SEEING STARS: EXPLORING CONSTELLATION NETWORK TYPES RELATIVE TO THE SIX FORCES

LAURIE INGRAHAM, MSW

Masters in Social Work, UW-Milwaukee
Bachelor of Arts, Acadia University

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Dedication

I wish to thank my friends and family for encouraging me when I was down and listening when I was frustrated. My brother, Scott, whose support and financial help got me through many hard times, was particularly kind and patient. I would not still be in this programme without his assistance.

My cohorts in the programme were a gift. We had so many laughs, great talks, wonderful dinners and “tours” together. What a wonderful group of people to learn from and share with.

Lastly, I have to mention Reggie, who brought laughs when they were needed, a lick when it was wanted and lots of love to everyone in the lab.

Abstract

This research begins with a review of those forces that constrain the attractiveness of industries. This includes the Five Forces (power of buyers, power of suppliers, threat of substitutes, threat of new entrants and industry rivalry) developed by Michael Porter (1980) and a Sixth Force (public interest) more recently introduced by Carr (2006). A typology is then developed consisting of six collaborative, within industry, inter-organizational alliances or constellation network types. It is posited that each of these constellation types will be observed in an industry when there is a need to ameliorate the specific forces to which they are linked. Following this theory development, an empirical test of one of the constellation ⇔ force matches is undertaken by searching for the presence or absence of Social Action and Legitimation Constellations where an industry is seen to be vulnerable to the Sixth Force of public interest as measured using the negative screening determinations of socially responsible investment funds.

The study findings support the hypothesized relationship with twenty-eight Social Action and Legitimation constellations being identified across the eight industries deemed most at risk for public interest intervention. Alcohol, nuclear power and industries open to animal welfare concerns show the strongest use of such constellations. Results are mixed, however, with some industries such as adult entertainment having little or no apparent interest in collaborative networks of this type.

Acknowledgements

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Introduction

The history of alliances has created challenges for strategists in this fast-paced global economy where industries are coping with the constantly changing dynamics of firm development. Understanding what defines a strategic alliance versus a joint venture or other forms of emerging partnerships will be the first part of this paper. Included in this explanation will be the newest form of strategic alliance formation: the constellation alliance network.

A discussion of Porter's Five Forces of competition reveals how strategists have used these forces to identify threats to their industry and how to defend their industry against them. The "Sixth Force" presented by Carr, is public interest and will be the focus of the research as well as the decisions formed to join constellations by firms within certain industries. Theory is developed to suggest how alliances might form for each of Porter's and Carr's forces, but only the presence of constellations to address Carr's Sixth Force will be examined empirically in this research.

It is posited that a Social Action and Legitimation constellation alliance could be used as a strategy against the Sixth Force such that firms within industries to which the public looks for stewardship of resources (e.g. forestry) or mitigation of environmental damage (e.g. mining) could develop an alliance to better manage the public interest in their industry. The sample of industries examined is those used in mutual fund exclusionary screens for social responsibility. The research first rates industries based on their social responsibility record, using mutual fund investment screens developed for Socially Responsible Investment (SRI) products. It is then hypothesized that industries that have a SRI poor rating will have a higher probability of containing a constellation alliance network of firms. This hypothesis is then tested for a sample of negatively screened SRI industries and a comparable neutral set of industries.

Strategic Alliances

Strategic alliances are cooperative arrangements between two or more firms to improve their competitive position by sharing resources. Alliances continue to demonstrate increasing popularity and growth, both in formation and in research (Pett & Dibrell, 2001). However, they frequently do not live up to expectations and a fifty percent failure rate reveals that alliance success is difficult to achieve (Phrashant Kale, Dyer, & Singh, 2002; Kogut, 1989).

An extremely large number of past alliances resulted in failure; it is estimated that fewer than 40% of regional alliances and fewer than 30% of international alliances should be considered successes (Podolny & Page, 1998). Bleeke and Ernst (1991) found that 24 of the 49 international partners they studied were considered failures and that most alliances will terminate, even the successful ones. The fact that they are difficult to manage is often a principle reason for alliance malfunction (Anand & Khanna, 2000). No matter what the rationalization for failure, the primary reason is the lack of insight towards an appropriate strategy in creating the alliance. As Casseres (1998) so aptly put it: “It’s the strategy behind the deal that matters, not the deal itself”. It is not surprising, then, that management researchers have scrambled in the past twenty years to analyse, develop and implement new theories in the hopes it will improve the situation.

Constellation alliances are a recently evolved phenomenon that share many traits with bilateral alliances, but also differ in many ways (Gomes-Casseres, 2003). They are defined as an alternative to the single firm as a way of governing a bundle of capabilities.

The set of firms are linked together through alliances that compete in a particular competitive domain(Gomes-Casseres, 2003b). They are often described as “members”, “partners” or “alliance partners”. Management, group size (number of firms), and membership mix must be considered in order to assemble a diverse set of capabilities. The fact is network alliances have learned from the mistakes of bilateral alliances and, as a result, hope to reduce the failure rate.

One might ask why strategic alliances continue to expand nationally and globally if their success rate is questionable. Even though alliances are risky, they can create value (Anand & Khanna, 2000; Gomes-Casseres, 2003a; Prashant Kale, Dyer, & Singh, 2001; Phrashant Kale, Dyer, & Singh, 2002; Suen, 2002). Many of these companies seek a sustained competitive edge in a turbulent global environment (J. Garrett Ralls & Webb, 1999; Pett & Dibrell, 2001). Collaborative advantage can create world-class products, attract the most valuable customers and reach extraordinary profits (Ploetner & Ehret, 2006) . It allows firms to enter new markets, obtain new skills, and share risks and resources (Inkpen & Beamish, 1997).

In spite of their rocky history, there is a significant growth in the number of alliances being formed and in the research on strategic alliances (Pett & Dibrell, 2001). Recent results show that more than 80% of top-level managers view strategic alliances as a primary growth vehicle (Schifrin, 2001) and have potential to gain a competitive advantage (Anand & Khanna, 2000; Ireland, Hitt, & Vaidyanth, 2002).

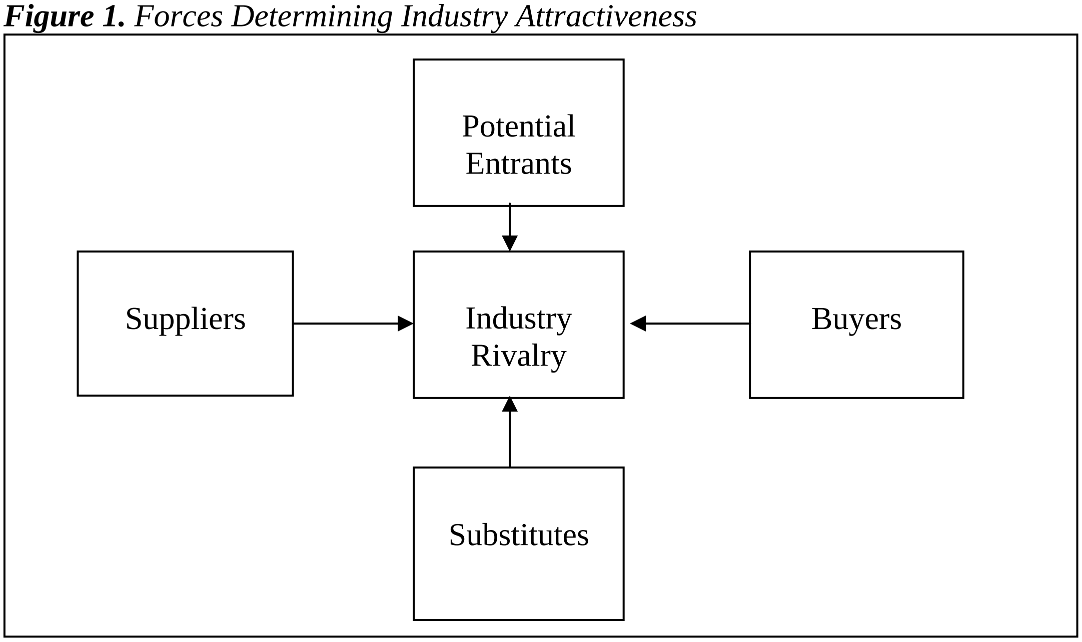
In fact, more than 20,000 new alliances were reported between 1998-2000 and the number of network alliances are on the increase (Anand & Khanna, 2000; Phrashant Kale, Dyer, & Singh, 2002). Given this growth, there is even an argument that network strategic alliances may actually be a superior organizational form (Podolny & Page, 1998).

As a result, collaboration in business is no longer confined to conventional two-company alliances, but more group-based competition (Baum, Shipilov, & Rowley, 2003; Gomes-Casseres, 1994). Gomes-Casseres states "the real competition is a constellation of competitors". This paper presents a theoretical underpinning for the constellation alliance as a strategic option for managers interested in increasing the attractiveness of their industries. I begin with the role of industry attractiveness as articulated by Porter.

Porter's Forces

One of the leading strategists in understanding competitive behaviour is Michael Porter. Companies with a large competitive advantage have higher profit margins and Porter (1980, 1986, 1998) developed "five forces" which describe the condition of competition in an industry and how it affects the profitability of companies (*Figure 1*).

Figure 1. *Forces Determining Industry Attractiveness*



Adapted from Porter, 1980.

These forces determine “industry attractiveness” and long-run industry profitability. Each of these forces creates a threat to an industry and strategists scrutinize each one carefully to determine how to lessen their impact. The stronger these forces are in an industry, the lower its profit potential. Each force differs in strength by industry and changes over time. Understanding the forces will illuminate how they relate to strategic alliance networks (constellations).

An industry is the group of firms that produce products that are close substitutes for each other (M. E. Porter, 1998). A key aspect of the firm’s environment is the firm’s industry(s) in which it competes. An industry’s structure has a strong influence in determining the competitive rules of the game and the strategies available to the firm. A company doesn’t just compete against its immediate rivals; it also competes for profits within industries against suppliers and buyers.

Industry analysis depends on three things (M. E. Porter, 1998): 1) understanding the competitive forces in your industry, 2) assessing the attractiveness and growth opportunities within a new industry, and 3) developing effective strategies to raise profits, power, and competitive position in an industry. Porter’s model builds a framework for strategists to develop an edge over rival firms by better understanding the industry context in which the firm operates. The forces describe how they exert influence on the competitors in an industry (rivalry), the impact new entrants and substitute services have on that industry, as well as the bargaining power of suppliers and buyers. Each of these forces will be discussed in detail later in the paper.

Ultimate profit potential is determined by the strength of these collective forces and not all industries have the same potential because the collective strength of the forces differs (Porter 1998, 1980). The weaker the forces are, the greater the opportunity for superior performance. Every industry has an underlying structure (or set of fundamental economic and technical characteristics) that give rise to these competitive forces. For example in tires, paper and steel the forces are intense and no firm gains much return. However, in industries like oil-field equipment and services, cosmetics, and toiletries where the forces are less intense, high returns are quite common. A change in any of the forces normally requires a company to reassess the marketplace and their strategy.

Carr's Sixth Force

Increasingly, the public interest is playing a larger role in markets because the public today directly influences many of the outcomes Porter specifies as determining corporate returns pricing, costs, and investment (Carr, 2006a). Traditionally, there has been a gap between social responsibility and economic motives in business with managers free to externalize many costs so that they are borne by society instead of shareholders.

Recently, however, public interest is expanding its influence over a company's financial results. That public interest has an economic interest and is becoming an active competitor in the struggle to seize the bounties of the marketplace (Carr, 2006). It is changing the way businesses think about strategy needs at an industry level. Currently, most decent-sized companies are responding to public pressure in one way or another and are becoming more socially responsible. Large firms, with very public brand profiles may be held to higher standards of behaviour than smaller, lower-profile firms (Godfrey, 2005). At the same time, investors are looking for both CSR (Corporate Social Responsibility) *and* returns. The result is that socially responsible investment (SRI) assets grew faster than the entire universe of managed assets in the United States during the past 10 years (Mitchell & Larsen, 2006), which is cause enough for companies, (especially larger ones) and industries to pay attention to the power of the people.

