0.082	-.416**	-0.149
15	Tbroker	.986**	-0.092	.987**	.922**	-0.055	-0.146	-.295*	-0.085	-0.282†	-0.167
16	TweakComp	0.172	.694**	0.193	.345*	0.216	0.129	0.117	-0.024	-0.132	0.147
17	Tegobtwn	.846**	-0.075	.841**	.942**	-0.032	-0.134	-0.252	-0.071	-0.246	-0.139
18	TbtwnNet	.785**	-0.027	.780**	.918**	-0.005	-0.087	-0.129	-0.077	-0.272†	-0.097
19	Seffsize	.949**	-0.04	.932**	.864**	-0.005	0.011	-0.26	-0.128	-.362*	-0.125
20	Sdegree	.920**	-0.085	.897**	.826**	0.007	0.064	-0.27	-0.119	-.392**	-0.129
21	Sbroker	-	-0.088	.996**	.898**	-0.046	-0.116	-.306*	-0.095	-0.283	-0.162
22	Sweakcomp		-	-0.056	-0.014	0.097	0.052	0.169	0.003	0.118	.411**
23	Segobtwn			-	.898**	-0.042	-0.132	-0.288	-0.09	-0.263	-0.146
24	SbtwnNet				-	0.015	-0.106	-0.224	-0.09	-0.288	-0.111
25	friendpercep					-	.441**	0.087	-0.098	0.002	0.233
26	friendvaluati						-	0.212	-0.107	-0.099	0.204
27	informalperc							-	-0.206	-0.037	0.111
28	informalvalu								-	0.203	.338*
29	taskpercepti									-	.427**
30	taskvaluatio										-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table VIII: Brokerage Regressions

12.1. FRIENDSHIP BROKERAGE

VIII.I.I.

DV Perception Difference from EgoNet avg

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	1.257	
Model 2	Ctrls + Effective Size <i>Effective Size</i>	0.982	0.052
Model 3	Ctrls + Degree <i>Degree</i>	0.972	0.022
Model 4	Ctrls + Broker <i>Broker</i>	1.012	0.092
Model 5	Ctrls + WeakComp <i>Weak Components</i>	1.021	-0.092
Model 6	Ctrls + EgoBetweenness <i>EgoBetweennesss</i>	1.041	-0.125

DV Perception Diff from Network avg

Model 7	Controls	0.278	
Model 8	Ctrls + EgoBetweenness <i>EgoBetweenness</i>	0.599	0.261
Model 9	Ctrls + NetworkBtwness <i>NetworkBetweenness</i>	0.551	0.24
Model 10	Ctrls + Brokerage <i>Age</i> <i>Tenure</i> <i>Knowledge</i> <i>Education</i> <i>Brokerage</i>	1.152	-0.073 -0.037 -0.276 0.105 0.384*

VIII.I.II.

DV Valuation Diff from EgoNet avg

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.373	
Model 2	Ctrls + Effective Size <i>Effective Size</i>	0.348	-0.127
Model 3	Ctrls + Degree <i>Degree</i>	0.441	-0.203

Model 4	Ctrls + Broker <i>Broker</i>	0.636	-0.29
Model 5	Ctrls + WeakComp <i>Weak Components</i>	0.438	0.18
Model 6	Ctrls + EgoBetweenness <i>EgoBetweennesss</i>	0.543	-0.261
<u>DV</u>	<u>Valuation Diff from Network avg</u>		
Model 7	Controls	0.875	
Model 8	Ctrls + EgoBetweenness <i>EgoBetweenness</i>	0.774	-0.123
Model 9	Ctrls + NetworkBtwness <i>NetworkBetweenness</i>	0.705	0.061

VIII.II. INFORMAL BROKERAGE

VIII.II.I.

DV Perception Diff from EgoNet avg

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.255	
Model 2	Ctrls + Effective Size Effective Size	0.456	0.205
Model 3	Ctrls + Degree Degree	0.422	0.195
Model 4	Ctrls + Broker Broker	0.606	0.254
Model 5	Ctrls + WeakComp Weak Components	0.394	0.168
Model 6	Ctrls + EgoBetweenness EgoBetweenness	0.429	0.195

DV Perception Diff from Network avg

Model 7	Controls	0.278	
Model 8	Ctrls + EgoBetweenness EgoBetweenness	0.595	0.231
Model 9	Ctrls + NetworkBtwness NetworkBetweenness	0.311	0.115

VIII.II.II.

DV Valuation Diff from EgoNet avg

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	4.224**	
Model 2	Ctrls + Effective Size Age Tenure Knowledge Education Effective Size	4.224**	-0.599** 0.331* -0.127 0.274† -0.313*
Model 3	Ctrls + Degree Age Tenure Knowledge Education Degree	5.33**	-0.595** 0.330* -0.101 0.259† -0.363*

Model 4	Ctrls + Broker	4.449**	
	<i>Age</i>		-0.603**
	<i>Tenure</i>		0.349*
	<i>Knowledge</i>		-0.154
	<i>Education</i>		0.312*
	<i>Broker</i>		-0.282†
Model 5	Ctrls + WeakComp	3.588**	
	<i>Weak Components</i>		-0.15
Model 6	Ctrls + EgoBetweenness	4.435**	
	<i>Age</i>		-0.606**
	<i>Tenure</i>		0.355*
	<i>Knowledge</i>		-0.154
	<i>Education</i>		0.307*
	<i>EgoBetweenness</i>		-0.282†
<u>DV</u>	<u>Valuation Diff from Network avg</u>		
Model 7	Controls	0.875	
Model 8	Ctrls + EgoBetweenness	0.993	
	<i>EgoBetweenness</i>		-0.199
Model 9	Ctrls + NetworkBtwness	0.977	
	<i>NetworkBetweenness</i>		-0.189

VIII.III. TASK-RELATED BROKERAGE

VIII.III.I.

DV Perception Diff from EgoNet avq

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.384	
Model 2	Ctrls + Effective Size Effective Size	0.69	0.243
Model 3	Ctrls + Degree Degree	0.572	0.211
Model 4	Ctrls + Broker Broker	0.691	0.236
Model 5	Ctrls + WeakComp Weak Components	0.605	0.2
Model 6	Ctrls + EgoBetweenness EgoBetweenness	0.321	0.057

DV Perception Diff from Network avq

Model 7	Controls	0.278	
Model 8	Ctrls + EgoBetweenness EgoBetweenness	0.223	0.179
Model 9	Ctrls + NetworkBtwness NetworkBetweenness	0.222	0.031

VIII.III.II.

DV Valuation Diff from EgoNet avq

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	1.04	
Model 2	Ctrls + Effective Size Age Tenure Knowledge Education Effective Size	1.627	0.092 0.195 -0.201 0.019 -0.322†
Model 3	Ctrls + Degree Age Tenure Knowledge Education Degree	1.829	0.073 0.212 -0.172 0.010 -0.367*

Model 4	Ctrls + Broker <i>Broker</i>	1.31	-0.249
Model 5	Ctrls + WeakComp <i>Weak Components</i>	0.904	-0.105
Model 6	Ctrls + EgoBetweenness <i>EgoBetweenness</i>	1.093	-0.190
<u>DV</u>	<u>Valuation Diff from Network avg</u>		
Model 7	Controls	0.875	
Model 8	Ctrls + EgoBetweenness <i>EgoBetweenness</i>	0.906	-0.172
Model 9	Ctrls + NetworkBtwness <i>NetworkBetweenness</i>	0.787	-0.12
Model 10	Ctrls + Degree	1.464	
	<i>Age</i>		0.209
	<i>Tenure</i>		0.098
	<i>Knowledge</i>		0.010
	<i>Education</i>		-0.041
	<i>Degree</i>		-0.331†
Model 11	Ctrls + Effective Size	1.337	
	<i>Age</i>		.226
	<i>Tenure</i>		.085
	<i>Knowledge</i>		-.016
	<i>Education</i>		-.033
	<i>Effective Size</i>		-.295†

VIII.IV. SUMMED NETWORK BROKERAGE

VIII.IV.I.

DV Perception Diff from EgoNet avg

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.261	
Model 2	Ctrls + Effective Size Effective Size	0.613	0.251
Model 3	Ctrls + Degree Degree	0.506	0.225
Model 4	Ctrls + Broker Broker	0.704	0.267
Model 5	Ctrls + WeakComp Weak Components	0.222	0.058
Model 6	Ctrls + EgoBetweenness EgoBetweenness	0.785	0.283

DV Perception Diff from Network avg

Model 7	Controls	0.278	
Model 8	Ctrls + EgoBetweenness Age Tenure Knowledge Education EgoBetweenness	0.886	-0.077 -0.004 -0.192 0.065 0.302†
Model 9	Ctrls + NetworkBtwness NetworkBetweenness	0.279	0.098

VIII.IV.II.

DV Valuation Diff from EgoNet avg

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.956	
Model 2	Ctrls + Effective Size Age Tenure Knowledge Education Effective Size	1.378	-0.012 0.258 -0.232 -0.029 -0.288†

Model 3	Ctrls + Degree	1.465	
	Age		-0.019
	Tenure		0.263
	Knowledge		-0.202
	Education		-0.042
	Degree		-0.317†
Model 4	Ctrls + Broker	1.356	
	Broker		-0.275
Model 5	Ctrls + WeakComp	0.924	
	Weak Components		0.165
Model 6	Ctrls + EgoBetweenness	1.217	
	EgoBetweenness		-0.240
	<u>DV</u>		
	<u>Valuation Diff from Network avg</u>		
Model 7	Controls	0.875	
Model 8	Ctrls + EgoBetweenness	1.047	
	EgoBetweenness		-0.214
Model 9	Ctrls + NetworkBtwness	1.041	
	NetworkBetweenness		-0.217

** . Correlation is significant at the 0.01 level; * . at 0.05 level; † . at 0.1 level (2-tailed).

Table IX: Correlations of Centrality Scores (informal power), DVs, & Controls

A- Friendship Centrality (power)									
<i>Variable</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
1	FriendPercDiff	-	.076	.056	-.002	.130	.248	.190	.176
2	FriendPercSim		-	.055	-.190	-.117	-.109	.013	-.027
3	FriendValDiff			-	-.779**	.169	-.019	.150	-.057
4	FriendValSim				-	-.093	.025	-.153	.023
5	F outdegree					-	.482*	.621	.142
6	F indegree						-	.788	.545**
7	F betweenness							-	.383**
8	F incloseness								-
9	F outcloseness								
10	F bonacich								
11	F bonacich(SYM-max)								
12	Knowledge								
13	Participation								
14	Age								
15	Tenure								
16	Education								

		<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>
1	FriendPercDiff	-.080	-.157	.251	0.311	.196	-.036	.252	.078
2	FriendPercSim	-.108	-.057	-.116	.058	.222	.401*	.354*	.437**
3	FriendValDiff	.196	-.092	-.001	.115	.128	-.055	.013	.104
4	FriendValSim	-.036	.168	.057	.084	-.020	.060	-.132	.050
5	F outdegree	.738**	.758**	.832**	.597*	.493**	-.095	.303*	-.215
6	F indegree	.205	.370*	.793**	.422*	.501**	-.097	.353*	-.122
7	F betweenness	0.259†	0.285†	.681**	.455*	.458**	-.109	.342*	-.102
8	F incloseness	-.095	-.115	.317*	.148	.509**	-.049	.309*	-.107
9	F outcloseness	-	.797**	.594**	.568*	.397**	.053	.147	-.002
10	F bonacich		-	.741**	.457*	.355*	.008	.225	-.099
11	F bncich(SYM-max)			-	.577*	.558**	-.092	.384**	-.167
12	Knowledge				-	.660**	-.054	.356*	.111
13	Participation					-	-.037	.406**	.078
14	Age						-	.327*	.319*
15	Tenure							-	.098
16	Education								-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

B- Informal Centrality (power)