In pricing, public pressure can reduce the prices companies are able to charge in local markets, especially if there is trust/mistrust in the product (Carr, 2006)**.** Companies must now spend more money addressing the concerns of the public which often affects cost. Investment capital is necessary to implement costly adjustments for the environment and safety concerns.

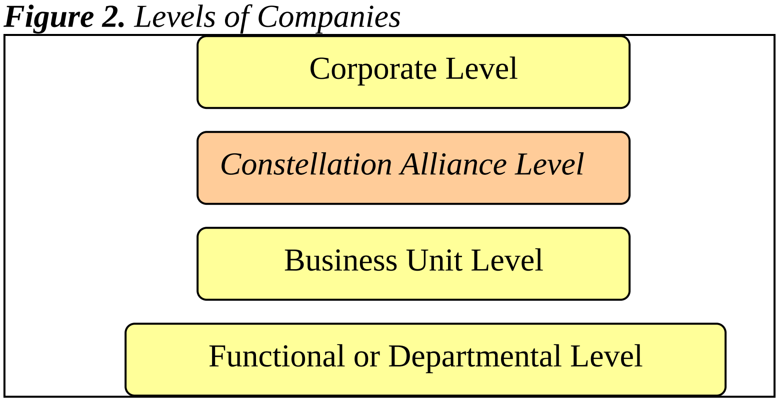
The Role of Constellations in Industry Attractiveness

Most strategists seek the areas where industry trends promise to hold the greatest significance as either opportunities or threats (Porter, 1998). Examining competitive pressure clarifies the areas where strategic changes may yield the greatest payoff and increase their advantages within an industry. A company seeks to find a position in the industry where it can best defend itself against these forces or can influence them in its favour (Porter, 1980).

Constellations allow companies to compete within their industries when they group together: a means for a firm to achieve mutual goals more efficiently, to share risks, to access resources it does not currently posses, and to increase global markets (Suen, 2002). Geographic, cultural, and institutional proximity provides companies with special access, closer relationships, better information, powerful incentives, and other advantages that are difficult to tap with an individual organization (Porter, 2000). It allows industries access to resources and to control scale economies through fixed prices. If a firm links to other firms using networks, it enables resources to flow from different ends of the network. These groups hold specialized knowledge and resources that when connected, allow them to become more efficient at a lower cost. Often this is a strategy which involves taking an offensive stance meant to alter the causes of the forces; not just cope with them. Joining a strategic alliance network would be such a strategy.

Once a strategist assesses the forces affecting competition in an industry, a plan would be devised to position the company so that its capabilities provide the best defense against the competitive force (Porter 1980, 1998). This will highlight the areas where the company should confront competition and where to avoid it. Strategy can be formulated on three levels (*Figure 2*). The three levels are described by Porter as 1) departmental, 2) business unit level and 3) the corporate level. This research intends to add a fourth strategy level: *constellation alliance networks* that is intermediate between strategic decision making versus competitors (business unit) and deciding which industries to be in (corporate) by focusing instead on within industry, collaborative decision making.

Figure 2. *Levels of Companies*



Adapted from Porter, 1980

What makes an industry attractive or unattractive? Porter describes an attractive industry as one with a high average return on investments because it is difficult to enter because of high barriers, suppliers and buyers will have modest bargaining power, substitute products or services are few, and the rivalry among competitors is stable. Carr's sixth force would suggest that industries that have *not* attracted the public interest would tend to be more attractive from a strictly economic standpoint.

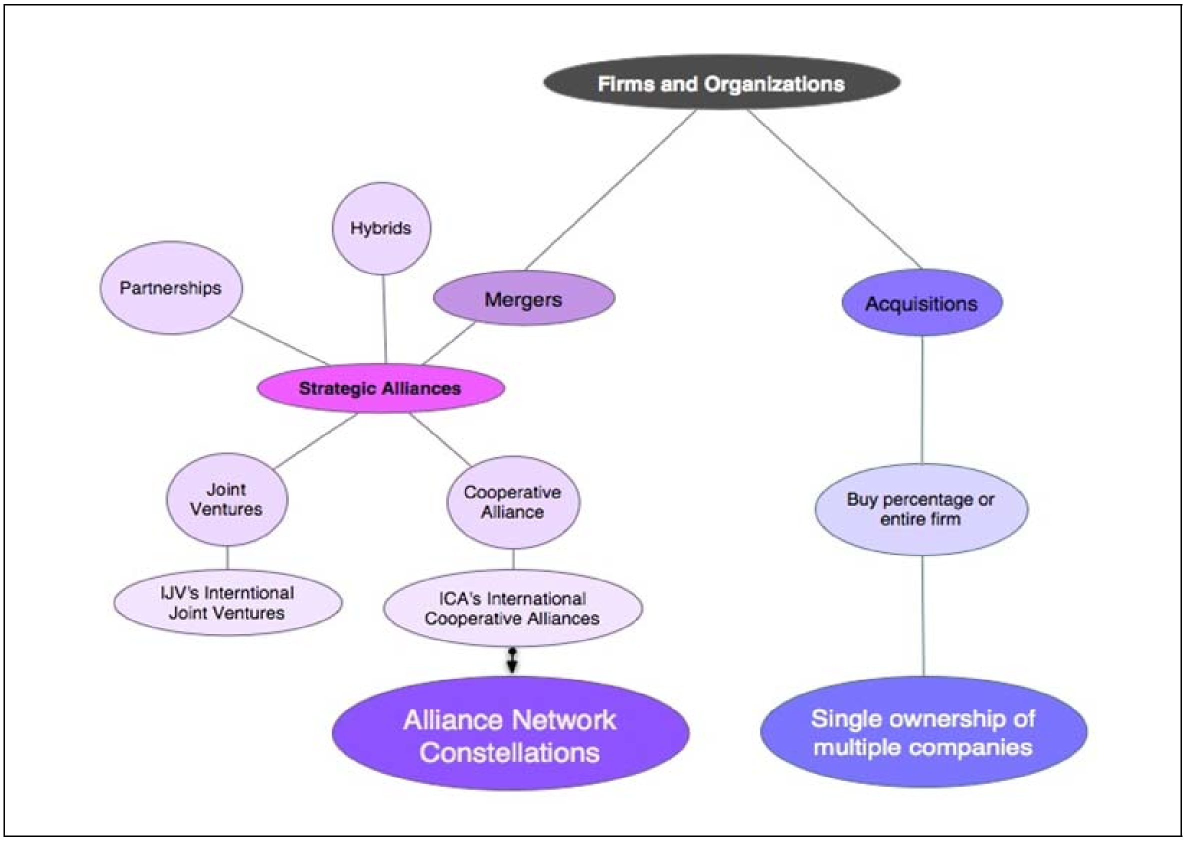
How do constellations relate to these aspects of industry attractiveness? We will return to this question shortly and develop in detail the theory linking specific constellation objectives to each of these forces, but first it is useful to delve deeper into the natures of constellations themselves.

Constellation Alliances

The new kid on the block of strategic alliance formation is a "constellation alliance network" (*Figure 3*). After decades of mergers and two party partnerships, strategic alliances evolved in which companies could retain their independence while benefiting from the resources of other companies and industries. These were often contractual obligations in which each company retained its product logo, as well as functioning as an independent entity. This became such a popular strategy among companies within specific industries that a variety of industries would contract with each other as well as within their own industry. Eventually this evolved into international strategic alliances, called "constellations".

An alliance constellation is a particular kind of organization created to pursue a particular kind of strategy (Gomes-Casseres, 2003a; Suen, 2002). Specific patterns exist within involved industries who adhere to this new form of alliance. They compete for final customers and for additional members which can migrate from alternative groups (Gomes-Casseres, 1994). They are linked through collaborative agreements, but are not necessarily linked with each other. These firms are not only linked together, but often compete against other constellations and/or against other single industries (Gomes-Casseres, 2003a). The individual companies in any group differ in size and focus and are brought together to fulfil specific roles within their group. They can share resources, while cutting costs and survive more effectively than they would if they were a single entity in their industry.

Figure 3. *Strategic Alliance Formation*



This strategic alliance model evolved from several concepts: "alliance network" (Baum, Rowley, Shipilov, & Chuang, 2005; Rowley, Baum, Shipilov, Greve, & Rao, 2004; Silverman & Baum, 2002), "inter-organizational collaboration" (Lazzarini, 2002b; Parkhe, 2000), and "clusters or cliques" (Baum, Shipilov, & Rowley, 2003; Porter, 2000; M. E. Porter, 1998). Constellations describe what are seen as small worlds of organizations which compete with other small worlds (Baum, Shipilov, & Rowley, 2003; Gomes-Casseres, 1997; Lazzarini, 2004). These autonomous firms compete against each other in the same or similar industries for both clients and members (Lazzarini, 2002a). The concept of small worlds describes linked clusters that enable degrees of separation to be much shorter across the global network (Baum, Shipilov, & Rowley, 2003; Porter, 2000; M. E. Porter, 1998; Uzzi & Spiro, 2005a).

For example, the airline industry using Star Alliance has approximately a dozen members within its industry and altered the nature of competition within the airline industry. Coca-Cola and Pepsi both managed complex constellations of bottlers and distributors around the world as have other organizations in other industries (Gomes-Casseres, 2003).

Why do companies perceive a global alliance network as a superior choice to single firms or simple joint ventures? The trend for the past twenty years in businesses is to group together because “cooperation is considered to be superior to individual action at achieving all goals”(Maitland, Bryson, & Van de Ven, 1985). Survival as isolated, self-sufficient entities is no longer an option for many firms in an environment of global strategic changes. In the 1950’s and 1960’s, companies were often unchallenged in their technology and able to manage large-scale businesses in the United States without the necessity of grouping (Gomes-Casseres, 1994). Since then, the increasing importance of global scale has created a fertile ground for alliance networks (Baum, Shipilov, & Rowley, 2003; Lazzarini, 2002b; Rowley, Baum, Shipilov, Greve, & Rao, 2004). The concept of constellations is a direct result of emerging trends in alliance formation that encourages cooperative relationships (T.K. Das & Teng, 2002; Gomes-Casseres, 1998; Ireland, Hitt, & Vaidyanth, 2002; Lorenzoni & Ornati, 1988; Suen, 2002). There is little doubt that the positive examples of successful alliance practitioners have encouraged others to form new alliances (Gomes-Casseres, 2003b).

Definition of Constellation Alliance

For the purpose of this paper, the definition of a constellation is a cooperative network of firms that works to improve the profitability of industries through joint action on factors that can reduce industry attractiveness. As in the previous discussion, there are rewards for many industries that are currently involved in constellations. Porter (1986) notes that there is a competitive advantage to integrating activities within industries on a worldwide basis. In fact, he supports the creation of competitive enhancing groups, but refers to them as "clusters" and identifies them as regional forces rather than global networks (Porter 1998, 2000).

Membership in a constellation alliance may be the current solution for the survival of industries that must compete with giant networks and small worlds. Considering that "cliques" or constellations can create value for their members and are likely to become stable, many firms from a variety of industries will use this strategy to compete (Rowley, Baum, Shipilov, Greve, & Rao, 2004). Cable & Wireless (Gomes-Casseres, 2003) proclaimed a few years ago, "The corporation is dead. Long live the federation." However, much depends on factors within and outside the "federation" to keep it alive.

To date, only a handful of industries have embraced this trend as the best method for them to compete in the current global economy. However, this number is on the increase as alliance constellations have proliferated in more and more industries (Baum, Rowley, Shipilov, & Chuang, 2005; Culpan, 2002; T. K. Das & Bing-Sheng, 2002; Dussauge & Garrette, 1995; Garcia-Pont & Nohria, 2002; Gomes-Casseres, 2003b; Lazzarini, 2002a; Lorenzoni & Ornati, 1988; Suen, 2002; Uzzi & Dunlap, 2005b). As firms look for new ways to compete, ‘constellating’ is expected to continue to be a popular strategy for managers.

There are two objectives to this research. The first is to assemble and synthesize from the available literature a typology model of constellations based on Porter’s Five Forces (Porter, 1980; M. E. Porter, 1998) and a Sixth Force (Carr, 2006). The collective strength of these forces determines the ultimate profit potential of an industry. Previous literature describes some industry level impacts of specific constellations, but research is sparse to non-existent in predicting which industries might benefit from each type (Culpan, 2002, p. 89; Gomes-Casseres, 2003). Particular focus will be given to the Sixth Force, as it is the least researched and the most current.

The second objective of this research includes speculation as to which industries might benefit most from each constellation type based on levels of each force such that there should be a predictable fit between industry attractiveness, constellation types and the Six Forces. The exploration of such a fit with respect to the Sixth force – the public interest - is the foundation of the research paper.

The contribution of research on constellations is vital, not only for alliance strategy, but also for management to evaluate the real utility of current trends and fashions in the alliance literature. Senior executives and managers should be asking themselves before they organize if this is a viable option for their firm in an industry (Gomes-Casseres, 1994). Strategy and policy should be developed around the experiences of both successful and unsuccessful constellations within industries (Gomes-Casseres, 2003), and not only the characteristics of firms. As the complexity of products and services increases due to production and delivery in international joint relationships, an awareness of who is connected with whom and how they are functioning will be crucial to decision-making processes at all levels of the corporate environment.

This “model for constellation development” fills a gap in the literature by developing theory with respect to industry complementarity. It will contribute information that should allow sceptical organizations from other industries to evaluate the possibility of global networks. Improved clarity from currently confusing emergent business strategies will assist industry leaders in their decision-making process. Understanding the factors contributing to the advantages of membership could influence whether it would be beneficial or not to join or create a new “world”.

Industry Attractiveness

Recapping briefly, according to Porter (1980, 1998), the attractiveness of an industry depends on five basic competitive forces that determine the attractiveness of a market. These forces are described as: threat of entry, power of customers, power of suppliers, threat of substitute products, and industry rivalry. A sixth force (Carr, 2006a) describes the public interest as a force of competition for industry profits. As the advocacy of unions waned and as governments embraced free-market capitalism, the public will also changed. The public applies increasing pressure on industries, demanding some portion of market profits be put to the general good rather than delivered to shareholders. As the public interest becomes an economic interest, it must be included in strategic decision making in companies and industries. This force will be a focus throughout the paper as its role as a determinant of industry profitability is linked to the formation of Social Action and Legitimation Constellations.

This research creates a typology of constellations based on six forces of industry attractiveness (Porter; 1980, Carr, 2000). It will argue that these constellations form in response to the six forces and a hypothesis will be developed and tested using the Sixth Force to explore if a specific type of constellation is being created in order to ameliorate this force.

Force One: Bargaining Power of Suppliers

For the most part, suppliers with low bargaining power are good for business. Strategy managers might ask if their business will be dependent on monopoly suppliers or not. Supplier groups can influence the level of competition when they are more concentrated than the industry they sell to and when they are dominated by a only a few companies (Porter, 1980). This can result in price control or a reduction in the quality of purchased goods and services. Also, if a particular industry does not represent a significant fraction of sales, suppliers could exert more power. The industry could become a more important customer of the supplier by increasing the number of sales or having access to more customers.

A constellation alliance of industry members would allow a pooling of resources so they would not be so dependent on one supplier and the supplier would not have as much control. It could gain power relative to a large seller by increasing its market share through a network alliance. This would reduce the power of the supplier. The possibility of attracting skilled labour or knowledge, and reducing costs through consolidating resource needs, would interest many firms which might not ordinarily be a competitor in this area.

Factor Network Constellation

An industry is attractive or unattractive in terms of industry profit margins depending upon how powerful the companies that supply its major raw materials are. For example in an industry in which the suppliers are large and concentrated (like petro-chemical companies that produce raw plastics for small manufacturers of plastic products), individual producers in the industry will have little or no ability to bargain for reduced raw materials costs. However, if a constellation of companies were to be formed that would consolidate orders to a size that would make a difference to the suppliers it would create more bargaining power.

Force Two: Bargaining Power of Buyers

The bargaining power of customers (buyer group) competes with firms for industry profits by forcing down prices, demanding higher quality or more services and playing competitors against each other (Porter, 1980). A company can improve its strategic posture by finding buyers who possess the least power to influence it adversely.

Bargaining power of buyers is greater when there are 1) a few dominant buyers and many sellers in the industry, 2) products are standardized and 3) the industry is not a key supplier group for buyers. A company can sell to powerful buyers if it is a low cost producer in its industry or if it has unique features. Selecting "good" buyers through product differentiation can decrease buyer power. For instance, in the clothing industry, most producers, with the possible exception of haute couture designers, have been unable to differentiate their products enough to increase switching costs that would lock in buyers (Porter, 1980). This is also the case in commodities (like oats or pulp for paper) where it makes no difference to strong buyers which producer they choose.

Producer Network Constellation

"Cluster firms" or constellations can often discern buyer trends faster than isolated companies (M. E. Porter, 1998). With a large member group, an industry could choose an optimal combination of customers through differentiation and high switching costs which would decrease buyer power. Different buyers may require differing levels of customer service, desired product quality or durability, needed information in sales presentations, etc. These differing purchasing needs could be more aptly met through several firms grouped together, than by one. For example, the Italian knitwear industry has reduced buyer power by consolidating producer capability in order to supply all of the needs of large buyers such as Benetton. This limits Benetton's alternative sources for choices and creates more diverse products and prices for the customers, while decreasing costs for the firms and making the industry more attractive.

Force Three: Threat of Substitute Products or Services

Substitutes are products or services from other industries that are not identical to industry products but from which customer can receive similar value. The presence of substitute products can lower industry attractiveness and profitability because they limit price levels (Porter, 1980; M. E. Porter, 1998). The threat of substitute products depends on the buyer's willingness to substitute, the price, the performance and the costs of switching substitutes. The competitive advantages of an industry are insecure, or contestable, if the value delivered by their product can be duplicated (Ghemawat, 1986). For example, train and bus travel will be substituted for airline travel by consumers whenever the price / convenience trade-off becomes too lop-sided. Unless an industry can upgrade the quality of the product or differentiate it somehow, it will suffer in earnings and possibly, in growth. Upgrading a product will happen more quickly if a firm is part of a network in which can access knowledge and resources from a large pool of information.

Substitutions come into play rapidly if there is rapid development increases in industry substitutes which cause price reduction or performance improvements (Porter, 1980). Increasing substitution usually depresses profits and cuts into sales in an industry. These can be mitigated if there are pockets of demand in the industry that are immune or resistant to the substitute. Membership in a constellation allows more options for innovation in an industry because if there are substitutes in one area, there could be new development in another. A firm in a constellation could absorb decreased profits due to decreased costs from a successful substitute more easily than if it was on its own. A constellation would provide more resources and information about substitute trends so that strategic decisions could be made more quickly.

Innovation Constellation

Joining this type of constellation would provide three important ways to reduce the power of substitutes: 1) speed to market, 2) cost reduction and 3) more market access (Culpan, 2002; Silver, 1993). This often involves the sharing of R&D expertise, reciprocity of knowledge, management expertise and sometimes pooling of labour (Anand & Khanna, 2000; Baum, Shipilov, & Rowley, 2003; T. K. Das & Teng, 1998; Gomes-Casseres, 2003, 2003a, 2003b; Harbison, 1998; Lazzarini, 2002a; Lorenzoni & Ornati, 1988; Pett & Dibrell, 2001; Porter, 1980; Uzzi & Spiro, 2005a).

If firms share their resources, they will bring new products from inception to market more quickly. This can be a crucial factor in an industry where rapid change is the norm and can mean the difference between being first and being imitated. This constellation would attract firms that wish to develop innovative products, but do not have the necessary resources to do so. They would seek out other partners to fill their technological, knowledge and resource gaps. As firms gather allies, they can compete against technological substitution from outside the industry (Gomes-Casseres, 1997).

A firm within a constellation or cluster can more rapidly source the new components, services, machinery and other elements needed to implement innovations (M. E. Porter, 1998). The complementarities involved in innovating are more easily achieved among multiple participants. They can experiment at a lower cost and can delay large commitments until they are assured that a new product or process will pan out. This is an important factor for delaying substitutes attempting to imitate new or superior technology (Ghemawat, 1986).

The presence of substitute products can also lower industry attractiveness and profitability because it limits the price levels. Even a company with a strong position in an industry unthreatened by potential entrants will earn low returns if it faces a superior or lower-cost substitute product. Strategy demands coping with this force to minimize its effect. An Innovative Constellation would attract industries who sought to diminish this force.

By integrating components of more than one firm, they could then sell through multiple channels, reduce costs by sharing R&D resources, and expedite the output of a product that would have taken much longer and been more costly to produce on their own. It would also encourage the partners to reinforce each other in current markets which would assist in offsetting competitors with substitute products.

Force Four: Threat of New Entrant

Force Four describes industry characteristics that deter new firms from entering into a particular industry (Porter 1980, 1986, 1998). New entrants to an industry bring new capacity, the desire to gain market share, and often substantial competitive resources. It is in the interest of industry firms to initiate obstacles to make entrance difficult in order to control the industry.

Sources of entry barriers are economies of scale, product differentiation, switching costs, cost advantages, access to distribution channels, capital requirements and government policy (Porter 1980, 1985, 1998). I will focus in particular on ways in which constellations can deter entry by simulating the effect of much larger organizations.

Economies of scale deter entry by forcing entrants to come in at a larger scale than smaller companies can achieve. The presence of economies of scale always leads to a cost advantage for the large-scale firm over small-scale firms. One large organization can spread the fixed costs of operating over a large number of units. However, if smaller organizations participate in a constellation network, they gain equal advantage by pooling resources to reduce operating costs (Baum, Shipilov, & Rowley, 2003).

With more partners, economies of scale created in one part of the alliance can sometimes outweigh diseconomies in another. Partners need each other as they have complementary assets and skills which provide advantage they could not accomplish on their own (Baum, Shipilov, & Rowley, 2003). The interfirm network smoothes exchange by providing rules and understandings that limit costs and uncertainty (Rowley, Baum, Shipilov, Greve, & Rao, 2004).

Organizations join this type of network to cross geographic borders and expand markets world wide. Where it might be difficult and costly to expand on their own, a firm could join an international constellation that already has set up global networks and gain market share they ordinarily could not attain (Dussauge, Garrette, & Mitchell, 2000). For example, constellations in the airline industry such as the Star Alliance and OneWorld allow individual firms to share resources such as baggage handling and food service and gain access to global markets that would have been too costly to develop on their own.

Access to distribution channels creates a threat when new entrants need access to distribute their product and established firms have control of those channels (Porter 1980, 1985, 1998). Constellations may act to limit access to global markets and their control of shared channels can create substantial barriers to entry**.**

Scale Agglomeration Constellation

Firms in this type of constellation seek to create barriers preventing global positioning, access to markets, and product dissemination at competitive costs. Joint participation is often motivated by the need to achieve production efficiency, share R&D risks and to gain access to new markets and skills (Kogut, 1989; Lorenzoni & Lipparini, 1999). The number of partners is less important than the type and size of each partner (Gomes-Casseres, 2003). Like the firm, the interfirm network with the lowest cost producer is the one with the largest, most efficient facilities (M. E. Porter, 1998).

Consolidating a fragmented industry can have high payoffs because the costs of entry are usually low and there tend to be relatively weak competitors (Porter, 1980). If an impediment can be removed which is causing the fragmentation (i.e. high transportation costs, absence of learning curve, absence of economies of scale, etc.) the industry could evolve with the assistance of a network alliance. This would improve business prospects for all industry players.

A scale agglomeration constellation might improve the attractiveness for this type of industry if it encounters a significant experience curve, which is contributing to the fragmentation of the industry. A characteristic of an industry in this situation would be one of loosely embedded ties and the need for more experience and knowledge.Well-organized networks develop methods for moving information, routines, and other resources that enable competitive advantage (Baum, Shipilov, & Rowley, 2003; Ghemawat, 2003; Gomes-Casseres, 2003a, 2003b; Ireland, Hitt, & Vaidyanth, 2002; Lazzarini, 2002a; Uzzi & Spiro, 2005a).