<i>Variable</i>		1	2	3	4	5	6	7	8
1	InforPercDiff	-	-.040	.096	.007	-.024	.111	.044	.207
2	InforPercSim		-	-.078	-.116	-.134	-.016	.063	-.193
3	InforValDiff			-	.650**	-.043	-.134	-.115	.059
4	InforValSim				-	.203	.151	.041	-.034
5	Inf outdegree					-	.391**	.595**	.120
6	Inf indegree						-	.802**	.565**
7	Inf betweenness							-	.418**
8	Inf incloseness								-
9	Inf outcloseness								
10	Inf bonacich								
11	Inf bncich(SYM-max)								
12	Knowledge								
13	Patricipation								
14	Age								
15	Tenure								
16	Education								

		9	10	11	12	13	14	15	16
1	InforPercDiff	-	-.151	.109	-.164	.027	-.176	-.012	-.075
2	InforPercSim	.	-.127	.009	-.086	.171	.335	.233	.330*
3	InforValDiff	-	-.131	-.135	.038	.066	-.095	.003	.090
4	InforValSim	.	0.276†	.225	.104	.094	.247	-.049	-.039
5	Inf outdegree	.	.808**	.722**	0.266†	.346*	-.093	.052	-.131
6	Inf indegree	.	0.266†	.822**	.299*	.346*	-.174	.181	-.165
7	Inf betwnness	.	.375*	.728**	.199	.341*	-.122	.200	-.080
8	Inf incloseness	-	-.018	.332*	-.058	.066	-	-.227	-.461**
9	Inf outcloseness	-	.582**	.421**	0.251†	.447**	.188	.053	.131
10	Inf bonacich		-	.570**	.347*	.337*	-.047	.113	-.080
11	Inf bncich(SYMmax)			-	.430**	.469**	-.126	.175	-.102
12	Knowledge				-	.660**	-.054	.356*	.111
13	Patricipation					-	-.037	.406**	.078
14	Age						-	.327*	.319*
15	Tenure							-	.098
16	Education								-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

C- Task-related Centrality (Power)

<i>Variable</i>		<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>	<i>8</i>
<i>1</i>	TaskPercDiff	-	0.178	-0.099	0.003	-0.191	0.091	-0.002	-0.043
<i>2</i>	TaskPercSim		-	-0.073	-0.023	0.003	0.045	0.077	-0.047
<i>3</i>	TaskValDiff			-	-0.732**	-0.169	-0.093	-0.011	0
<i>4</i>	TaskValSim				-	0.137	0.085	-0.09	0.108
<i>5</i>	T outdegree					-	.660**	.856**	.485**
<i>6</i>	T indegree						-	.772**	.721**
<i>7</i>	T betweenness							-	.494**
<i>8</i>	T incloseness								-
<i>9</i>	T outcloseness								
<i>10</i>	T bonacich								
<i>11</i>	T bonacich(SYM-max)								
<i>12</i>	Knowledge								
<i>13</i>	Patricipation								
<i>14</i>	Age								
<i>15</i>	Tenure								
<i>16</i>	Education								

		<i>9</i>	<i>10</i>	<i>11</i>	<i>12</i>	<i>13</i>	<i>14</i>	<i>15</i>	<i>16</i>
<i>1</i>	TaskPercDiff	-0.126	-.332*	-0.025	-0.159	-0.007	0.08	-0.094	-0.025
<i>2</i>	TaskPercSim	0.155	-0.011	-0.007	-0.049	0.147	.327*	0.282†	.309*
<i>3</i>	TaskValDiff	-0.079	-0.212	-0.211	0.008	0.094	0.204	0.073	0.169
<i>4</i>	TaskValSim	-0.041	0.243	0.243	0.056	-0.006	-0.115	-0.135	-0.053
<i>5</i>	T outdegree	-0.023	.888**	.752**	.400**	.362*	-0.212	.351*	-0.089
<i>6</i>	T indegree	-0.265†	.533**	.922**	.323*	.387**	-0.09	.351*	-0.01
<i>7</i>	T betweenness	-0.077	.647**	.685**	0.235	0.269†	-0.053	.381**	-0.058
<i>8</i>	T incloseness	-.763**	.403**	.708**	.403**	.451**	-0.15	0.157	-0.187
<i>9</i>	T outcloseness	-	0.124	-0.186	-0.089	-0.147	0.181	0.101	.333*
<i>10</i>	T bonacich		-	.707**	.483**	.433**	-0.145	.310*	0.013
<i>11</i>	T bonacich(SYM-max)			-	.488**	.505**	-0.145	.377*	-0.023
<i>12</i>	Knowledge				-	.660**	-0.054	.356*	0.111
<i>13</i>	Patricipation					-	-0.037	.406**	0.078
<i>14</i>	Age						-	.327*	.319*
<i>15</i>	Tenure							-	0.098
<i>16</i>	Education								-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

D- Summed Network Centrality (power)

<i>variable</i>	1	2	3	4	5	6	7	8
1 SumPercDiff	-	.022	.124	-.045	-.063	.109	.057	.142
2 SumValDiff		-	-.085	-.717**	-.085	-.099	-.086	.084
3 SumPercSim			-	.031	.055	.048	.137	.083
4 SumValSim				-	.145	.100	-.063	-.003
5 Sum outdegree					-	.677**	.791**	.597**
6 Sum indegree						-	.814**	.728**
7 Sum Betweenness							-	.549**
8 Sum incloseness								-
9 Sum outcloseness								
10 Sum bonacich								
11 Sum bonacich(SYM-max)								
12 Knowledge								
13 Patricipation								
14 Age								
15 Tenure								
16 Education								

	9	10	11	12	13	14	15	16
1 SumPercDiff	-.328*	.019	.019	-.234	-.060	.055	-.040	-.011
2 SumValDiff	-.204	-.089	-.089	.037	.111	.045	.048	.089
3 SumPercSim	-.016	-.018	-.018	-.027	.151	.424**	0.282†	.375*
4 SumValSim	.179	.152	.152	.113	.035	.101	-.123	.051
5 Sum outdegree	.164	.749**	.749**	.449**	.460**	-.145	.346*	-.156
6 Sum indegree	-.014	.866**	.866**	.339*	.408**	-.121	.307*	-.096
7 Sum Betweenness	.142	.706**	.706**	.244	.306*	-.060	.132	.014
8 Sum incloseness	-.515**	.660**	.660**	0.292†	.470**	-.221	.178	-.313*
9 Sum outcloseness	-	.106	.106	.293	.089	.185	.337*	.430**
10 Sum Bonacich		-	1.000**	.529**	.535**	-.143	.337*	-.090
11 SumBncich(SYM-max)			-	.529**	.535**	-.143	.356*	-.090
12 Knowledge				-	.660**	-.054	.406**	.111
13 Patricipation					-	-.037	.327*	.078
14 Age						-	0.221	.319*
15 Tenure							-	.098
16 Education								-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table X: Correlations between Measures of Brokerage, Centrality, & Formal Power

<i>variable</i>	1	2	3	4	5	6	7	8	9
1 Feffsize	-	.966**	.958**	.728**	.923**	.896**	.770**	.773**	.750**
2 Fdegree		-	.898**	.723**	.844**	.814**	.743**	.761**	.696**
3 Fbrokerage			-	.605**	.953**	.869**	.831**	.823**	.847**
4 Fweakcomp				-	.626**	.690**	.510**	.491**	.506**
5 Fegobetween					-	.941**	.750**	.732**	.756**
6 FbetweenNet						-	.653**	.637**	.627**
7 leffsize							-	.980**	.949**
8 ldegree								-	.922**
9 lbroker									-

<i>Variable</i>	10	11	12	13	14	15	16	17	18
1 Feffsize	.150	.752**	.654**	.745**	.767**	.684**	.135	.555**	.537**
2 Fdegree	.162	.698**	.638**	.704**	.742**	.618**	.142	.503**	.498**
3 Fbrokerage	.179	.831**	.675**	.811**	.822**	.785**	.081	.622**	.575**
4 Fweakcomp	.187	.529**	.503**	.595**	.602**	.530**	.290	.467**	.500**
5 Fegobetween	.151	.773**	.676**	.757**	.759**	.734**	.107	.656**	.627**
6 FbetweenNet	.137	.661**	.611**	.630**	.631**	.590**	.115	.530**	.523**
7 leffsize	.421**	.946**	.862**	.912**	.914**	.879**	.192	.743**	.693**
8 ldegree	.370*	.913**	.835**	.890**	.905**	.842**	.186	.703**	.661**
9 lbroker	.253	.983**	.795**	.945**	.933**	.963**	.160	.813**	.749**
10 lweakcomp	-	.234	.333*	.195	.179	.175	.134	.105	.099
11 legobtn		-	.864**	.957**	.942**	.971**	.215	.875**	.819**
12 lbtwnNet			-	.843**	.835**	.789**	.449**	.810**	.805**
13 TeffSizer				-	.992**	.967**	.260	.850**	.818**
14 Tdegree					-	.943**	.223	.818**	.787**
15 Tbroker						-	.202	.904**	.849**
16 TweakComp							-	.302*	.365*
17 Tegobtn								-	.976**
18 TbtwnNet									-

(table 16 cntd)

	Variable	19	20	21	22	23	24	25	26	27
1	Feffsize	.816**	.829**	.741**	-.086	.722**	.695**	.709**	.908**	.896**
2	Fdegree	.784**	.818**	.679**	-.096	.654**	.635**	.802**	.887**	.814**
3	Fbrokerage	.859**	.859**	.840**	-.119	.827**	.768**	.562**	.913**	.869**
4	Fweakcomp	.627**	.619**	.540**	.009	.540**	.584**	.614**	.606**	.690**
5	Fegobetween	.796**	.784**	.765**	-.122	.752**	.796**	.589**	.831**	.941**
6	FbetweenNet	.692**	.681**	.623**	-.094	.610**	.675**	.621**	.788**	1.000**
7	leffsize	.964**	.955**	.923**	-.016	.906**	.816**	.346*	.871**	.653**
8	ldegree	.945**	.949**	.889**	-.017	.870**	.772**	.381**	.865**	.637**
9	lbroker	.941**	.916**	.987**	-.080	.983**	.864**	.268	.839**	.627**
10	lweakcomp	.349*	.327*	.240	.225	.241	.237	.025	.255	.137
11	legobtwn	.945**	.918**	.977**	-.066	.970**	.910**	.303*	.834**	.661**
12	lbtwnNet	.857**	.838**	.792**	.095	.772**	.864**	.364*	.746**	.611**
13	TeffSizer	.965**	.941**	.967**	-.046	.958**	.898**	.299*	.818**	.630**
14	Tdegree	.968**	.959**	.951**	-.090	.936**	.870**	.347*	.838**	.631**
15	Tbroker	.916**	.879**	.986**	-.092	.987**	.922**	.212	.764**	.590**
16	TweakComp	.208	.167	.172	.694**	.193	.345*	.129	.142	.115
17	Tegobtwn	.778**	.737**	.846**	-.075	.841**	.942**	.250	.613**	.530**
18	TbtwnNet	.748**	.708**	.785**	-.027	.780**	.918**	.273	.590**	.523**
19	Seffsize	-	.990**	.949**	-.040	.932**	.864**	.373*	.894**	.692**
20	Sdegree		-	.920**	-.085	.897**	.826**	.423**	.906**	.681**
21	Sbroker			-	-.088	.996**	.898**	.247	.828**	.623**
22	Sweakcomp				-	-.056	-.014	-.082	-.086	-.094
23	Segobtwn					-	.898**	.218	.804**	.610**
24	SbtwnNet						-	.336*	.730**	.675**
25	Foutdegree							-	.482**	.621**
26	Findegree								-	.788**
27	Fbetweenness									-

(Table X contd)