Force Five: Industry Competitors and Internal Rivalry

Many tactics can be used by competitors in the industry such as price competition, advertising battles, product introductions and increased customer service or warranties (Porter, 1980). As firms are mutually dependent within an industry, what one firm does can cause a reaction from another. When the industry is highly concentrated or dominated by one or a few firms, the industry attractiveness is stronger. Given the fact that the success of constellation alliances of all types is critically dependent upon moderate levels of inter-firm rivalry, this force is particularly interesting.

Constellations can allow potential competitors to act collectively to increase prices or apportion demand which influences profit potential within its industry. Alternatively, where such behaviours could occur with catastrophic legal implications for the industry, constellations may act to create restraint within the industry resulting in overall benign effects such as encouraging high levels of quality and customer service across the industry.

Mutual Forbearance Constellation

A group of firms that has a large collective share, targets its efforts to distinct market segments and achieves high product differentiation is likely to be more insulated from inter-group rivalry (Porter, 1980). This insulation from rivalry will increase the ability to maintain profitability. Such industries will be more insulated from rivalry and therefore able to maintain profitability.

An industry with a history of mutual forbearance would be attractive to this constellation type. Mutual forbearance occurs when two or more competitors, operating in multiple common markets, have sufficient resources to pose a threat to each other, but decide to cooperate instead (Golden & Ma, 2003). An industry condition would be reciprocal dominance among rivals across markets. This type of constellation would encourage the use of mutual forbearance to diminish the power of internal rivalry by acting in the same way that large multi-connected firms such as chains and franchises do across multiple markets that are often spatially defined.

Types of industries that would be attractive to this type of constellation would be those with less maturity (as that can affect industry growth), alliance experience, specialties in technological innovation, above average profits, a brand name, similarity (but small) in size and product differentiation (Porter, 1980). Such differentiation reduces the likelihood of conflict in the group and creates beneficial, mutual dependence (Rowley, Baum, Shipilov, Greve, & Rao, 2004).

The Mutual Forbearance Constellation behaves in ways that are best for the industry (hold up prices, preserve product quality, maintain high levels of customer service, (Porter, 1980). The leader may see itself as the protector of the industry and monitors competition closely. Small firms would be attracted to this type of constellation because they would have large rivals and would seek allies to nullify their disadvantages (Gomes-Casseres, 1997).

Force Six: Public Interest

To control this force, an industry would pursue initiatives to shape the public's perceptions and demands while serving its own strategic interests in other areas. A constellation that speaks "on behalf of the industry" may be seen to be less self-interested and may also be able to create the impression of careful stewardship of resources or mitigation of damage in primary industries such as forestry or mining. In many cases, this force does encourage industries to become more socially responsible. For example, the forestry and mining industries have been in the public eye for some time and have had to create constellations to prove to the public that their industries are good stewards of the earth. Many of these actions have resulted in more socially responsible behaviour. Factors influencing industry attractiveness under this force would include characteristics such as having production processes that are seen as ecologically risky (fishing), having products that are considered a health hazard (tobacco), or having a poor reputation for working conditions (mining).

Social Action and Legitimation Constellation

A Social Action and Legitimation Constellation would interest organizations and industries who want to pool resources in advertising, technology and knowledge to address concerns in areas of public interest that would affect their industry by creating a more positive image. Industries may also wish to use alliance formation to actively intervene in an industry value chain to allow final users to ‘pull-through’ social initiatives taken by the primary producer. For example, the Forestry Stewardship Council has mechanisms in place that track wood from the time a tree is cut down until a 2x4 reaches the shelf at Home Depot to demonstrate that their products are coming from sustainably managed resources. Smaller companies would benefit by having the resources available to them to implement the necessary “social responsibility” requirements to enhance their reputation. Given its importance to this project, the Public Interest is discussed in greater detail below.

The power of the six forces can thus be seen as an invitation for managers to consider constellation formation as a strategy to make their industries more attractive. *Table 1* summarizes the forces and the strategic results that managers might reasonably take into account in their decision making and planning.

Table 1 The Six Forces and Constellation Types

Forces	**Characteristic of Force**	**Constellation Type**	**Strategic Result**
Force One	*Suppliers* retain high bargaining power	*Factor Network Constellation*	Industry buyers jointly bargain for raw materials
Force Two	*Customers* have high bargaining power through limited number of buyers	*Producer Network Constellation*	Industry producers consolidate capacity to serve customers
Force Three	Increased number of *substitute products*	*Innovation Constellation*	Upgrades product quality and differentiation
Force Four	Prevents *new entrants* by creating obstacles	*Scale Agglomeration Constellation*	Forces entry at a larger scale
Force Five	*Increased rivalry* and competition reduce profitability	*Mutual Forbearance Constellation*	Rivalry is reduced by grouping trusted partners
Force Six	*Public interest* affects decision- making and profitability	*Social Action and Legitimation Constellation*	Manages public image and polices actions of industry players

Adapted from Porter, 1980.

The Sixth Force: Public Interest

Although some have argued for the addition to Porter's Five Forces of such factors as complementors that describe companies selling products that complement the product of another company; i.e. desk top printers and digital cameras (Brandenburger & Nalebuff, 1995) and the non-market environment of private contract agreements (Baron, 2006), most references support Carr's notion of a Sixth Force based on the relative power of other stakeholders such as governments, local communities, creditors and shareholders (Wikpedia, 2006a).

Nicholas Carr's (2006a) addition to Porter's Five Forces suggests there is a missing force industries must reckon with. The literature is extensive on Porter's Five Forces, but Carr's proposition of an additional force is very current and both the backlash and feedback encompass mixed results. As is pointed out on a blogging website (Carr, 2006b), "blogging" itself is an indication of the public's interest in expressing an influence in all areas of life, including business. Strategist's websites describe mostly support for Carr's argument (Bess, 2005; May, 2005; Sarkar, 2006). However, there are those who believe "let Porter be Porter" and disagree with the idea of adding a force to Porter's theory (Hunter, 2005a).

The Sixth Force theory states that we are in an era of free-market capitalism and, with the power of unions waning, the public has inherited the responsibility as advocates that was not necessary when Porter presented his Forces theory in 1980. As a result, the public will has replaced that void via ad-hoc committees, activism, and non governmental organizations (NGO's) demanding that some portion of market profits be put to the general good. Since then, social responsibility in firms and industries has become a necessary part of strategy planning in order to address this new demand.

The public is devoting more time and attention to examining social responsibility within industries; especially with the recent acknowledgement of “global warming”. Since they must be their own advocates for change, interest groups and the Internet keep the public informed on global happenings within industries. The public has developed a significant voice which industries must now take into consideration with the rest of the five forces. It definitely has become a major force in the U.S. financial marketplace (Mitchell & Larsen, 2006).

Social responsibility actions of a firm can promote positive acceptance of an organization, thus increasing its competitive position in relationship to its industry rivals (Murray & Montanari, 1986). Murray defines it as a “product” which can be evaluated and justified on a cost-effectiveness basis, and therefore, has an impact on the success of the firm in the marketplace. He proposes that marketing social responsibility will create public support towards socially responsible firms and an opportunity to achieve industry preeminence. Using a constellation of social responsibility to enhance the public view would position the industry in a more positive light.

As the public interest plays a much larger role in markets, it has become more difficult for companies to manage. In the investment industry, social investors in mutual funds, pension funds and other portfolios are becoming involved in shareholder advocacy in record numbers. They actively file resolutions and engage in dialogue to pressure companies to become more responsible on a particular social, environmental or corporate-governance issue (Forum, 2006). This forces a higher level of accountability to all of their stakeholders, which ultimately gives the public more power—a force.

One view is that NGO's (non-governmental organizations), activist shareholders and SRI's (Socially Responsible Investors) are in an ethics crusade which could actually hurt the cause for which they are fighting and could lead to greater conflict; especially for developing countries, smaller enterprises and the poor (Kapstein, 2001). Alliances of consumer groups, socially responsible investors, labour unions, environmentalists, and human rights activists—based on the rich countries' values—are on the attack against multinational firms. The Internet and news media enables campaigning against companies they deem unacceptable. It has proven to be a very effective strategy as many company executives are forced to reconsider their operations in many important instances.

Kapstein (2001) declares that executives still have a responsibility to their mainstream shareholders and to society to "bring the self-declared ethicists to heel when necessary instead of caving in to their demands". But he agrees that the corporate ethics crusade is not likely to disappear, and is gathering momentum. Many corporations are embracing the promoters of CSR (Corporate Social Responsibility) in fear of being a target for their discontent. As a result, there is a high price tag for improving environmental quality and working conditions. For instance, "the GAP" spends $10,000 a year to hire independent monitors for just one of its factories in El Salvador; which smaller companies could not afford. Forming a constellation alliance network would decrease the power of the public ethicists while allowing smaller firms to compete against larger ones within the industry.

Steve Milloy, the Cato Institute scholar, wants to interfere with the trend of Socially Responsible Investments (Indexuniverse, 2006). In fact, he is promoting a new mutual fund that fights shareholder activism on all fronts. He is tired of SRI investors using their equity stakes to advocate for changes in how companies should do business. His mutual fund, America Free Enterprise Fund, promises to defend free enterprise by shooting down activist proposals on a variety of issues. The funds will actively screen for companies that "have suffered" or "could suffer" from business harm as the result of shareholder activism.

So far, it has been a losing battle for Milloy, as overall SRI continues to increase at record rates and his fund is not showing significant gains. Friedman (1970) agrees with Milloy. He does not deny the existence of social problems but claims SRI supports theft and political subversion by diverting money from shareholders pockets.

Carr (2006a) contends that public pressure in one form or another is taking a financial toll on firms and is becoming a threat to industry growth and profitability. The public today directly influences all three of the factors Porter describes as determining corporate returns: pricing, costs and investment (Carr, 2006a). This force brings as much pressure as suppliers or customers or rivals. For example, public pressure can reduce or raise the prices companies are able to charge in local markets (i.e. Microsoft vs. Linux and organic produce vs. regular market produce). Increased costs are often a response to public influence through augmenting advertising costs, hiring more workers in PR or research, or canceling/changing products. Investment of capital as a corporate response to public pressure is common (i.e. changing sourcing strategies in developing countries, retrofitting plants to reduce emissions, etc.).

Clearly, public interest has become an economic interest and can no longer be segregated from strategic decision-making. If public interest can be viewed as an expansion to Porter's framework, then it must be an essential concern of directors, CEO's and other business strategists. Few strategic managers account for the public interest when they analyze their industries or make future plans. This task usually becomes the responsibility of other sectors within the firm instead of being included in management's primary profit-making mission.

Addressing the economic consequences of civic pressures is not an inviting task. It requires making tradeoffs that will inevitably alienate some constituencies and could involve influencing or even changing the public's views (Carr, 2006a). However, managers need to recognize that the public interest is now as significant a force as an economic force - and hence must be a core concern of business strategy.

Socially Responsible Investments

Stakeholder investment data has been used in management theory in the past 20 years and is widely used in determining social responsibility within firms and industries (Griffin & Mahon, 1997; Harrison & Freeman, 1999). However, it has its limitations. The use of market return analysis that solely depends on investors' evaluations may not be sufficient (McGuire, Sundgren, & Schneeweis, 1988). Moreover, those vested with pecuniary interests might be quietly manipulating public perception of social causes to their advantage (Johnsen, 2003). But these issues aside, the premise of SRI is that SRI fund managers should punish firms that are deemed unacceptable through using positive and negative screens that assess social responsibility. Firm stocks are then rated and either eliminated or included in SRI fund portfolios accordingly. And while this action was once viewed as an insignificant influence, this has changed dramatically.

The 2005 Report on Socially Responsible Investing Trends in the United States (Forum, 2006) supports Carr's suggestion that there is a strong force within the public sector that must not be ignored in the field of investment strategy. Socially responsible investment assets grew four percent faster than the entire universe of managed assets in the United States. Assets rose more than 258 percent from $639 billion in 1995 to $2.29 trillion in 2005 (*Table 2*). In fact, in the past 10 years, socially and environmentally responsible investing has grown at an average annual rate of 26 percent to reach $2.3 trillion in total assets under management in 2005. Nearly one out of every ten dollars under professional management in the United States today is involved in socially responsible investing. These changes are a direct result of public interest.

Table 2. Socially Responsible Investing in the US 1995-2005

Socially Responsible Investing in the US 1995-2005 (in Billions)	**1995**	**1997**	**1999**	**2001**	**2003**	**2005**
Social Screening	$162	$529	$1,497	$2010	$2,143	$1,685
Shareholder Advocacy	$473	$736	$922	$897	$448	$703
Screening and Shareholder	n/a	($84)	($265)	($592)	($441)	($117)
Community Investing	$4	$4	$5	$8	$14	$20
Total	$639	$1,185	$2,159	$2,323	$2,164	$2,290

Adapted from Social Investment Forum, 2005.

The recently published report from the Social Investment Forum collected data from the past ten years and concludes: "over the past decade, SRI (Socially Responsible Investments) has become a force within the US financial marketplace" (Forum, 2006, p. v). They support this conclusion based on the following facts:

1. In regards to the number and diversity of products and screens offered, socially and environmentally screened mutual funds have experienced substantial growth.
2. Social and environmental factors are increasingly being incorporated into mainstream money management investment.
3. Growing numbers of shareholder resolutions filed on social, environmental and corporate-governance issues rose dramatically over the last ten years. *Shareholder advocacy produced tangible changes in corporate policies and practices.*
4. Community investing is experiencing significant growth in assets spurring industry developments that are making it easier for many types of investors to participate in this expanding field.
5. Socially and environmentally responsible investing is developing and increasing in different regions of the world.

Not only are the largest SRI markets like Canada, Europe, Australia and Japan increasing socially and environmentally responsible investing, but emerging markets like Latin America, South Africa and the Asia Pacific region are participating in this movement as well (Forum, 2006). In the past, SRI was only popular in the US, but today it is a robust and growing field in all regions. Demand is growing for information and resources that would assist in supplying SRI awareness and development in markets around the world.

For example, the institutional investors at Ceres (a mutual funds group) who manage $3 trillion in assets, are pushing for insurers to become advocates on climate change and risk, just like they pushed successfully in the past for fire codes and auto safety regulations (Lavelle, 2006). In fact, a network was formed (INCR) to support further analysis of climate risk by the financial community which coordinates engagements of its members with companies and policy makers on climate risk. INCR working groups provide a forum for its members to combine their knowledge of this complex and rapidly changing issue, to ensure that its members and the public gain access to vital information. The members control over $800 billion in assets. This network represents a huge public force and related firms and industries are reacting to comply or cooperate. This is a clear example of Carr's Sixth Force in action.

Hypothesis: The number of organizations that belong to a Social Action and Legitimation Constellation in an industry would be expected to be positively related to public interest in that industry.

Research Methodology

In the previous sections, the development of constellation network alliances was explained as a possible strategy to respond to each of Porter's Five Forces. The Sixth Force presented by Carr (2006) constitutes yet another force: public interest. The collective strength of these forces determines the ultimate profit potential of an industry. The development of constellations allows firms to jointly address unattractive features of their industry.

In its empirical test, this project deals specifically with the hypothesized relationship between the need for firms in an industry to protect themselves against the Sixth Force and the presence or absence of a Social Action and Legitimation Constellation in that industry. This research will use the negative screens developed by socially responsible investment funds as a method of determining how public interest affects a given industry. The objective is to develop a list of industries that emerge as high public interest industries ("at risk" industries) due to the reputation of their product or the undesirable process of acquiring the product. In the second phase of the research, a search is conducted for the presence/absence of Social Action and Legitimation Constellations within those "at risk" industries.

Using SRI to Develop the Public Interest Sample

In the past 10 years, researchers in the area of social responsibility have increased significantly indicating that the question appears to be gaining momentum (Margolis & Walsh, 2003b). In these studies, half of the results pointed to a positive relationship between corporate social performance and financial performance. Margolis & Walsh

(2003) analysed 127 studies from researchers to support this connection. *Table 3* shows measurements used in many of these studies. Using multiple data sources to analyze social responsibility within firms and industries decreases bias and ameliorates the limitations within each measure (Griffin & Mahon, 1997). This paper will imitate those measurements employed in previous research by using investments (mutual funds) and ratings (KLD and Calvert Social Indices) to rate industries for corporate social responsibility.

Table 3. Measurements Used in Social Responsibility Studies

Type	**Number of studies N=120***	**Used in this study**
KLD and other evaluations	13	yes
Mutual Fund Screens	20	yes
TRI (Toxic Report Inventory)	4	no
Disclosures	20	no
CEP (Council on Economic Priorities) Current info not available	10	no

Adapted from Margolis & Walsh, 2003
**some listings use multiple measurements*

This descriptive research uses secondary data based on the following steps to develop the industry sample for researching constellation presence:

1. A list of common negative screens used for social responsibility was generated by examining multiple mutual fund screening companies.
2. KLD and Calvert Indices for social responsibility were the two mutual fund companies chosen for this research, as they typified the categories used by other companies (*Table 4*) and are often used by management researchers (*Table 3*).
3. The exclusionary screens themselves are coded within the Industry Classification Systems and are then broken down into sub-categories. For example, Tobacco, gambling and nuclear power are listed as primary industries in the NAICS (the

North American Industry Classification System). Between the two mutual screens, a sample size of 11 industries (exclusionary screens) was identified as appropriate for this research (*Table 6*). This list is described as “at risk” industries as they are vulnerable to public scrutiny, and are referenced as targets by shareholder advocacy on their websites and in their SRI reports.

4. From this list, the specified industries were matched with general industry groupings designed by the US Census Bureau (NAICS industry classification systems) and the Standard & Poor’s international classification system (GICS) in order to acquire the industry sub-categories necessary to look for constellations of firms within the 11 identified industries.
5. Sub-categories were identified from the 11 primary “at risk” industry categories (*Table 5)*.

In order to further explain the methodology of the research, definitions of the variables used in the analysis are necessary.

Definition of Screens

Applying criteria to differentiate companies in the investment process is called “screening” (KLD, 2006). It applies to both the selection of investments and the identification of companies presenting issues in which an investor wants to support. The act of screening can involve criteria which are financial or non-financial. All investors apply screens to their investments, but they are many and varied. Social screens are non-financial criteria which relate to business activities or products. They involve the investigation of a company’s characteristics and behaviours which investors want their portfolios to meet.

Since the early 20th century, “exclusionary screens” have been used to bar classes of businesses based on the nature of the goods or services they produced (KLD, 2006). The earliest screens eliminated alcohol and tobacco companies from portfolios held by investors who believed drinking and smoking were sinful. Many current religious groups use social screens in their investments for similar reasons. All screens rely on research for implementation and involve significant analysis. Social investors also screen stocks on non-industry specific qualitative social criteria such as “employee relations” or “corporate governance” as well as product screens that exclude particular industries (*Appendix A*). Such screens are problematic for the use of this current research as they transcend industry boundaries. But as I discuss with respect to future research directions, the fact that trans-industry constellation constellations do exist, to address such issues implies an application of the basic theory to a higher level of analysis.

Several types of screens are used by SRI mutual funds firms and they vary greatly from one company to another. *Appendix B* displays a list of the 15 most popular mutual fund indices and their methodology for screening. However, the majority of investment companies have approximately seven primary negative categories that are used regularly (*Table 4*). Most of the mutual funds listed in *Appendix B* included these basic screens (industries) in their methodology process as well. However, for the purpose of this research, two popular mutual fund companies used in management research (Calvert and KLD) will be used.

Table 4 Most common screens used in mutual funds

Source	Controversial Business Issues	Social Issue Ratings
KLD	Alcohol Tobacco Gambling Adult Entertainment Military Firearms Nuclear Power	Environment Product Community Corporate Governance Human Rights Employee relations Diversity
Calvert	Alcohol Tobacco Gambling Pornography Military weapons Firearms Animal welfare	Environment Product Safety and Impact Community Relations Governance and Ethics International Operations and Human Rights Workplace Indigenous Peoples'Rights

Adapted from KLD.com, Calvert.com

Shareholders will often choose their investments based on these reports. As Walden Asset Management states (Forum, 2006):

> *"over the past decade, SRI has become a major force in the U.S. financial marketplace…a growing number of institutional investors are embracing the philosophy of active ownership with the companies in their portfolios…and community investing is surging at a meteoric rate as an option for investors who want to see their assets make a direct and tangible difference in the U.S. and around the world."*

Historically, the use of screens to assess corporate SR behaviour is a popular data source for researchers (Johnsen, 2003; Margolis & Walsh, 2003a; Murray & Montanari, 1986). The social performance scale is highly correlated with overall corporate reputation

(Harrison & Freeman, 1999). Empirical evidence reiterates that firms committed to social and environmental issues that are important to their stakeholders, have superior financial performance and superior reputations (Verschoor & Murphy, 2002).

Screens and Mutual Fund Ratings

Rating methods used by several major research institutes develop social indices to measure sustainable behaviours in companies and often list them, according to best and worst. The Fortune rankings (Forum, 2006) and KLD rankings (KLD, 2006) are popular among many management researchers (Griffin & Mahon, 1997; Harrison & Freeman, 1999) and are considered accurate measures of corporate social performance.

Other accepted references for assessing industry sustainability are: Social Investment Forum, Social Funds (Funds.com, 2006), Calvert Investment Group (Calvert, 2006), the Global 100 List (Innovest, 2006), Reputex (Reputex, 2006) and Ceres (Ceres, 2006). Each of these groups used extensive research to screen industries and companies for social responsibility. The following two SRI fund indices will be used to identify the "at risk" industries in this paper.

Calvert Social Index

The Calvert Social Index takes the 1,000 largest companies in the US and ranks them based on a social audit in four areas: products, environment, workplace and integrity (Calvert, 2006). There are 627 companies in the index rated in specific categories. This fund uses positive and negative screens to decide who they will represent in their portfolio. If a company doesn't meet the criteria, the company is refused and stockholders usually trust the index. It depends on seven areas which it deems the most important for screening categories: alcohol, animal welfare, environment, gambling, tobacco, firearms/weapons and pornography.

KLD Social Index

The KLD financial analysis firm created an index which assesses eight dimensions of corporate social performance, using largely objective sets of screening criteria (Griffin & Mahon, 1997; Harrison & Freeman, 1999). KLD also analyzes community relations, diversity employee relations, human rights, product quality and safety, environment and corporate governance (KLD, 2006).

It first excludes from consideration any groups involved in any of the following products or industries: alcohol, tobacco, firearms, gambling, nuclear power and military-weapons. KLD excludes those that fail these exclusionary screens regardless of other social and environmental attributes.

The KLD LCS, like the Calvert Social Index, strives to support positive social records that, overall, are *acceptable to social investors*. KLD may remove a company at any time for reasons related to its social and environmental record, either because it violates an exclusionary screen or because it fails a qualitative screen (KLD, 2006). Carr’s Sixth Force of Public Interest decides which companies will be included and which ones will not. Using the screens deemed important by the stakeholders dictates the investment policy and, ultimately, the attractiveness of the industry.

The list of screens described in *Table 5* is adjusted in order to develop a final list of “at risk” industries used later in the analysis. One category (Firearms/Weapons) is divided into two categories: defence/military weapons and firearms, as they are often viewed as unique industries. Nuclear power/weapons are separated into two categories as each is a separate industry and both are screened by Calvert and KLD, although it is only a limited screen in Calvert. “Contraceptives” was eliminated because even though it is used as a screen, it is not listed as an industry. *Table 6* displays the eight industry sample that will be used in the final analysis as industries for “public interest”.