	Variable	28	29	30	31	32	33	34	35	36
1	Feffsize	.444**	.332*	.456**	.879**	.404**	.763**	.654**	.355*	.213
2	Fdegree	.458**	.464**	.579**	.951**	.422**	.749**	.638**	.344*	.223
3	Fbrokerage	.349*	.210	.363*	.808**	.403**	.800**	.675**	.310*	.171
4	Fweakcomp	.579**	.430**	.321*	.610**	.257	.485**	.503**	.268	.278
5	Fegobetween	.332*	.199	.327*	.732**	.393**	.697**	.676**	.306*	.163
6	FbetweenNet	.383**	.259	.285	.681**	.360*	.615**	.611**	.353*	.204
7	leffsize	.380*	.087	.269	.650**	.572**	.939**	.862**	.446**	.180
8	ldegree	.374*	.113	.289	.683**	.647**	.925**	.835**	.456**	.263
9	lbroker	.309*	.063	.222	.604**	.465**	.882**	.795**	.296*	.134
10	lweakcomp	.218	-.058	-.073	.062	.249	.347*	.333*	.447**	.081
11	legobtwN	.315*	.096	.264	.607**	.506**	.882**	.864**	.320*	.144
12	lbtwnNet	.361*	.130	.341*	.541**	.595**	.802**	1.000**	.418**	.232
13	TeffSizer	.410**	.070	.243	.601**	.474**	.874**	.843**	.329*	.171
14	Tdegree	.427**	.115	.291	.655**	.499**	.886**	.835**	.342*	.205
15	Tbroker	.290	.040	.199	.526**	.443**	.813**	.789**	.240	.112
16	TweakComp	.244	.022	.079	.053	.254	.146	.449**	.269	.190
17	TegobtwN	.166	.107	.295*	.428**	.490**	.644**	.810**	.190	.092
18	TbtwnNet	.226	.100	.274	.393**	.477**	.604**	.805**	.226	.092
19	Seffsize	.459**	.116	.288	.678**	.500**	.934**	.857**	.431**	.181
20	Sdegree	.457**	.177	.361*	.737**	.521**	.939**	.838**	.433**	.208
21	Sbroker	.324*	.055	.219	.586**	.432**	.867**	.792**	.281	.123
22	Sweakcomp	.104	-.140	-.123	-.155	.062	-.043	.095	.243	-.065
23	SegobtwN	.321*	.031	.178	.553**	.419**	.843**	.772**	.272	.109
24	SbtwNet	.281	.119	.291	.525**	.481**	.719**	.864**	.270	.132
25	Foutdegree	.142	.738**	.758**	.832**	.381**	.315*	.364*	.129	.241
26	Findegree	.545**	.205	.370*	.793**	.402**	.909**	.746**	.443**	.171
27	Fbetweenness	.383**	.259	.285	.681**	.360*	.615**	.611**	.353*	.204
28	Fincloseness	-	-.095	-.115	.317*	.032	.463**	.361*	.392**	.097
29	Foutcloseness		-	.797**	.594**	.244	.071	.130	-.113	.327*
30	Fpower			-	.741**	.335*	.283	.341*	-.065	.213
31	FsymPower				-	.431**	.663**	.541**	.209	.254
32	Infoutdegree					-	.391**	.595**	.120	.621**
33	Infindegree						-	.802**	.565**	.066
34	Infbetweenness							-	.418**	.232
35	Infcloseness								-	-.154
36	Infoutcloseness									-

(Table Xcntd)

	<i>Variable</i>	37	38	39	40	41	42	43	44	45
1	Feffsize	.251	.707**	.518**	.761**	.537**	.677**	-.365*	.411**	.754**
2	Fdegree	.301*	.729**	.528**	.728**	.498**	.719**	-.415**	.442**	.762**
3	Fbrokerage	.217	.742**	.515**	.822**	.575**	.613**	-.241	.403**	.787**
4	Fweakcomp	.125	.417**	.478**	.591**	.500**	.640**	-.411**	.396**	.589**
5	Fegobetween	.195	.631**	.555**	.756**	.627**	.564**	-.212	.424**	.712**
6	FbetweenNet	.150	.546**	.465**	.635**	.523**	.563**	-.301*	.349*	.589**
7	Ieffsize	.312*	.868**	.613**	.924**	.693**	.678**	-.269	.485**	.865**
8	Idegree	.401**	.937**	.615**	.908**	.661**	.697**	-.284	.493**	.881**
9	Ibroker	.228	.817**	.624**	.942**	.749**	.588**	-.135	.480**	.858**
10	Iweakcomp	-.010	.209	-.013	.221	.099	.286	-.307*	-.056	.144
11	IlegobtwN	.294*	.799**	.704**	.950**	.819**	.609**	-.147	.558**	.862**
12	IbtwnNet	.375*	.728**	.730**	.839**	.805**	.644**	-.232	.606**	.777**
13	TeffSizer	.293	.788**	.725**	.986**	.818**	.670**	-.207	.574**	.921**
14	Tdegree	.338*	.826**	.742**	.985**	.787**	.702**	-.221	.615**	.960**
15	Tbroker	.261	.729**	.709**	.946**	.849**	.549**	-.074	.558**	.851**
16	TweakComp	.126	.122	.279	.223	.365*	.272	-.236	.155	.140
17	TegobtwN	.345*	.596**	.851**	.808**	.976**	.456**	-.010	.671**	.719**
18	TbtwnNet	.326*	.555**	.856**	.772**	1.000**	.494**	-.077	.647**	.685**
19	Seffsize	.293	.834**	.662**	.972**	.748**	.733**	-.295*	.537**	.916**
20	Sdegree	.351*	.870**	.671**	.955**	.708**	.755**	-.302*	.581**	.941**
21	Sbroker	.230	.778**	.649**	.959**	.785**	.588**	-.121	.516**	.870**
22	Sweakcomp	-.134	-.119	-.148	-.060	-.027	.016	-.208	-.248	-.189
23	SegobtwN	.204	.751**	.628**	.947**	.780**	.568**	-.110	.486**	.846**
24	SbtwnNet	.284	.649**	.781**	.866**	.918**	.577**	-.128	.620**	.776**
25	Foutdegree	.333*	.414**	.450**	.296*	.273	.465**	-.342*	.402**	.418**
26	Findegree	.267	.794**	.513**	.859**	.590**	.717**	-.353*	.431**	.814**
27	Fbetweenness	.150	.546**	.465**	.635**	.523**	.563**	-.301*	.349*	.589**
28	Fincloseness	-.065	.287	.102	.455**	.226	.536**	-.443**	.040	.415**
29	Foutcloseness	.322*	.238	.356*	.060	.100	.234	-.093	.461**	.235
30	Fpower	.498**	.394**	.511**	.235	.274	.252	-.043	.611**	.394**
31	FsymPower	.406**	.709**	.514**	.628**	.393**	.606**	-.288	.512**	.722**
32	Infoutdegree	.808**	.722**	.634**	.441**	.477**	.366*	-.003	.611**	.557**
33	Infindegree	.266	.822**	.515**	.918**	.604**	.722**	-.383**	.417**	.841**
34	Infbetweenness	.375*	.728**	.730**	.839**	.805**	.644**	-.232	.606**	.777**
35	Infincloseness	-.018	.332*	.152	.381**	.226	.581**	-.671**	.008	.293
36	Infoutcloseness	.582**	.421**	.289	.161	.092	.232	.088	.423**	.325*

(Table X cntd)

	<i>Variable</i>	37	38	39	40	41	42	43	44	45
37	Infpower	-	.570**	.582**	.275	.326*	.244	.077	.706**	.449**
38	InfSymPower		-	.606**	.805**	.555**	.645**	-.207	.570**	.867**
39	Toutdegree			-	.660**	.856**	.485**	-.023	.888**	.752**
40	Tindegree				-	.772**	.721**	-.265	.533**	.922**
41	Tbetweenness					-	.494**	-.077	.647**	.685**
42	Tincloseness						-	-.763**	.403**	.708**
43	Toutcloseness							-	.124	-.186
44	Tpower								-	.707**
45	TsymPower									-

	<i>Variable</i>	46	47	48	49	50	51	52	53	54
1	Feffsize	.675**	.801**	.695**	.604**	.010	.824**	.824**	.432**	.212
2	Fdegree	.678**	.780**	.635**	.639**	-.012	.860**	.860**	.472**	.207
3	Fbrokerage	.669**	.839**	.768**	.566**	.076	.824**	.824**	.402**	.231
4	Fweakcomp	.597**	.581**	.584**	.581**	-.047	.577**	.577**	.296*	.067
5	Fegobetween	.688**	.762**	.796**	.524**	.082	.730**	.730**	.351*	.196
6	FbetweenNet	.621**	.666**	.675**	.516**	.014	.635**	.635**	.300*	.128
7	Ieffsize	.726**	.946**	.816**	.686**	-.007	.856**	.856**	.322*	.111
8	Idegree	.716**	.932**	.772**	.703**	-.015	.902**	.902**	.341*	.106
9	Ibroker	.683**	.910**	.864**	.580**	.093	.824**	.824**	.366*	.223
10	Iweakcomp	.297*	.313*	.237	.457**	-.296*	.113	.113	-.101	-.291
11	Iegobtwn	.731**	.916**	.910**	.590**	.101	.823**	.823**	.385**	.238
12	IbtwnNet	.738**	.845**	.864**	.619**	.051	.751**	.751**	.254	.084
13	IeffSizer	.722**	.937**	.898**	.636**	.063	.846**	.846**	.360*	.203
14	Idegree	.744**	.946**	.870**	.670**	.064	.895**	.895**	.392**	.211
15	Ibroker	.703**	.877**	.922**	.537**	.131	.770**	.770**	.374*	.255
16	IweakComp	.135	.205	.345*	.245	-.159	.132	.132	-.008	-.115
17	Iegobtwn	.756**	.728**	.942**	.443**	.164	.642**	.642**	.333*	.234
18	IbtwnNet	.751**	.696**	.918**	.471**	.122	.602**	.602**	.301*	.188
19	Ieffsize	.772**	.975**	.864**	.712**	.017	.872**	.872**	.361*	.156
20	Idegree	.793**	.974**	.826**	.732**	.032	.913**	.913**	.406**	.186
21	Ibroker	.704**	.916**	.898**	.573**	.118	.807**	.807**	.373*	.238
22	Iweakcomp	-.161	-.043	-.014	.061	-.346*	-.164	-.164	-.118	-.206
23	Iegobtwn	.679**	.895**	.898**	.559**	.110	.778**	.778**	.369*	.238
24	IbtwnNet	.791**	.814**	1.000**	.549**	.142	.706**	.706**	.332*	.208
25	Ioutdegree	.536**	.346*	.336*	.382**	-.019	.582**	.582**	.371*	.129
26	Idegree	.663**	.918**	.730**	.679**	.005	.849**	.849**	.450**	.243
27	Ibetweenness	.621**	.666**	.675**	.516**	.014	.635**	.635**	.300*	.128

(Table X cntd)

	<i>Variable</i>	46	47	48	49	50	51	52	53	54
28	Fincloseness	.187	.502**	.281	.561**	-.249	.370*	.370*	.285	.078
29	Foutcloseness	.426**	.090	.119	.182	.110	.359*	.359*	.284	.161
30	Fpower	.538**	.291	.291	.202	.171	.522**	.522**	.468**	.313*
31	FsymPower	.647**	.685**	.525**	.541**	.052	.856**	.856**	.536**	.281
32	Infoutdegree	.668**	.433**	.481**	.409**	.098	.640**	.640**	.240	.031
33	Infindegree	.608**	.974**	.719**	.708**	-.069	.829**	.829**	.371*	.156
34	Infbetweenness	.738**	.845**	.864**	.619**	.051	.751**	.751**	.254	.084
35	Infcloseness	.233	.494**	.270	.689**	-.540**	.281	.281	-.049	-.362*
36	Infoutcloseness	.346*	.142	.132	.261	.152	.378*	.378*	.121	.034
37	Infpower	.534**	.288	.284	.238	.237	.529**	.529**	.390**	.247
38	InfsymPower	.689**	.832**	.649**	.634**	.090	.930**	.930**	.379*	.157
39	Toutdegree	.857**	.593**	.781**	.495**	.133	.699**	.699**	.381**	.218
40	Tindegree	.685**	.971**	.866**	.665**	.054	.860**	.860**	.368*	.203
41	Tbetweenness	.751**	.696**	.918**	.471**	.122	.602**	.602**	.301*	.188
42	Tincloseness	.585**	.760**	.577**	.814**	-.172	.712**	.712**	.239	.019
43	Toutcloseness	-.105	-.353*	-.128	.599**	.526**	-.236	-.236	.021	.207
44	Tpower	.826**	.493**	.620**	.383**	.351*	.661**	.661**	.462**	.339*
45	TsymPower	.776**	.897**	.776**	.679**	.124	.951**	.951**	.439**	.243
46	Sumoutdegree	-	.677**	.791**	.597**	.164	.749**	.749**	.390**	.188
47	Sumindegree		-	.814**	.728**	-.014	.866**	.866**	.385**	.180
48	SumBetweenness			-	.549**	.142	.706**	.706**	.332*	.208
49	Sumincloseness				-	-.515**	.660**	.660**	.343*	-.003
50	Sumoutcloseness					-	.106	.106	.000	.229
51	Sumpower						-	1.000**	.471**	.241
52	SumsymPower							-	.471**	.241
53	CoordBOD								-	.808**
54	CoordBODStaff									-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table XI: Dyadic Centrality Product Scores & Dyadic Dependent Variables

<i>Variables</i>	1	2	3	4	5	6	7	8	9
1 CSRPERCDIFF	-	0.022†	0.103†	-0.134†	0.063	0.108	0.041	-0.054	0.09†
2 CSRPERCSIM		-	-0.047	-0.023	0.018	0.007	0.013	0.006	0.078
3 CSRVALUDIFF			-	-0.762**	-0.064	0.017	0.015	-0.038	-0.016
4 CSRValuSIM				-	0.112†	0.006	0.031	0.032	-0.016
5 DRIVEIDEAL					-	0.021	0.034	0.033	0.043
6 DRIVEPERCEIVED						-	0.005	0.054†	-0.02
7 F Degree(SYM-max)							-	0.63**	0.576**
8 F Eigen(SYM-Max)								-	0.205**
9 F Btwness(SYM-max)									-

<i>Variables</i>	10	11	12	13	14	15	16	17
1 CSRPERCDIFF	0.147*	0.029	-0.05	-0.085	0.054	-0.196	-0.118	0.211**
2 CSRPERCSIM	0.047	0.052	-0.033	0.042	0.053	0.172	-0.035	0.01
3 CSRVALUDIFF	-0.036	-0.048	0.042	-0.006	-0.084	-0.108	0.165†	-0.02
4 CSRValuSIM	0.013	0.047	-0.023	0.062	0.06	0.204	-0.016	0.042
5 DRIVEIDEAL	0.087†	0.093†	-0.009	0.014	0.036	0.161	0.031	0.047
6 DRIVEPERCEIVED	0.003	0.01	-0.016†	-0.017	-0.009	0.01	-0.007	-0.005
7 F Degree(SYM-max)	0.741**	0.753**	0.417**	0.354**	0.227*	0.496	0.27**	0.353**
8 F Eigen(SYM-Max)	0.454**	0.725*	0.268**	0.497**	0.041	0.597	0.186**	0.086**
9 FBtwness(SYM-max)	0.695**	0.562**	0.471**	0.149*	0.269**	0.055	0.171*	0.257**
10 F Indegree	-	0.809**	0.382**	0.235**	0.442**	0.225	0.153†	0.547**
11 F INEigen		-	0.372**	0.416**	0.294**	0.66**	0.248**	0.348**
12 F Outdegree			-	0.672**	0.122	0.318†	0.675**	0.06
13 F OutEigen				-	-0.08	0.703**	0.663**	0.029
14 F InCloseness					-	-0.733**	-0.084	0.186*
15 F InClosnss(SYM-max)						-	0.765**	0.01
16 F OutCloseness							-	0.014
17 I InDegree(SYM-max)								-

(Table XI contd)

<i>Variables</i>	18	19	20	21	22	23	24	25
1 CSRPERCDIFF	0.009	-0.04	0.08	0.153*	0.119†	0.034	-0.008	0.104
2 CSRPERCSIM	-0.07	-0.094*	0.104†	0.042	-0.014	-0.007	-0.061	-0.023
3 CSRVALUDIFF	0.053	-0.004	-0.089†	-0.106†	-0.063	0.017	0.022	-0.043
4 CSRValuSIM	0.031	0.049	0.041	0.055	0.089	0.108	0.101	-0.054
5 DRIVEIDEAL	0.058	-0.004	0.115*	0.041	0.04	0.145*	0.11†	0.038
6 DRIVEPERCEIVED	-0.016	-0.017	-0.006	-0.005	-0.018	-0.014†	-0.015	-0.013
7 F Degree(SYM-max)	0.479**	0.377**	0.531**	0.59**	0.526**	0.304**	0.23*	0.259**
8 F Eigen(SYM-Max)	0.418**	0.43**	0.367**	0.388**	0.378**	0.215**	0.267**	0.125*
9 F Btwness(SYM-max)	0.178*	0.093†	0.453**	0.464**	0.259**	0.234**	0.073*	0.244**
10 F Indegree	0.328**	0.291**	0.65**	0.849**	0.642**	0.291**	0.168†	0.348**
11 F INEigen	0.433**	0.402**	0.516**	0.639**	0.552**	0.286**	0.259**	0.23*
12 F Outdegree	0.258*	0.144*	0.248**	0.228*	0.188*	0.317**	0.262*	0.102
13 F OutEigen	0.354**	0.284**	0.176*	0.161*	0.214*	0.232*	0.379**	-0.053
14 F InCloseness	0.112	0.097	0.273**	0.365**	0.309**	0.029	-0.056	0.368**
15 F InClnss(SYM-max)	0.452*	0.4*	0.222	0.197	0.319*	0.319	0.465**	-0.034
16 F OutCloseness	0.238*	0.126†	0.08	0.05	0.109	0.221†	0.278**	-0.104
17 I InDegree(SYM-max)	0.208*	0.251**	0.376**	0.62**	0.636**	0.193*	0.136*	0.194**
18 I OutDeg(SYM-max)	-	0.808**	0.404**	0.363**	0.578**	0.558**	0.7**	0.269**
19 I OutEigen(SYM-max)			-	0.279**	0.372**	0.653**	0.296**	0.518**
20 I Betweenness				-	0.733**	0.475**	0.436**	0.226*
21 IIndegree					-	0.791**	0.282*	0.171†
22 I INEigen						-	0.24*	0.286**
23 I Outdegree							-	0.765**
24 I OutEigen								-

(Table XI cntd)

Variables	26	27	28	29	30	31	32	33
1 CSRPERCDIFF	0.027	0.047	0.03	-0.03	-0.012	0.06	0.13*	0.099†
2 CSRPERCSIM	0.105	0.043	0.064	0.091	0.047	0.052	0.079	0.074*
3 CSRVALUDIFF	0.097	-0.024	-0.031	-0.039	-0.052	-0.039	-0.082†	-0.018*
4 CSRValuSIM	0.145	-0.014	-0.021	0.03	0.053	-0.027	0.032	-0.002
5 DRIVEIDEAL	0.208**	0.074†	0.078	0.129*	0.141*	0.094*	0.072	0.081
6 DRIVEPERCEIVED	-0.001†	-0.015	0.01	0.02	0.002	-0.009	-0.014	0.013
7 F Degree(SYM-max)	0.127†	0.199*	0.522**	0.439**	0.394**	0.271**	0.427**	0.407**
8 F Eigen(SYM-Max)	0.075	0.00	0.379**	0.44**	0.227**	0.057†	0.246**	0.24*
9 F Btwness(SYM-max)	0.134†	0.207**	0.417**	0.347**	0.421**	0.345**	0.463**	0.475**
10 F Indegree	0.124	0.291**	0.639**	0.602**	0.616**	0.466**	0.76**	0.764**
11 F INEigen	0.17*	0.169*	0.529**	0.57**	0.44**	0.246**	0.532**	0.495**
12 F Outdegree	0.205†	0.057	0.256**	0.282**	0.396**	0.129†	0.19*	0.275**
13 F OutEigen	0.157*	0.048	0.228*	0.276**	0.164†	0.028	0.101†	0.098*
14 F InCloseness	0.093	0.08	0.197*	0.211*	0.484**	0.177*	0.325**	0.402**
15 F InClosnss(SYM-max)	0.393†	0.031	0.251	0.414*	0.1	-0.004	0.1	0.029
16 F OutCloseness	0.318*	0.052	0.156†	0.207*	0.204†	0.027	0.037	0.066
17 I InDegree(SYM-max)	0.081	0.24**	0.408**	0.336**	0.318**	0.272**	0.54**	0.409**
18 I OutDegree(SYM-max)	0.288**	0.107*	0.395**	0.402**	0.309**	0.103†	0.228*	0.216*
19 I OutEigen(SYM-max)	0.1	0.108*	0.361**	0.348**	0.239**	0.083†	0.222*	0.179*
20 I Betweenness	0.167*	0.377**	0.705**	0.635**	0.53**	0.535**	0.74**	0.65**
21 IIndegree	0.043	0.375**	0.699**	0.645**	0.625**	0.47**	0.853**	0.776**
22 I INEigen	0.079	0.198**	0.453**	0.468**	0.519**	0.219*	0.545**	0.489**
23 I Outdegree	0.593**	0.113*	0.368**	0.388**	0.303*	0.213*	0.279**	0.292**
24 I OutEigen	0.531**	0.095†	0.302**	0.331**	0.184†	0.087	0.146†	0.126
25 I InCloseness	-0.139	0.101*	0.251**	0.292**	0.53**	0.15**	0.271**	0.345**
26 I OUTCloseness	-	0.046	0.152*	0.222*	0.2†	0.046	0.104	0.15†
27 T Btwness(SYM-max)		-	0.626**	0.4**	0.241**	0.677**	0.534**	0.365**
28 T Degree(SYM-max)			-	0.874**	0.594**	0.646**	0.81**	0.757**
29 T Eigen(SYM-max)				-	0.752**	0.443**	0.702**	0.785**
30 T INCloseness					-	0.371**	0.595**	0.778**
31 T Betweenness						-	0.682**	0.569**
32 T Indegree							-	0.873**
33 T InEigen								-

(Table XI *cont*)

	<i>Variables</i>	<i>34</i>	<i>35</i>	<i>36</i>
1	CSRPERCDIFF	-0.034	-0.088	0.011
2	CSRPERCSIM	0.05	0.055	0.04
3	CSRVALUDIFF	-0.116	-0.094	0.022
4	CSRValuSIM	0.023	0.11	0.015
5	DRIVEIDEAL	0.199**	0.219**	-0.033
6	DRIVEPERCEIVED	-0.016	-0.014	0.023
7	F Degree(SYM-max)	0.356**	0.33**	-0.178
8	F Eigen(SYM-Max)	0.272**	0.307**	-0.063
9	F Btwness(SYM-max)	0.306**	0.209*	-0.192*
10	F Indegree	0.386**	0.308*	0.259**
11	F INEigen	0.375**	0.415**	-0.146†
12	F Outdegree	0.406**	0.345**	-0.29*
13	F OutEigen	0.405**	0.499**	-0.029
14	F InCloseness	0.098	0.037	0.424**
15	F InClosnss(SYM-max)	0.308	0.547	0.264
16	F OutCloseness	0.351**	0.448**	-0.091
17	I InDegree(SYM-max)	0.185*	0.181*	-0.097
18	I OutDegree(SYM-max)	0.423**	0.513**	-0.137
19	I OutEigen(SYM-max)	0.285**	0.361**	-0.104
20	I Betweenness	0.485**	0.386**	-0.172*
21	IIndegree	0.386**	0.293*	0.288**
22	I INEigen	0.27*	0.296**	0.291**
23	I Outdegree	0.586**	0.555**	-0.005
24	I OutEigen	0.528**	0.654**	0.068
25	I InCloseness	0.137	-0.002	-0.628**
26	I OUTCloseness	0.288**	0.414**	0.086
27	T Btwness(SYM-max)	0.35**	0.291**	-0.022
28	T Degree(SYM-max)	0.628**	0.522**	-0.157*
29	T Eigen(SYM-max)	0.588**	0.554**	-0.264**
30	T INCloseness	0.433**	0.34**	-0.66**
31	T Betweenness	0.452**	0.263*	-0.075
32	T Indegree	0.444**	0.331**	-0.18*
33	T InEigen	0.439**	0.301*	-0.317**
34	T OutDegree	-	0.865**	-0.026
35	T OutEigen		-	0.12
36	T Closeness			-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table XII: Informal Power Regressions**18.1. FRIENDSHIP POWER****XII.I.I.****DV Perception avg Difference from ego-alter**