Table 5 Negative Screens Used by Calvert and KLD

Negative Screen	**Calvert**	**KLD**
Alcohol	X	X
Tobacco	X	X
Gambling	X	X
Military weapons	X	X
Firearms	X	X
Nuclear Energy	X	X
Adult Entertainment	X	X
Environmental Issues	X	X
Animal Welfare	X	
Nuclear Power		X
Contraceptives		X

Table 6 Industries “at risk” for public interest

Screen	KLD	Calvert	Industry Sample For this Research
Alcohol	X	X	X
Gambling	X	X	X
Tobacco	X	X	X
Military Weapons (including nuclear)	X	X	X
Firearms	X	X	X
Nuclear Power	X	X	X
Adult Entertainment	X	X	X
Animal Welfare		X	X

Each of the exclusionary screens is described in detail by KLD and Calvert and they illustrate sub-categories for each screen (*Table 7*). These sub-sectors are used to investigate whether a similar sub-sector exists within a general industry classification index. They are then matched to an industry sub-sector in order to determine the specific industry categories in which potential constellations might exist. Each of these screens and/or their sub-categories must be listed as an industry in both the NAICS and the GICS (to be discussed in the next section).

Table 7. Negative Screen Sub-Sectors

	Mutual Fund Groups	
	Categories of Screens	
Screen	Calvert	KLD
Alcohol	Manufacturers Reataurants that sell more than 20% alcohol	Licensing Manufacture Manufacturer of Products Necessary for Alcoholic Beverages Retailer Ownership BY an alcohol company Ownership OF an alcohol company
Gambling	Equipment Providers Own or operate casinos Have direct gambling involvement Receive revenues from gambling Operators of gambling	Licensing Manufacturer Supporting Products or Services Owner and Operator Ownership BY a gambling company Ownership OF a gambling company
Tobacco	Production	Licensing Manufacturer Manufacturer of Products necessary for Tobacco products Retailer Ownership BY a tobacco company Ownership OF a tobacco comp
Military Weapons	DOD weapons contracts Nuclear weapons	Manufacturer of Weapons or Weapons Systems Manufacturer of Components for Weapons or Weapons Systems Ownership BY a military company Ownership OF a military comp
Firearms	Production Manufacturers Nuclear Weapons	Manufacturer Retailer Ownership by a Firearms Company Ownership of a Firearms Company
Adult Entertainment	Production Market	Distributor Owner and Operator Producer Provider Ownership By an Adult Entertainment Company Ownership OF an Adult Entertainment Company
Nuclear Power	Limited screens	Ownership of Nuclear Power Plants Construction & Design of Nuclear Power Plants Nuclear Power Fuel & Key Parts Nuclear Power Service Provider Ownership BY a nuclear power company Ownership OF a nuclear power company
Animal Welfare	Animal Husbandry Biotech firms Consumer product testing Pharmaceuticals Food Industry (fast food) Pet stores Factory farms Circuses Zoos Media & entertainment	

Industry Samples

This research will examine industries using the following methods:

1. Two classification standards will be used for analyzing industry sectors and their sub-categories: 1) the GICS and 2) the NAICS.
2. The 8 “at risk” industries in *Table 7* that were divided into industry sub-categories, will be compared with the GICS (Global Industry Classification Standard) and the NAICS (North American Industry Classification System).
3. Sub-sections for each exclusionary screen/industry are compared with sub-sections within the two standard industry classification systems.
4. The process of collapsing the industry categories from a major industry level to a 2-digit category and finally, a 5/6-digit level, allows a comparison to be made between the negative screen sub-sections and the general industry sub-categories (*Appendixes C and D).*
5. These 5/6-sector categories will be the industries used to explore for public interest constellations (*Appendix E*).

GICS Industry Grouping (Global Industry Classification Standard)

The GICS was developed in response to the global financial community's need for one complete, consistent set of global sector and industry definitions that reflects today's economy and is flexible enough to change as the investment world changes (Poor, 2006). Standard & Poor's and Morgan Stanley Capital International (MSCI), two leading providers of global indices, jointly launched the Global Industry Classification

Standard (GICS) in 1999. It was created in response to clients' requests for GICS codes at the reporting line-of-business or "segment" level. It provides classification codes for the individual operating segments of a company. The purpose was to facilitate sector analysis on a global basis.

With this structure, every company is classified in a sub-industry and assigned an industry, industry group and sector based on its principal business activity. The eight digit GICS coding system is designed to adapt to the changing world, so as the global economy changes, sectors, industry groups industries and sub-industries can be added or redefined. These are levels that are examined for Social Action and Legitimation Constellations. The current system consists of 10 sectors, 24 industry groups, 67 industries and 147 sub-industries. The description for the sectors in the 3-digit category are limited, so to obtain a more complete description of industries that would fit the screening categories, another industry classification section was added, which is more specific.

NAICS Industry Grouping (North American Industry Classification System)

The NAICS is a six-digit system for grouping industries that provides for comparability among three countries (Canada, Mexico, and the United States) at the five-digit level *(Table 8)*, to provide for increased flexibility in the industry rating system (NAICS(b), 2006). Economic units that use like processes to produce goods or services are grouped together. It uses a similar method as the GICS, except that it is limited to North America.

Table 8. Industry Sector Digit Ratings

NAICS	
2-digit	Sector
3-digit	Subsector
4-digit	Industry Group
5-digit	NAICS Industry
6-digit	National

Adapted from NAICS Numerical List.

The NAICS (United States) is the official classification system used by the U.S. statistical agencies and is the culmination of a multi-year review based on economic classifications, business data users, and future information needs.

Canada and the United States agreed upon an industry structure and hierarchy to ensure comparability of statistics between those two countries. Canada and the United States also established the same national detail (six-digit) industries where possible, adopting the same codes to describe comparable industries. NAICS allows each country to recognize activities that are important in the respective countries, but may not be large enough or important enough to recognize in all three countries.

The NAICS codes include more groupings (*Table 9)* than the GICS (ten), but it includes many of the same categories, so the 2 groups were combined for the exploration of constellations within the “at risk” industries. Calvert included “animal welfare”, in its exclusionary screens, which is added to the industry list. KLD had two extra categories (contraceptives and birth control) which were eliminated due to the absence of information in the industry sectors.

Table 9. NAICS 20 industry groupings

11	Agriculture, Forestry, Fishing and Hunting	53	Real Estate and Rental and Leasing
21	Mining and Oil and Gas Extraction	54	Professional, Scientific and Technical Services
22	Utilities	55	Management of Companies and Enterprises
23	Construction	56	Administrative and Support, Waste Management and Remediation Services
31-33	Manufacturing	61	Educational Services
41	Wholesale Trade	62	Health Care and Social Assistance
44-45	Retail Trade	71	Arts, Entertainment and Recreation
48-49	Transportation and Warehousing	72	Accommodation and Food Services
51	Information and Cultural Industries	81	Other Services (except Public Administration)
52	Finance and Insurance	91	Public Administration

Adapted from NAICS Numerical Listing, Stats Canada.

Several steps were taken to find the appropriate industry that would fit the corresponding "at risk" industry. First, the 20 industry categories from the NAICS (*Table 9*) were investigated for the 8 exclusionary screen headings in order to find out to which 2-digit industry it belonged. For example, Alcohol encompasses 5 major industries (*Table 10*). The first two digits of the 6-digit number describes the industry type: 72 (Accommodations and Food Services), 31 (Manufacturing), 42 (wholesale/retail trade) (NAICS, 2006). Then, the appropriate 6-digit rating was added to find a more detailed description of the industry (*Table 11*).

Table 10. Industry categories for alcohol

Alcoholic beverage drinking places	722410		Drinking Places (Alcoholic Beverages)
Alcoholic beverages (except brandy) distilling	312140		Distilleries
Alcoholic beverages (except distilled spirits, wine) merchant wholesalers	424810	422810	Beer and Ale Merchant Wholesalers
Alcoholic beverages, brandy, distilling	312130		Wineries
Alcoholic beverages, wine and distilled spirits merchant wholesalers	424820	422820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers

Adapted from Stats Canada, NAICS

Table 11. Alcohol Industry sub-sectors

2- digit industry	**Six digit industry**
72-Accomodations and Food Service	Restaurants Hotels
31-Manufacturing	Wineries Distilleries
44-Retail Trade	Beer stores Duty Free liquor Liquor stores Wine shops
72-Drinking Places	Bars/Taverns Cocktail lounges Nightclubs

Adapted from Stats Canada, NAICS

In order to match the exclusionary screens ("at risk") industries with Social Action and Legitimation Constellations, the lower industry sub-sectors needed to be utilized. For example, the coding below in *Table 12* shows a 6 digit level of "112112". The first two digits represent the industry sector, "11", which is the industry sector for "Agriculture, Forestry, Fishing and Hunting". As you look further into the industry sub-sectors, you will find “feedlots” which is under the Calvert exclusionary screens for “Animal Welfare”. This industry segment would be investigated for any constellations or networks. The complete table of “at risk” industries and their matching sub-sectors can be found in *Appendix E for* NAICS Industries.

Table 12 6-Digit Industry Levels for NAICS

2002 NAICS	1997 NAICS	1987 SIC	Corresponding Index Entries
112112	112112	0211	Beef cattle feedlots (except stockyards for transportation)
112112	112112	0211	Cattle feedlots (except stockyards for transportation)
112112	112112	0211	Fattening cattle
112112	112112	0211	Feed yards (except stockyards for transportation), cattle
112112	112112	0211	Feedlots (except stockyards for transportation), cattle

Adapted from NAICS Numerical Listing, Stats Canada, 2006.

Identifying Constellations

The second part of this research sought to establish the presence or absence of Social Action and Legitimation Constellations in each of the industries chosen above. Where specific industries were weak in the areas of social responsibility, forming a constellation should help to defend them against the force of public interest. Therefore, when public interest in an industry increases, the probability of finding a Social Action and Legitimation Constellation in that industry should also increase.

Methods for Finding Constellations

Socially responsible constellation networks had to meet the following criteria in order to be considered as a valid Social Action and Legitimation network constellation:

1. In their website or trade journals, they had to describe and refer to “members” or “partners”, or “alliance partners”.
2. There had to be an explanation and definition of social responsibility for their group and it had to be obvious on the home page of the website or easy to find through a site menu or “search” engine.
3. A specific goal or “mission statement” concerning socially responsible behaviour, sustainability or environmental stewardship had to be described as an aspiration for all alliance members.
4. Transparency: A brochure/report or code describing exactly what socially responsible actions their group was engaged in; preferably this would be in the form of a Social Responsibility Report.
5. Shareholder advocacy/public interest had to be mentioned; especially in regards to satisfying public perception and/or shareholder interests.

Several avenues are used to track the presence of a SA&L (Social Action and Legitimation) constellation. Industry websites were the first step. For clarity, an example of a screen (“alcohol”) will be used to take the reader through the entire process of the investigation. The distillery industry is a 6-digit sub-industry (Appendix E). The distillery industry was first checked using 3 search engines: Google, MSN and AOL. The following steps are an example of how distilleries were tracked through the process:

1. Negative screen: alcohol
2. Look into NAICS classification system for that industry and its sub industries.
3. Match the sub-sectors of the negative screen of alcohol with NAICS classification system.