		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	1.452	
Model 2	Ctrls + Outdegree <i>outdegree</i>	1.12	-0.063
Model 3	Ctrls + Indegree <i>Indegree</i>	1.13	0.072
Model 4	Ctrls + Betweenness <i>Betweenness</i>	1.122	-0.067
Model 5	Ctrls + Incloseness <i>Incloseness</i>	1.37	0.202
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	1.312	-0.182
Model 7	Ctrls + Power <i>Knowledge</i> <i>Age</i> <i>Tenure</i> <i>Education</i> <i>Power</i>	1.873	0.387* -0.186 0.257 0.081 -0.323†
Model 8	Ctrls + SymPower <i>SymPower</i>	1.121	0.065

XII.I.II.**DV Perception avg Similarity from ego-alter**

Model 1	Controls	4.069	
Model 2	Ctrls + Outdegree <i>outdegree</i>	3.143*	-0.022
Model 3	Ctrls + Indegree <i>Indegree</i>	3.415*	-0.162
Model 4	Ctrls + Betweenness <i>Betweenness</i>	3.140*	0.01
Model 5	Ctrls + Incloseness <i>Incloseness</i>	3.401*	-0.152
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	3.325*	-0.131
Model 7	Ctrls + Power <i>Power</i>	3.169*	-0.051
Model 8	Ctrls + SymPower <i>SymPower</i>	3.295*	-0.134

XII.I.III.

DV **Valuation avg Difference from ego-alterns**

		<u>F-score</u>	<u>Beta</u> <u>(stdized)</u>
Model 1	Controls	0.9	
Model 2	Ctrls + Outdegree <i>outdegree</i>	0.318	0.256
Model 3	Ctrls + Indegree <i>Indegree</i>	0.077	0.044
Model 4	Ctrls + Betweenness <i>Knowledge</i> <i>Age</i> <i>Tenure</i> <i>Education</i> <i>Betweenness</i>	0.946	-0.211 0.075 -0.052 -0.042 0.457*
Model 5	Ctrls + Incloseness <i>Incloseness</i>	0.138	0.122
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	0.214	0.179
Model 7	Ctrls + Power <i>Power</i>	0.168	-0.144
Model 8	Ctrls + SymPower <i>SymPower</i>	0.117	-0.116

XII.I.IV.

DV **Valuation avg Similarity from ego-alterns**

Model 1	Controls	1.179	
Model 2	Ctrls + Outdegree <i>outdegree</i>	1.038	-0.161
Model 3	Ctrls + Indegree <i>Indegree</i>	0.911	-0.017
Model 4	Ctrls + Betweenness <i>Knowledge</i> <i>Age</i> <i>Tenure</i> <i>Education</i> <i>Betweenness</i>	1.919	0.446* -0.048 -0.158 0.131 -0.425*
Model 5	Ctrls + Incloseness <i>Incloseness</i>	0.916	0.034
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	0.951	-0.085

Model 7	Ctrls + Power	1.09	
	<i>Power</i>		0.168
Model 8	Ctrls + SymPower	1.016	
	<i>SymPower</i>		0.149

XII.II. INFORMAL POWER

XII.II.I.

DV **Perception avg Difference from ego-alters**

		<u>F-score</u>	<u>Beta</u> <u>(stdized)</u>
Model 1	Controls	0.67	
Model 2	Ctrls + Outdegree <i>outdegree</i>	0.521	-0.007
Model 3	Ctrls + Indegree <i>Indegree</i>	0.612	0.119
Model 4	Ctrls + Betweenness <i>Betweenness</i>	0.522	0.015
Model 5	Ctrls + Incloseness <i>Incloseness</i>	0.673	0.171
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	0.521	-0.007
Model 7	Ctrls + Power <i>Power</i>	0.638	-0.132
Model 8	Ctrls + SymPower <i>SymPower</i>	0.733	0.191

XII.II.II.

DV **Perception avg Similarity from ego-alters**

Model 1	Controls	3.150*	
Model 2	Ctrls + Outdegree <i>outdegree</i>	2.653*	-0.135
Model 3	Ctrls + Indegree <i>Indegree</i>	2.514*	0.08
Model 4	Ctrls + Betweenness <i>Betweenness</i>	2.516*	0.079
Model 5	Ctrls + Incloseness <i>Incloseness</i>	2.453†	0.026
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	2.614*	0.136
Model 7	Ctrls + Power <i>Power</i>	2.652*	-0.138
Model 8	Ctrls + SymPower <i>SymPower</i>	2.509*	0.082

XII.II.III.

DV Valuation avq Difference from ego-alters

		<u>F-score</u>	<u>Beta</u> <u>(stdized)</u>
Model 1	Controls	0.277	
Model 2	Ctrls + Outdegree <i>outdegree</i>	0.224	-0.037
Model 3	Ctrls + Indegree <i>Indegree</i>	0.327	-0.137
Model 4	Ctrls + Betweenness <i>Betweenness</i>	0.269	-0.92
Model 5	Ctrls + Incloseness <i>Incloseness</i>	0.218	-0.023
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	0.337	-0.153
Model 7	Ctrls + Power <i>Power</i>	0.401	-0.173
Model 8	Ctrls + SymPower <i>SymPower</i>	0.422	-1.78

XII.II.III.

DV Valuation avq Similarity from ego-alters

Model 1	Controls	2.107	
Model 2	Ctrls + Outdegree <i>outdegree</i>	2.143 [†]	0.228
Model 3	Ctrls + Indegree <i>Indegree</i>	1.959	0.191
Model 4	Ctrls + Betweenness <i>Betweenness</i>	1.655	0.043
Model 5	Ctrls + Incloseness <i>Incloseness</i>	1.88	0.186
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	2.175 [†]	0.262
Model 7	Ctrls + Power <i>Knowledge</i>	2.559*	0.26
	<i>Age</i>		0.409*
	<i>Tenure</i>		-0.363*
	<i>Education</i>		-0.085
	<i>Power</i>		0.308 [†]

Model 8	Ctrls + SymPower	2.614*	
	<i>Knowledge</i>		0.23
	<i>Age</i>		0.465*
	<i>Tenure</i>		-0.397*
	<i>Education</i>		-0.099
	<i>SymPower</i>		0.341†

XII.III. TASK POWER

XII.III.I.

DV **Perception avg Difference from ego-alternates**

		<u>F-score</u>	<u>Beta</u> <u>(stdized)</u>
Model 1	Controls	0.319	
Model 2	Ctrls + Outdegree <i>outdegree</i>	0.368	-0.146
Model 3	Ctrls + Indegree <i>Indegree</i>	0.538	0.21
Model 4	Ctrls + Betweenness <i>Betweenness</i>	0.281	0.71
Model 5	Ctrls + Incloseness <i>Incloseness</i>	0.27	0.06
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	0.485	-0.185
Model 7	Ctrls + Power <i>Knowledge</i> <i>Age</i> <i>Tenure</i> <i>Education</i> <i>Power</i>	0.981	0.040 0.028 -0.012 -0.003 -0.344†
Model 8	Ctrls + SymPower <i>Knowledge</i> <i>Age</i> <i>Tenure</i> <i>Education</i> <i>SymPower</i>	0.991	0.041 0.036 -0.012 -0.004 -0.352†

XII.III.II.

DV **Perception avg Similarity from ego-alternates**

Model 1	Controls	2.582†	
Model 2	Ctrls + Outdegree <i>outdegree</i>	2.02†	0.033
Model 3	Ctrls + Indegree <i>Indegree</i>	2.016†	0.024
Model 4	Ctrls + Betweenness <i>Betweenness</i>	2.027†	0.04
Model 5	Ctrls + Incloseness <i>Incloseness</i>	2.066†	0.077
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	2.013†	-0.014

Model 7	Ctrls + Power <i>Power</i>	2.011 [†]	-0.007
Model 8	Ctrls + SymPower <i>SymPower</i>	2.011 [†]	-0.006

XII.III.III.

<u>DV</u>	<u>Valuation avq Difference from ego-alterns</u>	<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.643	
Model 2	Ctrls + Outdegree <i>outdegree</i>	0.69	-0.177
Model 3	Ctrls + Indegree <i>Indegree</i>	0.607	-0.124
Model 4	Ctrls + Betweenness <i>Betweenness</i>	0.513	0.041
Model 5	Ctrls + Incloseness <i>Incloseness</i>	0.518	-0.051
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	0.556	-0.087
Model 7	Ctrls + Power <i>Power</i>	0.885	-0.250
Model 8	Ctrls + SymPower <i>Knowledge</i>	1.152	-0.039
	<i>Age</i>		0.091
	<i>Tenure</i>		0.196
	<i>Education</i>		-0.001
	<i>SymPower</i>		-0.326 [†]

XII.III.IV

<u>DV</u>	<u>Valuation avq Similarity from ego-alterns</u>		
Model 1	Controls	1.1	
Model 2	Ctrls + Outdegree <i>outdegree</i>	1.035	0.165
Model 3	Ctrls + Indegree <i>Indegree</i>	1	0.138
Model 4	Ctrls + Betweenness <i>Betweenness</i>	1.003	-0.139
Model 5	Ctrls + Incloseness <i>Incloseness</i>	1.188	0.212

Model 6	Ctrls + Outcloseness	0.955	
	<i>Outcloseness</i>		-0.111
Model 7	Ctrls + Power	1.415	
	<i>Power</i>		0.287
Model 8	Ctrls + SymPower	1.961	
	<i>Knowledge</i>		0.125
	<i>Age</i>		0.028
	<i>Tenure</i>		-0.354†
	<i>Education</i>		0.113
	<i>SymPower</i>		0.397*

XII.IV. SUMMED MATRIX POWER

XII.IV.I.

<u>DV</u>		<u>F-score</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.493	
Model 2	Ctrls + Outdegree <i>outdegree</i>	0.391	0.034
Model 3	Ctrls + Indegree <i>Indegree</i>	0.740	0.227
Model 4	Ctrls + Betweenness <i>Betweenness</i>	0.479	0.118
Model 5	Ctrls + Incloseness <i>Incloseness</i>	-.987	0.280
Model 6	Ctrls + Outcloseness <i>Knowledge</i> <i>Age</i> <i>Tenure</i> <i>Education</i> <i>Outcloseness</i>	1.494	-0.118 0.049 0.042 0.191 -0.406*
Model 7	Ctrls + Power <i>Power</i>	0.656	0.221

XII.IV.II.

<u>DV</u>			
Model 1	Controls	4.069**	
Model 2	Ctrls + Outdegree <i>outdegree</i>	3.391*	0.146
Model 3	Ctrls + Indegree <i>Indegree</i>	3.287*	0.098
Model 4	Ctrls + Betweenness <i>Betweenness</i>	3.324*	0.111
Model 5	Ctrls + Incloseness <i>Knowledge</i> <i>Age</i> <i>Tenure</i> <i>Education</i> <i>Incloseness</i>	4.453**	-0.187 0.289† 0.19 0.413** 0.315*
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	3.812*	-0.246
Model 7	Ctrls + Power <i>Power</i>	3.208	0.063

XII.IV.III**DV Valuation avg Difference from ego-alters**

		<u>F-score</u>	<u>Beta</u> <u>(stdized)</u>
Model 1	Controls	0.328	
Model 2	Ctrls + Outdegree <i>outdegree</i>	0.259	0.024
Model 3	Ctrls + Indegree <i>Indegree</i>	0.368	-0.132
Model 4	Ctrls + Betweenness <i>Betweenness</i>	0.302	-0.084
Model 5	Ctrls + Incloseness <i>Incloseness</i>	0.264	0.036
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	0.606	-0.243
Model 7	Ctrls + Power <i>Power</i>	0.570	-0.241

XII.IV.IV**DV Valuation avg Similarity from ego-alters**

Model 1	Controls	2.838*	
Model 2	Ctrls + Outdegree <i>outdegree</i>	2.326†	0.116
Model 3	Ctrls + Indegree <i>Indegree</i>	2.453†	0.154
Model 4	Ctrls + Betweenness <i>Betweenness</i>	2.318†	-0.101
Model 5	Ctrls + Incloseness <i>Incloseness</i>	2.370†	0.128
Model 6	Ctrls + Outcloseness <i>Outcloseness</i>	2.213†	0.016
Model 7	Ctrls + Power <i>Knowledge</i>	3.105*	0.272
	<i>Age</i>		0.245
	<i>Tenure</i>		-0.455**
	<i>Education</i>		0.203
	<i>Power</i>		0.316†

** . Correlation is significant at the 0.01 level; * at the 0.05 level; † at the 0.1 level (2-tailed)

Table XIII: Formal Power & Influence

<i>Variable</i>	1	2	3	4	5	6	7	8	9
1 Coord+BOD	-	.808**	-.104	-.040	.086	.122	-.064	.041	-.083
2 Coord+BOD+Fac/Staff		-	-.170	-.065	.210	.120	-.125	.118	-.041
3 SumPercDiff			-	.022	.124	-.045	.881**	.179	-.069
4 SumValDiff				-	-.085	-.717**	-.050	-.049	.939**
5 SumPercSim					-	.031	.137	.927**	-.082
6 SumValSim						-	-.030	-.017	-.642**
7 TaskPercDiff							-	.178	-.099
8 TaskPercSim								-	-.073
9 TaskValDiff									-

<i>Variable</i>	10	11	12	13	14	15	16	17	18
1 Coord+BOD	.150	-.084	.047	-.005	.140	0.298†	.010	.021	-.054
2 Coord+BOD+Fac/Staff	.070	-.192	.188	-.042	.107	.238	.143	-.004	-.125
3 SumPercDiff	.044	.889**	.026	.067	-.051	.577**	-.081	-.046	.012
4 SumValDiff	-.685**	.040	-.008	.959**	-.574**	.053	-.046	.874**	-.614**
5 SumPercSim	-.003	-.012	.928**	-.119	-.048	.006	.831**	.004	-.124
6 SumValSim	.895**	-.032	-.089	-.721**	.919**	-.027	-.040	-.693**	.821**
7 TaskPercDiff	.003	.753**	.057	-.023	-.028	0.338†	-.136	-.142	.039
8 TaskPercSim	-.023	.033	.824**	-.086	-.085	.014	.843**	.046	-.172
9 TaskValDiff	-.732**	-.012	-.013	.871**	-.479**	-.015	-.067	.770**	-.493**
10 TaskValSim	-	.015	-.129	-.656**	.772**	.043	-.002	-.587**	.665**
11 InforPercDiff		-	-.040	.096	.007	.461**	-.163	-.078	.083
12 InforPercSim			-	-.078	-.116	.005	.718**	.033	-.184
13 InforValDiff				-	-.650**	.095	-.033	.855**	-.646**
14 InforValSim					-	-.017	-.154	-.615**	.832**
15 FriendPercDiff						-	.076	.056	-.002
16 FriendPercSim							-	.055	-.190
17 FriendValDiff								-	-.779**
18 FriendValSim									-

** . Correlation is significant at the 0.01 level; * at the 0.05 level; † at the 0.1 level (2-tailed)

Table XIV: Structural Equivalence Correlation Table

<i>Variable</i>	1	2	3	4	5	6	7	8
1 CSRPERCDIFF	-	0.022	0.103†	-0.134†	-0.108**	0.063	-0.049	0.143*
2 CSRPERCSIM		-	-0.047	-0.023**	0.007	0.018	0.003	0.053
3 CSRVALUDIFF			-	-0.762	-0.017	-0.064	0.043	0.036
4 CSRValuSIM				-	-0.006	0.112†	-0.065	-0.074
5 Drive Perceived					-	-0.021	0.003	0.023
6 Drive Ideal						-	-0.046	0.005
7 AGEDIFF							-	-0.031
8 KNOWLEDGEDIFF								-
9 PARTICIPDIFF								
10 TENUREproduct								
11 SAMEDEPARTMENT								
12 Friendship StrucEQUIV								
13 Informal StrucEQUIV								
14 Task StrucEQUIV								
15 Joined StrucEQUIV								

<i>Variable</i>	9	10	11	12	13	14	15
1 CSRPERCDIFF	0.009	0.016	-0.018	-0.029	-0.090†	-0.179*	-0.170*
2 CSRPERCSIM	-0.029	0.133†	0.065	0.004	-0.069	-0.107†	-0.080
3 CSRVALUDIFF	-0.019	0.02	0.152*	0.052	0.103†	0.001	0.030
4 CSRValuSIM	-0.037	-0.103	-0.073	0.006	0.025	0.1768*	0.137†
5 Drive Perceived	0.018	0.008	-0.001	-0.014	0.013	0.033	0.037
6 Drive Ideal	-0.144*	0.095	-0.031	0.015	0.005	0.001	-0.005
7 AGEDIFF	0.193*	0.199†	-0.099	-0.086†	-0.095	0.026	-0.008
8 KNOWLEDGEDIFF	0.417**	-0.192**	-0.205**	-0.123*	-0.137*	-0.257**	-0.244**
9 PARTICIPDIFF	-	-0.105	-0.211**	-0.102*	-0.115*	-0.142*	-0.155*
10 TENUREproduct		-	0.111	0.133*	0.035	-0.013	0.039
11 SAMEDEPARTMENT			-	0.057†	-0.005	0.044	0.010
12 Friendship StrucEQUIV				-	0.254**	0.220**	0.456**
13 Informal StrucEQUIV					-	0.409**	0.729**
14 Task StrucEQUIV						-	0.850**
15 Joined StrucEQUIV							-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table XV: Structural Equivalence Regressions

XV.I. Results of Regression Analyses on CSR perception difference (# of observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	<i>0.027*</i>	
	<i>Age</i>		<i>0.044</i>
	<i>Knowledge</i>		<i>-0.172*</i>
	<i>Participation</i>		<i>0.049</i>
	<i>Same Department</i>		<i>-0.004</i>
	<i>Tenure</i>		<i>0.053</i>
Model 2	Ctrls + SE Friendship	<i>0.028*</i>	
	<i>SE Friendship</i>		<i>-0.025</i>
Model 3	Ctrls + SE Informal	<i>0.033**</i>	
	<i>Age</i>		<i>0.051</i>
	<i>Knowledge</i>		<i>-0.162*</i>
	<i>Participation</i>		<i>0.054</i>
	<i>Same Department</i>		<i>-0.008</i>
	<i>Tenure</i>		<i>0.055</i>
	<i>SE Informal</i>		<i>-0.080†</i>
Model 4	Ctrls + SE Task	<i>0.048**</i>	
	<i>Age</i>		<i>0.037</i>
	<i>Knowledge</i>		<i>-0.134*</i>
	<i>Participation</i>		<i>0.058</i>
	<i>Same Department</i>		<i>-0.004</i>
	<i>Tenure</i>		<i>0.042</i>
	<i>SE Task</i>		<i>-0.151*</i>
Model 5	Ctrls + SE Joined	<i>0.048 **</i>	
	<i>Age</i>		<i>0.044</i>
	<i>Knowledge</i>		<i>-0.138*</i>
	<i>Participation</i>		<i>0.060</i>
	<i>Same Department</i>		<i>-0.011</i>
	<i>Tenure</i>		<i>0.052</i>
	<i>SE Joined</i>		<i>-0.148*</i>

XV.II. Results of Regression Analyses on CSR perception similarity (# of observations = 1980)

Model 1	Controls	0.030**	
	Age		0.01
	Knowledge		-0.113 ⁺
	Participation		0.047
	Same Department		0.061
	Tenure		0.144 [†]
Model 2	Ctrls + SE Friendship	0.031**	
	<i>SE Friendship</i>		-0.01
Model 3	Ctrls + SE Informal	0.035**	
	<i>SE Informal</i>		-0.066
Model 4	Ctrls + SE Task	0.038**	
	<i>SE Task</i>		-0.092
Model 5	Ctrls + SE Joined	0.035*	
	<i>SE Joined</i>		-0.071

XV.III. Results of Regression Analyses on CSR valuation difference (# of observations = 1980)

Model 1	Controls	<i>0.031*</i>	
	<i>Age</i>		<i>-0.056</i>
	<i>Knowledge</i>		<i>-0.085</i>
	<i>Participation</i>		<i>0.029</i>
	<i>Same Department</i>		<i>0.169**</i>
	<i>Tenure</i>		<i>0.003</i>
Model 2	Ctrls + SE Friendship	<i>0.034**</i>	
	<i>SE Friendship</i>		<i>0.056</i>
Model 3	Ctrls + SE Informal	<i>0.045**</i>	
	<i>Age</i>		<i>-0.067</i>
	<i>Knowledge</i>		<i>-0.099†</i>
	<i>Participation</i>		<i>0.022</i>
	<i>Same Department</i>		<i>0.175**</i>
	<i>Tenure</i>		<i>0.00</i>
	<i>SE Informal</i>		<i>0.121*</i>
Model 4	Ctrls + SE Task	<i>0.031**</i>	
	<i>SE Task</i>		<i>0.011</i>
Model 5	Ctrls + SE Joined	<i>0.033**</i>	
	<i>SE Joined</i>		<i>0.047</i>

XV.IV. Results of Regression Analyses on CSR valuation similarity (# of observations = 1980)

		<u>R²</u>	<u>Beta (stdized)</u>
Model 1	Controls	0.028*	
	<i>Age</i>		0.041
	<i>Knowledge</i>		0.109†
	<i>Participation</i>		0.014
	<i>Same Department</i>		-0.09
	<i>Tenure</i>		-0.107
Model 2	Ctrls + SE Friendship	0.028*	
	<i>SE Friendship</i>		0.007
Model 3	Ctrls + SE Informal	0.028*	
	<i>SE Informal</i>		0.009
Model 4	Ctrls + SE Task	0.052*	
	<i>Age</i>		0.048
	<i>Knowledge</i>		0.068
	<i>Participation</i>		0.005
	<i>Same Department</i>		-0.089
	<i>Tenure</i>		-0.095
	<i>SE Task</i>		0.161*
Model 5	Ctrls + SE Joined	0.042*	
	<i>Age</i>		0.041
	<i>Knowledge</i>		0.081
	<i>Participation</i>		0.005
	<i>Same Department</i>		-0.084
	<i>Tenure</i>		-0.106
	<i>SE Joined</i>		0.121†

XV.V. Results of Regression Analyses on Perceived Drive (# of observations = 1980)