4. Manufacturing is in both under the 2-digit “31”—manufacturing (*Appendix E*).
5. The “beverage manufacturing” includes the distillery industry as a 6-digit sub-industry within that industry and under “alcohol”.
6. Search on Google for “distilled spirits”
7. Choose the “Distilled Spirits Council of the United States”, which takes you to the site: http://www.discus.org/
8. The top of the menu reveals a label tab that says “industry responsibility”. The home page also displays an advertisement: “enjoy our products responsibly”. The tab is an obvious place to find social responsibility.
9. When this is clicked, there is a statement of social responsibility and to the right there is a menu of 10 links involved in social responsibility, including a “Code of Responsible Practices for Beverage and Alcohol Advertising and Marketing” among others. This takes you to the following site: http://www.discus.org/responsibility/code.asp
10. Complete transparency is available for all of their codes and questions about their policies. If you click on “read the code”, it takes you to the next site:

    http://www.discus.org/responsibility/code.asp

    Scrolling down, this description will easily take you to the following discussion about “social responsibility”:

SCOPE

- *This Code applies to all activities undertaken to advertise and market distilled spirits, malt beverage and wine brands. These activities include brand advertising, consumer communications, promotional events, packaging, labels, and distribution and sales materials.*

- *The provisions of the Code apply to every type of print and electronic media, including the Internet and any other on-line communications, used to advertise or market beverage alcohol. These provisions also apply to every type of promotional or marketing activity or event, including all product placements.*
- *DISCUS members recognize that it is not possible to cover every eventuality and, therefore, agree to observe the spirit, as well as the letter, of this Code. Questions about the interpretation of the Code, member companies' compliance with the Code, and the application of its provisions are directed to the Code Review Board of DISCUS.*

1. *SOCIAL RESPONSIBILITY*
2. *Beverage alcohol advertising and marketing materials should portray beverage alcohol products and drinkers in a responsible manner. Beverage alcohol products and drinkers may be portrayed as part of responsible personal and social experiences and activities, such as the depiction of persons in a social or romantic setting, persons who appear to be attractive or affluent, and persons who appear to be relaxing or in an enjoyable setting.*
3. *Beverage alcohol advertising and marketing materials should not depict situations where beverage alcohol is being consumed excessively or in an irresponsible manner. These materials should not portray persons in a state of intoxication or in any way suggest that intoxication is socially acceptable conduct, and they should not promote the intoxicating effects of beverage alcohol consumption.*
4. *Beverage alcohol advertising and marketing materials should not contain any curative or therapeutic claim except as permitted by law.*
5. *Beverage alcohol advertising and marketing materials should contain no claims or representations that individuals can attain social, professional, educational, or athletic success or status as a result of beverage alcohol consumption.*
6. *Beverage alcohol products should not be advertised or marketed in any manner associated with abusive or violent relationships or situations.*
7. *Beverage alcohol advertising and marketing materials should not imply illegal activity of any kind.*
8. *Beverage alcohol advertising and marketing materials should not portray beverage alcohol being consumed by a person who is engaged in, or is immediately about to engage in, any activity that requires a high degree of alertness or physical coordination.*
9. *Beverage alcohol advertising and marketing materials should not be associated with anti-social or dangerous behavior.*
10. *Driving while intoxicated is against the law. Beverage alcohol advertising and marketing materials should not portray, encourage or condone driving any motor vehicle while intoxicated.*

11. Under "code review board" the interest in addressing public complaints is stated as the following:

> *"There shall be established and maintained a Code Review Board, which shall meet when necessary to consider complaints lodged by DISCUS members or other interested parties, including members of the public"*

12. The member site is not as easy to find as it could be, but if you click "about us" on the tabs at the top of the page, it takes you to the following link:

http://www.discus.org/about/

The mission statement or core objective is stated as: "*Our strong commitment to responsibility is the foundation of everything we do as an organization and as an industry.*" Also, here is where the link to the member list is located on the right hand side of the page.

12. If you click on the "member companies", the list of 13 industry members is displayed here, which confirms that a constellation alliance exists.

13. All of the criteria were met to label this a Social Action and Legitimation Constellation and so it was included in Appendix F. *Table 13* displays the criteria and results for this particular category in the negative screen "alcohol/distilleries"

Table 13. Criteria for measurement of constellation presence

	31-Beverage & Product Manufacturing	Distilled Spirits Council of the United States (DISCUS)
	Criteria	**Date of inception--2001**
1	Mention partner/member	13 members of Alcohol manufacturers
2	Definition of SR	yes
3	Goal or Mission statement	yes
4	Transparency: reports, etc.	Codes with definitions and purpose
5	Public perception/shareholder	Yes--to discuss complaints lodged by interested parties and public and address them
	Meet criteria for SAL constellation	yes

Reference: *http://www.icmm.com/members.php*

Results and Analysis

The results displayed on *Appendix F* supported the expectation that some industries were more prone to having Social Action and Legitimation Constellations than others. The screened categories which had groups which met the criteria for SA & L constellations were counted and compared (*Table 14*). The first column represents the total number of constellations discovered in that industry which appeared to be qualifiers for the constellation. The second column represents the number of networks from the last column of *Appendix F* that were rejected due to not meeting one or more of the five criteria listed in *Table 13*. The last column represents the final number of constellations that met the five criteria and were, therefore, considered Social Action and Legitimation Constellations.

Table 14. Industries with highest concentration of SA&L constellations

Screen type	# of constellations	# rejected	Total SA& L constellations
Alcohol	11	5	6
Gambling	9	3	6
Tobacco	5	2	3
Military Weapons	1	1	0
Nuclear Power	5	1	4
Adult Entertainment	4	0	4
Firearms	2	2	0
Animal Welfare	6	1	5

There were several categories in which the focus on social responsibility was obvious, while other categories involved an in-depth search for any type of interest in SR or sustainable behaviours…and found none. Others mentioned social responsibility, but did not show any evidence of actually doing anything or demonstrating through reports that they had made any significant effort.

The exclusionary screens with the largest number of Socially Responsible Constellations were the Alcohol, Gambling, and Animal Welfare industries.

After investigating websites, trade journals and site recommended magazines, military, and firearms had no legitimate SA&L constellations, although there were some constellations. These sites listed groupings of firms but there were no SR menus, references or reports of any kind, so they could not be counted. Other groups had mixtures of SR groupings and groups that were there principally for advertising their product (cruise lines). They were displayed to show there are constellation networks that exist within that particular industry, albeit not for the reason of reducing public interest. They are represented with an asterisk and italics and are not counted in the final tally of constellations for Social Responsibility.

All of the networks who met the five point criteria had statements about appeasing the public, informing the public or even reducing stakeholder interest. However, many of them were subtle in how they described their goals and mission in this area.

Several constellations made meagre attempts at altering public perception (cruise lines, gambling, hotels), even though the exclusionary screens are very strong in all of the major mutual fund companies. These groups may want to reconsider how they represent themselves to the public or even take steps to change, given that the social responsibility trend is expected to continue, and increase, in the next decade.

It appears that several groups may have been involved in SR in order to avoid government regulation, for example with gambling where the government appeared to be involved or partnered with gambling networks as over-seers of SR. In fact, the recent regulation imposed by the United States Congress (October, 2006) limiting banks from transferring money to a Web site that offers gambling is a clear example of the Sixth Force at work (Timmons & Pfanner, 2006). The ban was passed out of concern for increased gambling addiction and social problems.

Many of the gambling sites have established educational areas to encourage responsible gambling; most likely as a deterrent for government regulation. The N.Y. Times (Timmons & Pfanner, 2006) states that the global industry of gambling has "been hit very hard by the U.S. ban". In fact, Europe and Canada are trying to find partners to avoid their countries following the same trend as the U.S. It will be interesting for future research to determine whether more Social Action and Legitimation Constellations develop rapidly in the gambling industry as a result of this legislation.

It is also possible that some industries may have too much lobbying power (like liquor or taverns) and so do not feel pressured by government regulation yet; or are trying to avoid it by acting first. For example, the Empire State Restaurant and Tavern Association states in their mission statement that a major goal is "thwarting proposals to expand local government authority for alcohol beverage control" and that "…these public battles are indicative of the association's determination to protect our members' businesses". The latest study by The National Center on Addiction and Substance Abuse at Columbia University (CASA) adds to a mountain of growing evidence that the alcoholic-beverage industry cannot be trusted to regulate itself nor be expected voluntarily to give up advertising and marketing aimed at attracting its principal profit centers: underage and adult excessive drinkers. This indicates that government regulation will be the next step, and the increased pressure from the public to make changes in advertising may lead to more constellations in the near future.

Some of the most unlikely industries are realizing the importance of grouping together to reduce public influence on their industry. For example the ITGA (International Tobacco Growers Association) states: “ITGA emphasises the need for tobacco growers to join forces to counter anti-tobacco-growing pressure…tobacco growers all over the world are given the opportunity to voice their concerns in unison” (*Appendix F*).

Even the cruise industry wants to “hop on board” the public image trend by forming the Cruise Industry Coalition by bringing together the two largest industry players to show the public its “efforts demonstrating good corporate citizenship” (*Appendix F*). Unfortunately there is only one organization in which a coalition exists for social responsibility and it is not very specific about changes it is making, but rather the *intentions* to make a difference. It appears to be a feeble attempt at altering public image.

Another example was within the “hotel and accommodation” industry. There were many “constellation" networks, including enormous global ones, but the lack of SR reports and obvious interest in sustainable issues were missing on their websites and in the trade journals. As the website Economically Sound (economicallysound.com) states: “Hotels and all hospitality properties need to pay attention to the growth of tourism. Being a green hotel and a sustainable tourism property or destination is the wave of the future and the path to success”.

The Adult Entertainment industry had most of their constellations in the video stores and gaming industries. Although there were many sites for entertainment companies and some for producing it, they did not show social responsibility within their networks.

Some industries excluded by all mutual fund companies did not seem to be interested whatsoever in forming SR constellations, or even mentioning it. Their sites and magazines displayed different marketing techniques all together. The industries that wanted to promote SR had nature pictures, waterfalls, soft colours and people smiling on their websites and report covers/pages. The military weapons, firearms and adult entertainment websites and magazines were more interested in attacking the "do-gooders" who were trying to interfere with their products or were strongly promoting their products and using flashy advertising with the purpose of locating purchasing locations. There was some mention in the adult entertainment of good working environment and not distributing to minors, but it was very limited. The military weapons sites and firearms did mention keeping the country safe, but did not expand on social responsibility in other ways.

Out of all of the industries investigated, the alcohol (distilleries especially), nuclear energy and agricultural/animal welfare industries demonstrated the most transparency for social responsibility and seemed to have the most interest in convincing the public they were doing everything possible to create a sustainable environment that was healthy for everyone.

Interestingly, they are some of the least scrutinized by the public. All of the other screened industries have had multiple stakeholder resolutions put out against them; especially the non-alcoholic beverage companies, manufacturing companies and chemical companies (Forum, 2005).

Both objectives of this research have been realized. First, the typology model of constellations using Porter's Five Forces and Carr's Sixth Force can be used as a strategy by managers, companies and industries wanting to reduce the power of these forces. Future research is needed to test each of these constellation types to decipher if they can be as effective a strategy as the Social Action and Legitimation Constellation. Secondly, the research demonstrates which industries could benefit from using this constellation strategy to manage public image as well as police the actions of industry players.

The hypothesis is supported in that the number of organizations belonging to a Social Action and Legitimation Constellation in an industry is positively related to public interest in that industry. Six out of the eight screened areas (75%) which had a negative public image for SR behaviour, developed network constellations established for the purpose of proving to the public that they were socially responsible in their industry and were working towards a sustainable, responsible environment. There was an obvious interest in reducing the pressure the public and shareholders were creating in specific industries. However, in other areas (military weapons and firearms) there appeared to be no interest at all in changing or bowing to public opinion.

Conclusion and Limitations

It has been established that an alliance constellation is a particular kind of organization created to pursue a particular kind of strategy. One strategy for firms in need of more acceptance from the public is to form a constellation of firms that will represent or actually undertake socially responsible actions in order to change their image.

Social Action and Legitimation Constellations do exist as a result of this force and specific industries have more of them than others. Industries which have received poor ratings may want to readdress their policies concerning social responsibility. Other industries could use this research to realize the importance of constellation formation for this purpose, or at least, take the Sixth Force more seriously. More research needs to be done in this area in order to substantiate and extend the findings here. However, this is an early step in the process of taking constellation alliances to a new level of analysis.

The limitations to this research include a limited sample of industries and regional limitations. Most of the mutual funds rated are North American as opposed to global. It would be interesting to pursue mutual funds in other countries or in a world wide context to find out if the sixth force reveals itself in those environments. Using more industries to legitimize the findings is also recommended for future researchers.