Model 1	Controls	0.001 [†]	
	<i>Age</i>		0.001
	<i>Knowledge</i>		-0.022
	<i>Participation</i>		-0.011
	<i>Same Department</i>		0.004
	<i>Tenure</i>		0.013
Model 2	Ctrls + SE Friendship	0.001 [†]	
	<i>SE Friendship</i>		0.017
Model 3	Ctrls + SE Informal	0.001 [†]	
	<i>SE Informal</i>		0.009
Model 4	Ctrls + SE Task	0.001 [†]	
	<i>SE Task</i>		0.009
Model 5	Ctrls + SE Joined	0.001 [†]	
	<i>SE Joined</i>		0.001

XV.VI. Results of Regression Analyses on Ideal Drive (# of observations = 1980)

Model 1	Controls	0.039**	
	<i>Age</i>		0.035
	<i>Knowledge</i>		-0.084*
	<i>Participation</i>		0.175**
	<i>Same Department</i>		-0.065†
	<i>Tenure</i>		0.106†
Model 2	Ctrls + SE Friendship	0.04**	
	<i>SE Friendship</i>		-0.035
Model 3	Ctrls + SE Informal	0.039**	
	<i>SE Informal</i>		-0.003
Model 4	Ctrls + SE Task	0.041	
	<i>SE Task</i>		0.038
Model 5	Ctrls + SE Joined	0.04	
	<i>SE Joined</i>		0.028

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table XVI: Individual-level Core-Periphery Regression Test*(IV: Core/Periph Vector - Ctrl: Knowledge, Education, Age, & Tenure)*

	Dep. Variable	F-score	stdized-beta
Model 1	<i>CSR Perception</i>	<i>0.859</i>	<i>0.067</i>
Model 2	<i>CSR Valuation</i>	<i>1.029</i>	<i>0.136</i>
Model 3	<i>Perceived Drive</i>	<i>0.511</i>	<i>0.098</i>
Model 4	<i>Ideal Drive</i>	<i>0.385</i>	<i>0.118</i>

Some post hoc work was conducted with the entire network of relations to uncover any systematic effects of a core-periphery structure (this was omitted from results for conciseness and usefulness). The actors were dichotomized by UCINET’s core-periphery algorithm into a dummy variable representing either core (1) or periphery (0) members, and regressions at the individual-level were run with controls to test for any core/periphery effects on our dependent variables. Results showed no noteworthy differences between core and periphery actors on any of the dependent variables (see regression Table22 above). In another operationalization, we computed a dyadic similarity in ‘coreness’ score using UCINET’s continuous core/periphery algorithm (this similarity score was essentially an inverted absolute difference measure). When tested against the dyadic similarity & difference measures using a QAP correlation procedure, marginally significant results were obtained with the CSR Identity Perception Similarity & Difference dependent variables (see Table23 below). This result may be interpreted such that the closer 2 actors are in their ‘coreness’ (i.e. they are positioned similarly with respect to a core-periphery dichotomy), the more homogeneous their reports for CSR Identity Perceptions. The result is weak however, but nevertheless suggestive of a potential core-periphery difference in identity views (Lamertz, 2009).

Table XVII: Correlation - Dyadic Similarity in Coreness & Dyadic DVs

<i>Variable</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>	<i>6</i>	<i>7</i>
1 CSR Perc Diff	-	-0.533**	0.103†	-0.134†	-0.108**	0.063	-0.125†
2 CSR Perc SIM		-	-0.171*	0.307**	0.04†	-0.03	0.13†
3 CSR Val Diff			-	-0.762**	-0.017	-0.064	0.098†
4 CSR Val SIM				-	-0.006	0.112†	0.05
5 Drive Perceived					-	-0.021	0.019
6 Drive Ideal						-	-0.033
7 Similar Coreness							-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table XVIII: Correlation between Brokerage & Average Ego-Net Influence Scores

	<i>Variable</i>	1	2	3	4	5	6	7	8	9	10
1	Feffsize	-	.966**	.958**	.728**	.923**	.346*	-.085	.053	-.023	.770**
2	Fdegree		-	.898**	.723**	.844**	0.295†	-.131	.052	-.012	.743**
3	Fbrokerage			-	.605**	.953**	.355*	-.013	-.014	-.022	.831**
4	Fweakcomp				-	.626**	.230	.126	.172	-.085	.510**
5	Fegobetween					-	.241	.037	.018	-.105	.750**
6	FriendPercDiff						-	.076	.056	-.002	.174
7	FriendPercSim							-	.055	-.190	-.052
8	FriendValDiff								-	.779**	-.148
9	FriendValSim									-	.091
10	leffsize										-
	<i>variable</i>	11	12	13	14	15	16	17	18	19	20
1	Feffsize	.773**	.750**	.150	.752**	.107	.034	-.009	.049	.745**	.767**
2	Fdegree	.761**	.696**	.162	.698**	.086	-.007	.032	.059	.704**	.742**
3	Fbrokerage	.823**	.847**	.179	.831**	.158	.082	-.060	.038	.811**	.822**
4	Fweakcomp	.491**	.506**	.187	.529**	.007	.150	.030	.006	.595**	.602**
5	Fegobetween	.732**	.756**	.151	.773**	.076	.125	-.062	-.025	.757**	.759**
6	FriendPercDiff	.206	.271	-.129	.183	.461**	.005	.095	-.017	.194	.205
7	FriendPercSim	-.096	.026	-.029	-.017	-.163	.718**	-.033	-.154	-.002	-.013
8	FriendValDiff	-.113	-.070	-.119	-.053	-.078	.033	.855**	-.615**	-.075	-.080
9	FriendValSim	.089	-.014	.042	-.036	.083	-.184	-.646**	.832**	.012	.026
10	leffsize	.980**	.949**	.421**	.946**	.111	.021	-.155	.152	.912**	.914**
11	ldegree	-	.922**	.370*	.913**	.119	-.006	-.139	.163	.890**	.905**
12	lbroker		-	.253	.983**	.157	.094	-.111	.042	.945**	.933**
13	lweakcomp			-	.234	.111	-.076	-.019	.093	.195	.179
14	legobtw				-	.097	.077	-.106	.028	.957**	.942**
15	InforPercDiff					-	-.040	.096	.007	.139	.122
16	InforPercSim						-	-.078	-.116	.085	.064
17	InforValDiff							-	-.650**	-.146	-.150
18	InforValSim								-	.069	.089
19	TeffSizer									-	.992**
20	Tdegree										-

(Table XVIII
cntd)

	Variable	21	22	23	24	25	26	27	28	29
1	Feffsize	.684**	.135	.555**	.007	.013	-.038	.070	.816**	.829**
2	Fdegree	.618**	.142	.503**	-.024	-.013	-.005	.060	.784**	.818**
3	Fbrokerage	.785**	.081	.622**	.071	.035	-.083	.069	.859**	.859**
4	Fweakcomp	.530**	.290	.467**	.063	.211	.046	.023	.627**	.619**
5	Fegobetween	.734**	.107	.656**	-.003	.077	-.076	-.008	.796**	.784**
6	FriendPercDiff	.222	-.268	-.023	.338	.014	-.015	.043	.190	.181
7	FriendPercSim	.038	-.097	.045	-.136	.843**	-.067	-.002	-.028	-.043
8	FriendValDiff	-.048	.073	-.014	-.142	.046	.770**	-.587**	-.104	-.127
9	FriendValSim	-.054	-.050	-.133	.039	-.172	-.493**	.665**	.062	.096
10	lfeffsize	.879**	.192	.743**	.075	-.004	-.147	.152	.964**	.955**
11	ldegree	.842**	.186	.703**	.047	-.048	-.121	.150	.945**	.949**
12	lbroker	.963**	.160	.813**	.133	.046	-.116	.070	.941**	.916**
13	lweakcomp	.175	.134	.105	.262	.033	.003	.038	.349*	.327*
14	legobtwn	.971**	.215	.875**	.075	.025	-.103	.047	.945**	.918**
15	InforPercDiff	.136	.148	-.005	.753**	.033	-.012	.015	.123	.099
16	InforPercSim	.098	.029	.073	.057	.824**	-.013	-.129	.075	.063
17	InforValDiff	-.109	.000	-.090	-.023	-.086	.871**	-.656**	-.150	-.162
18	InforValSim	-.003	-.046	-.078	-.028	-.085	-.479**	.772**	.130	.170
19	TeffSizer	.967**	.260	.850**	.107	.062	-.137	.115	.965**	.941**
20	Tdegree	.943**	.223	.818**	.065	.035	-.155	.147	.968**	.959**
21	Tbroker	-	.202	.904**	.138	.064	-.103	.034	.916**	.879**
22	TweakComp		-	.302*	.176	.096	.000	-.012	.208	.167
23	Tegobtwn			-	-.006	.063	-.060	-.069	.778**	.737**
24	TaskPercDiff				-	.178	-.099	.003	.082	.035
25	TaskPercSim					-	-.073	-.023	.063	.041
26	TaskValDiff						-	-.732**	-.143	-.162
27	TaskValSim							-	.157	.200
28	Seffsize								-	.990**
29	Sdegree									-

(Tbl XVIIIcntd)

	Variable	30	31	32	33	34	35	36
1	Feffsize	.741**	-.086	.722**	.102	-.003	.018	.037
2	Fdegree	.679**	-.096	.654**	.046	.027	-.007	.044
3	Fbrokerage	.840**	-.119	.827**	.163	-.060	.041	.030
4	Fweakcomp	.540**	.009	.540**	.072	.082	.208	.013
5	Fegobetween	.765**	-.122	.752**	.072	-.047	.077	-.053
6	FriendPercDiff	.261	-.186	.277	.577**	.053	.006	-.027
7	FriendPercSim	.039	-.125	.038	-.081	-.046	.831**	-.040
8	FriendValDiff	-.069	.078	-.055	-.046	.874**	.004	-.693**
9	FriendValSim	-.015	.020	-.035	.012	-.614**	-.124	.821**
10	lffsize	.923**	-.016	.906**	.144	-.134	.000	.123
11	ldegree	.889**	-.017	.870**	.130	-.100	-.043	.121
12	lbroker	.987**	-.080	.983**	.196	-.108	.073	.038
13	lweakcomp	.240	.225	.241	.217	.023	-.087	.026
14	legobtwn	.977**	-.066	.970**	.135	-.098	.058	.018
15	InforPercDiff	.156	.115	.180	.889**	.040	-.012	-.032
16	InforPercSim	.113	-.074	.111	.026	-.008	.928**	-.089
17	InforValDiff	-.120	.178	-.102	.067	.959**	-.119	-.721**
18	InforValSim	.037	-.082	.017	-.051	-.574**	-.048	.919**
19	TeffSizer	.967**	-.046	.958**	.161	-.133	.087	.074
20	Tdegree	.951**	-.090	.936**	.124	-.138	.060	.097
21	Tbroker	.986**	-.092	.987**	.185	-.099	.092	-.004
22	TweakComp	.172	.694**	.193	.173	-.006	.102	-.007
23	Tegobtwn	.846**	-.075	.841**	.012	-.061	.081	-.102
24	TaskPercDiff	.147	.048	.175	.881**	-.050	.137	-.030
25	TaskPercSim	.071	-.014	.073	.179	-.049	.927**	-.017
26	TaskValDiff	-.122	.212	-.104	-.069	.939**	-.082	-.642**
27	TaskValSim	.073	-.006	.054	.044	-.685**	-.003	.895**
28	Seffsize	.949**	-.040	.932**	.143	-.125	.061	.118
29	Sdegree	.920**	-.085	.897**	.094	-.139	.045	.166
30	Sbroker	-	-.088	.996**	.201	-.113	.098	.037
31	Sweakcomp		-	-.056	.126	.166	-.035	-.050
32	Segobtwn			-	.229	-.097	.095	.017
33	SumPercDiff				-	.022	.124	-.045
34	SumValDiff					-	-.085	-.717**
35	SumPercSim						-	.031
36	SumValSim							-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

† . Correlation is significant at the 0.1 level (2-tailed).

Table XIX: T-test Comparisons for Difference Survey Versions

<u>comparison between</u>	<u>Absolute Diff btw means for:</u>			
	<u>Perception</u>	<u>Valuation</u>	<u>DrivePerc</u>	<u>DriveIdeal</u>
Regular & Reward groups	0.028	0.11	0.138	0.138
Regular & Paper Version	0.379	0.629†	0.344	0.125
Reward & Paper Version	0.407	0.52	0.1	0.2

†. T-test is significant at the 0.1 level (2-tailed).

APPENDIX B

Questionnaire:



Corporate Social Responsibility & Sustainability at *Sustainable Concordia*



"an ecologically aware, socially just, and economically responsible society"

Dear participant, my name is Fares George Khalil; I'm an MSc student in management at JMSB, Concordia University, and as a Concordian and an avid enthusiast of social initiatives and sustainability, I am looking to investigate the relation between one's social connections at Sustainable Concordia and one's view of, and identification with, the group's sense of sustainability. I greatly appreciate you taking the time to aid me in this quest and am forever grateful to you. Best Wishes, Fares G. Khalil

CONSENT FORM TO PARTICIPATE IN RESEARCH

This is to state that I agree to participate in a program of research being conducted by MSc student Fares Khalil (f_khalil@alumni.concordia.ca) of the John Molson School of Business at Concordia University, and supervised by Dr. Kai Lamertz (klamertz@jmsb.concordia.ca; 514-8484-2424 ext. 4136)

A. PURPOSE

I have been informed that the purpose of the research is to investigate *sustainability* as an important facet of the identity of Sustainable Concordia.

B. PROCEDURES

Participating in this research involves a 6-10 minute survey. I will be asked about the different types of corporate social responsibility (CSR) initiatives at Sustainable Concordia and about my social relations at the workplace. Other questions will also gather some personal data. To protect confidentiality, all results from this study will be aggregated and reported in summary format only, and my name will be kept confidential and cannot be traced back to me personally.

C. RISKS AND BENEFITS

By participating in this study, I will contribute to an effort to understand how CSR identities at Sustainable Concordia are socially diffused and how this integral part of our identity can best be propagated.

CONDITIONS OF PARTICIPATION

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences. I understand that I may contact the principal investigator at any time and have my records removed from the database.
- I understand that my participation in this study is **CONFIDENTIAL**. The researchers will know but will not disclose my identity or my firm’s identity.
- I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

FULL NAME (please print) _____

SIGNATURE _____ DATE _____

If at any time you have questions about your rights as a research participant, please contact: Adela Reid, Research Ethics and Compliance Officer, Concordia University, at (514) 848-2424 x7481 or by email at adela.reid@concordia.ca.

Please note that the quality and value of this study is in direct result of the integrity of your responses. We appreciate you putting the time and effort to give your best answers. Thank you!

-A- Identity Perceptions: Please indicate your perception of the importance that Sustainable Concordia (SC) places on each of the following corporate social responsibility (CSR) aspects of its identity; in other words, how important do you think each CSR aspect **is to Sustainable Concordia’s identity?**

*1= not at all important
to Sustainable Concordia’s identity*

*7= extremely important
to Sustainable Concordia’s identity*

<u>CSR initiatives</u> - How important is each to Sustainable Concordia’s identity?	1 Not at all important to SC’s ID			7 Extremely important to SC’s ID			
(a) engendering a strong sense of community	1	2	3	4	5	6	7
(b) promoting health and well-being amongst Concordia community members	1	2	3	4	5	6	7
(c) creation and integration of sustainability practices into Concordia’s policy and implementation structures	1	2	3	4	5	6	7
(d) making Concordia one of Canada’s leading universities - increasing teachers and student enrolment and enhancing the curriculum and research	1	2	3	4	5	6	7
(e) ensuring that Concordia obtains sufficient funding with equitable tuition and from socially responsible investing	1	2	3	4	5	6	7
(f) educating students with the knowledge, skills, and values to effectively develop a thriving, secure, and civil society	1	2	3	4	5	6	7
(g) increasing environmental awareness and responsible practices among students	1	2	3	4	5	6	7
(h) integrating environmental and ethical considerations into Concordia’s purchasing policy (buildings, equipment, paper, and food procurement)	1	2	3	4	5	6	7
(i) reducing waste output by implementing green projects, recycling, composting...	1	2	3	4	5	6	7
(j) developing a sustainable transportation infrastructure (e.g. biodiesel, shuttles,	1	2	3	4	5	6	7

carpooling)		
(k) maintaining shared space in a more sustainable fashion (e.g. greening buildings, indoor and outdoor space management, air quality)	1 2 3 4 5 6 7	
(l) responsible use of key resources such as reducing on-campus water & energy consumption and using more water & energy-efficient equipment and practices	1 2 3 4 5 6 7	
<u>Sustainability</u> – how important is each to Sustainable Concordia’s identity?	1 Not at all important to SC’s ID	7 Extremely important to SC’s ID
(a) ecological integrity – reducing its environmental footprint and encouraging responsible consumption and environmentally-conscious practices	1 2 3 4 5 6 7	
(b) economic prosperity - cutting costs & improving efficiency and generating a level of return that facilitates reinvestment and growth	1 2 3 4 5 6 7	
(c) social equity – equal opportunity and equitable treatment, non-hierarchy and tolerance, consensus based decision-making, multi-stakeholder approach...	1 2 3 4 5 6 7	

What do you think **most strongly** underlies CSR initiatives at Sustainable Concordia? Please circle one option.

- (a) CSR driven by *profit maximization* – should make economic or financial sense
- (b) CSR driven by *compliance* – is an obligation, abiding to laws and regulations
- (c) CSR driven by *values* – the human potential, social responsibility and caring for the planet are important
- (d) CSR driven by a *win-together sustainable approach* – we only win together with well-balanced, functional solutions that make economic, social, and ecological sense

-B- Personal Identity: Now, Please indicate how important it is **to your sense of self** - your personal identity - to be a member of a group that values and excels on each of the following CSR aspects. Put differently, how important to your identity is partaking in a collective that embodies and enacts the following CSR aspects? *1= not at all important to my sense of self* *7= extremely important to my sense of self*

<u>CSR initiatives</u> —how important to my <i>identity</i> is being part of a university that strongly values:	1 Not at all important to my Identity	7 Extremely important to my Identity
(a) engendering a strong sense of community	1 2 3 4 5 6 7	
(b) promoting health and well-being amongst Concordia community members	1 2 3 4 5 6 7	
(c) creation and integration of sustainability practices into Concordia’s policy and implementation structures	1 2 3 4 5 6 7	
(d) making Concordia one of Canada’s leading universities - increasing teachers and student enrolment and enhancing the curriculum and research	1 2 3 4 5 6 7	
(e) ensuring that Concordia obtains sufficient funding with equitable tuition and from socially responsible investing	1 2 3 4 5 6 7	
(f) educating students with the knowledge, skills, and values to effectively develop a thriving, secure, and civil society	1 2 3 4 5 6 7	
(g) increasing environmental awareness and responsible practices among students	1 2 3 4 5 6 7	
(h) integrating environmental and ethical considerations into Concordia’s purchasing policy (buildings, equipment, paper, and food procurement)	1 2 3 4 5 6 7	
(i) reducing waste output by implementing green projects, recycling, composting...	1 2 3 4 5 6 7	

(j) developing a sustainable transportation infrastructure (e.g. biodiesel, shuttles, carpooling)	1	2	3	4	5	6	7
(k) maintaining shared space in a more sustainable fashion (e.g. greening buildings, indoor and outdoor space management, air quality)	1	2	3	4	5	6	7
(l) responsible use of key resources such as reducing on-campus water & energy consumption and using more water & energy-efficient equipment and practices	1	2	3	4	5	6	7
<u>Sustainability</u> - how important to my identity is being part of a university that strongly values:	1						7
	Not at all important to my Identity						Extremely important to my Identity
(a) ecological integrity – reducing its environmental footprint and encouraging responsible consumption and environmentally-conscious practices	1	2	3	4	5	6	7
(b) economic prosperity - generating a level of return that facilitates reinvestment and growth	1	2	3	4	5	6	7
(c) social equity – equal opportunity and equitable treatment, non-hierarchy and tolerance, consensus based decision-making, multi-stakeholder approach...	1	2	3	4	5	6	7

According to you, what do you think **should be** the guiding principle behind CSR at Sustainable Concordia? Please circle one option.

- (a) CSR driven by *profit maximization* – should make economic or financial sense
- (b) CSR driven by *compliance* – is an obligation, abiding to laws and regulations
- (c) CSR driven by *values* – the human potential, social responsibility and caring for the planet are important
- (d) CSR driven by a *win-together sustainable approach* – we only win together with well-balanced, functional solutions that make economic, social, and ecological sense

-D- Social connections carry influence on perceptions and attitudes. Please specify whether you know any people **that work or have worked** at Sustainable Concordia. For each relation type, please specify the number of individuals at SC that you know/knew personally. (*the same SC contact may be considered for all 3 relation categories; overlap possible*)

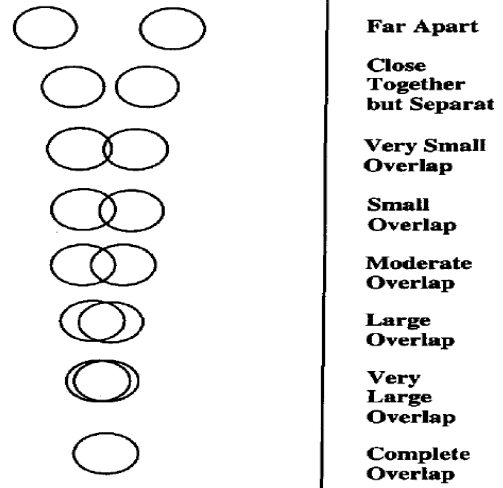
1. **Friendship relations** – the number of individuals at SC who are/were friends of yours, people who you saw socially outside of work/school _____

2. **Task-related/advice relations** – the number of individuals at SC that you are/were in contact with to successfully accomplish your tasks, those who are important sources of professional advice and information. _____

3. **Informal communication** - please state the number of individuals at SC who you talk to for any form of informal communication such as everyday news and events, gossiping, casual chatter etc... _____

-E- Imagine that the column of circles at the left represents your own self-definition or identity and the column of circles at the right represents Concordia University's identity.

Please circle the letter (A, B, C, D, E, F, G, or H) that best describes the level of overlap between your own and Concordia University's identity.



-F- Please indicate to what degree your self-image overlaps with Concordia University's image.

not at all 1 2 3 4 5 6 7 *very much*

-G- Please rate the level of your participation in Sustainable Concordia initiatives - to what extent have you been personally involved in CSR-related activities at Concordia?

very much involved 1 2 3 4 5 6 7 *not at all involved*

-H- Please rate the extent of your knowledge about Sustainable Concordia's initiatives.

not at all knowledgeable 1 2 3 4 5 6 7 *very knowledgeable*

-I- Please rate the extent of your knowledge about Sustainable Concordia initiatives from sources other than social interaction with other people at Concordia (i.e. from information on the website, posters, campaigns, newsletter etc).

very low extent 1 2 3 4 5 6 7 *very high extent (100%)*

-J- Please provide the following information about yourself

1. (a)Gender: m / f (b) Age: ____
2. Have you ever worked at Sustainable Concordia, and if so, for how long? Yes / No _____
3. What is the formal title of your most recent position at SC? _____
4. How long have you occupied that position? _____
5. Highest level of education obtained or level currently enrolled in? (please circle)

High School

CEGEP/College

Undergraduate Graduate

6. Are you part of, or will be part of a professional group (circle if applicable)?

Marketing Engineering
Accounting Management
Human resources other: _____

7. Please name all groups you consider yourself a member of at Sustainable Concordia or at Concordia University (e.g. department, team, project, management level, student group etc):

**Thank you for taking the time to complete the survey
Your efforts are greatly appreciated and will contribute to a very informative study.
Best wishes!**