It is also noteworthy to mention the abundance of trans-industry constellations that were discovered as a result of this research. Numerous constellations exist to control public interest that are not limited to just their industry. For example, the building industry includes a 7200 member alliance from a variety of professions who claim to be dedicated to the “mission of transforming the building industry to sustainability”

(USBC.org—U.S. Green Building Council). Apparently green construction is “spreading across the public and private sectors throughout Canada and the world (bccassn.com). They are coordinating with the forest industry, plastics industry and real estate industries to produce green buildings. Other examples of cross-industry constellations are within the computer/cellular/electronics industries where they are involved in world-wide recycling programmes. This research has limited itself to within industry constellations, but it would be beneficial to study trans-industry constellations dedicated to reducing public pressure by practicing or advertising social responsibility.

Overall, the results of this study demonstrate important research that could be used in practical management strategy. Porter’s Forces continue to provide a foundation for industry analysis and an addition to his work is based on previous theoretical foundation and continues to be an important tool for strategists today. Adding the Sixth Force enhances what has been previously accomplished without disputing the usefulness of those theories.

This study would be more impactful had it been completed five years ago and then compared with current trends to demonstrate any increase in these types of constellations. Future research could use the information presented here as a baseline and continue it as a longitudinal study to evaluate any future increases in this trend. It would also be of interest to assess whether these constellations increase in number to become “galaxies” instead of “worlds”. Industries would be well protected in that case and could manage public perception globally.

However, perhaps by grouping together to create larger Social Action and Legitimation Constellations, there would be improvements to a suffering world of global warming and irresponsible environmental behaviour. Only time will tell…

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List of Appendixes

Appendixes

Appendix A. Positive and Negative Screen Indicators

Ratings Indicators for Screens		
Area	**Positive**	**Negative**
Community	Charitable Giving strength Innovative Giving Non-US charitable giving Support for Housing Support for education Volunteer Programs Other strengths	Negative Economic Impact Investment Controversies Tax Disputes Other Concerns
Corporate Governance	Limited Compensation Ownership Strength Political Accountability Transparency Other strengths	High Compensation Ownership Concern Political Accountability Transparency Accounting Other concerns
Diversity	CEO Promotion Board of Directors Work/Life Benefits Women & Minority Contracting Employment of the Disabled Gay & Lesbian Policies Other strengths	Controversies Non-representation Ownership Concern Other concerns
Employee Relations	Cash Profit Sharing Employee Involvement Health and Safety Strength Retired Benefits Strengths Other strengths	Union Relations Concern Health and Safety Concern Workforce Reductions Retirement Benefits Concern Other concerns
Environment	Clean Energy Beneficial Products & Services Pollution Prevention Recycling Other strengths	Hazardous waste Regulatory Problems Ozone Depleting Chemical Substantial Emissions Agricultural Chemicals Climate Change Other concerns
Human Rights	Indigenous Peoples Relations Labour rights strengths Other strengths	Burma Labour Rights Concerns Indigenous Peoples relations Other concerns
Product	Quality R&D/ Innovation Benefits the Economically Disadvantaged Other strengths	Product Safety Marketing/Contracting concerns Antitrust disputes Other concerns

Adapted from KLD Research and Analytics, 2006

Appendix B. Mutual Fund Lists and Methodology

Research Group	Methodology	Rating Process	List Title	Source
Corporate Knights (Innovest research group)	Selected from Innovest universe of 1800	(see Innovest)	Global 100: Most sustainable companies in the world	Global100.org
Innovest	Corporate Documents Government Data Industry sources (trade Publications/reports	Weighted score Letter grade (AAA, BB…)	(same as above)	Innovestgroup.com
Calvert* (Double dilligence research Process)	Largest 100 U.S. companies by market capital. Use five issue areas.	Team of 14 research analysts.	Calvert Social Index	Calvert.com
Fortune global 100 companies	Points awarded for 5 areas of corporate governance	Based on 100 points	2005 Accountability Rating of top 100 global companies	Accountability rating.com
Fortune 100 Best and Worst	Surveys of other corps	Points and opinion polls	Top 50 Most Admired Best and Worst in social Responsibility	Money.cnn.com/ Magazines/fortune
KLD Indices (KLD Research & Analytics)	Large-cap companies covering over 80% of the US equity market. Selects companies with positive social and environmental records. Has an Index of 400 companies.	Weighted on the S&P 500 Index	KLD's Domini 400 Social Index	KLDIndices.com
KLD Indices*	100 global companies that will	1% weight to each of the	KLD Global Climate 100	KLDIndices.com

	offset climate change: renewable energies, future fuels and Clean Technology	100 using multi-size companies	Index	
KLD Indices*	Russell 3000 Index—largest publicly traded US companies	Two step screening process:	KLD Broad Market Social Index	KLDIndices.com
Social Investmen t Forum	Quantitative Behavioural study using surveys	1 out of 3 types of SRI to qualify for mutual fund.	SRI funds Institutions involved in SRI	Socialinvest.org
Ceres	Corporate reports and accountability tools	Companies listed that use the guidelines	Ceres sustainable company list	Ceres.org
Ceres	Rates 100 leading companies in major industries	100 point scoring system	Ranks the larges companies in 9 different industries for social responsibility	Ceres.org/news/ne ws
The Green Life	Company background check Public Relations Tactics	Discrepancie s in facts	10 Worst Greenwashers	Thegreenlife.org
Business Week 50	10 performance metrics	Weighted results for sales volume	Top 50 Performers financially	Businessweek.com
finfacts	4,000 business leaders in 70 countries Surveys of 720 chief executives	Open ended qualitative and quantitative	World's Most Respected Companies	FT.com
Pax World Funds	Utilizes professional screening services, company documents, media reports, and public records, among others.	Open ended qualitative	Pax World Balanced Fund	Paxworld.com

* Used for this research due to most reliable research methods

Appendix C. *GICS Industry and KLD Exclusionary Screens*

KLD Indices	GICS **2 number Industry Sector**	 **4 number Industry Group**
Alcohol	Consumer staples	Food, Beverage and Tobacco
Licensing		
Manufacturers		
Manufacture of Products necessary for Alcoholic Beverages		
Retailer		
Ownership **of** an alcohol company		
Ownership **by** alcohol company		
Gambling	Consumer Discretionary	consumer services
Licensing		
Manufacturer		
Owner and Operator		
Supporting Products and Services		
Ownership BY gambling company		
Ownership OF a gambling company		
Tobacco	Consumer staples	
Licensing		
Manufacturer		
Manufacturer of products necessary for tobacco products		
Retailer		
Ownership BY tobacco company		
Ownership OF a tobacco company		
Military Weapons	Industrials	Capital Goods
Manufacturer of weapons or systems	Aerospace & Defence	
Manufacturer of components for weapons or systems		
Ownership BY a Military Company		
Ownership OF a Military Company		
Nuclear Power	Energy Equipment & Services	Energy Equipment & Services
Ownership of nuclear power plants		
Construction & Design of Nuclear power Plants	Energy Equipment & Services	
Nuclear power Fuel & Key Parts	Energy Equipment & Services	
Nuclear power service provider	Energy Equipment & Services	
Ownership BY nuclear power company		
Ownership OF a nuclear power company		

Adult Entertainment Distributor Owner and Operator Producer Provider Ownership by Adult entertainment company Ownership of an Adult entertainment company	consumer discretionary	Media
Firearms Manufacturer Retailer Ownership OF a Firearms Company Ownership BY a Firearms Company	Industrial	

Appendix D. GICS Industry and Calvert Exclusionary Screens

Calvert Social Index		
Alcohol	Consumer staples	Food, Beverage and Tobacco
Manufacturers		
Restaurants that sell more than 20%		
Gambling	Consumer Discretionary	consumer services
Equipment providers		
Own or operate casinos		
Have direct gambling involvement		
Receive revenues from gambling		
Operators of gaming		
Tobacco	Consumer Staples	
Production		
Military Weapons	Industrials/Capital goods	
DOD weapons contracts		
Nuclear weapons		
Nuclear Power	Industrials/Capital goods	
(see firearms)		
Adult Entertainment	Consumer discretionary	
Production		
Market		
Firearms	Industrials	
Production		
Manufacturers		
Nuclear weapons		
Animal Welfare	Consumer staples	
Animal Husbandry		
Biotech firms	Health care	Pharmaceuticals, biotechnology & life sciences
Consumer product testing	Health care	
Pharmaceuticals		Pharmaceuticals, biotechnology & life sciences
Food Industry (fast food)	Consumer staples	
Pet stores		
Factory Farms		
Circuses		
Zoos		Media
Media & Entertainment		

Appendix E. "At risk" 6-digit industry matches for NAICS

KLD & Calvert Social Indexes	NAICS GROUPINGS	
	2 number Industry Sector	**5/6 Digit Industry Sector**
Alcohol		
Licensing	91-Public Administration	Regulation, Licensing, Inspection
Manufacture	31-Manufacturing	Beverage Manufacturing/Distilleries/wineries
Manufacture of Products necessary	31-Manufacturing	Aluminum, Glass
for Alcoholic Beverages		
Retailer	44-Retail Trade	Food & Beverage Stores
Ownership **of** an alcohol company	72-Accomodations & Food Services	Drinking places/Taverns, bars, lounges
Ownership **by** alcohol company	31-Manufacturing	Beverage & Product Manufacturing
Gambling		
Licensing	91-Public Administration	Regulation, Licensing, Inspection
Manufacturer	31-Manufacturing	coin operated machines
Owner and Operator	71-Arts, Entertainment, Recreation	Casinos,
	72-Accomodations & Food Services	Casino hotels, resorts,
Supporting Products and Services	71-Arts, Entertainment, Recreation	Bingo parlors, lottery
		slot machines parlors,
		video gaming, betting parlors
Ownership BY gambling company	71-Arts, Entertainment, Recreation	gambling cruises, Cruises, Riverboat casinos
Ownership OF a gambling company	Accommodations & Food Services	
Tobacco		
Licensing	91-Regulation, Licensing, Inspection	
Manufacturer	31-Manufacturing	Tobacco leaf, processing, aging, preparing
Manufacturer of products	11-Agriculture,Forestry, Fishing, Hunting	Farming/Tobacco, corn and bean growing
necessary for tobacco products	31-Manufacturing	machinery manufacturing
Retailer	41- Wholesale Trade	tobacco stores, merchant wholesalers
	49-Transportation and Warehousing	Tobacco warehousing and storage
Ownership BY tobacco company	11-Agriculture,Forestry, Fishing, Hunting	Food products
	49-Transportation and Warehousing	

Ownership OF a tobacco company	45- Retail Trade	Tobacco stores and stands
Military Weapons		
Manufacturer of weapons or systems	31-Manufacturing	Rockets, Tanks, armored vehicle
Manufacturer of components	31-Manufacturing	Vehicle parts
for weapons or systems		
Ownership BY a Military Company	31-Manufacturing	Uniforms
	61-Educational Services	military schools, academics, training
	72-Accomodations & Food Services	Military messes
	71-Arts, Entertainment, Recreation	Military museums
	62-Health Care and Social Assistance	Military hospitals
	91-Public Administration	Military bases, camps services
Ownership OF a Military Company		
Nuclear Power		
Ownership of nuclear power plants	22- utilities	electric power generators,
		nuclear power generators,
Construction & Design of	23-Construction	nuclear plants, waste disposal sites
Nuclear power Plants		Construction
Nuclear power Fuel & Key Parts	31-Manufacturing	nuclear reactors
	31-Manufacturing	application valves
	31-Manufacturing	radiation detection devices
	31-Manufacturing	waste casks, heavy metal
Nuclear power service provider	31-Manufacturing	np scrap reprocessing, nuclear fuels,
		medicine
	31-Manufacturing	Nuclear shielding, metal plates
	31-Manufacturing	reactors, control rods
		Steam supply systems
Ownership BY nuclear power company		
Ownership OF nuclear power	22- utilities	

Adult Entertainment	no results found	
Distributor		
Owner and Operator		
Producer		
Provider		
Ownership by Adult		
entertainment company		
Ownership of an Adult		
entertainment company		
Firearms		
manufacture/production	31-33 Manufacturing	ammunition, barrels, belts,
		bb guns
		gun barrels
		dart guns
		grenade launchers machine gun belts
		pellet guns
		revolvers
		shotguns, submachine guns,
		tranquilizer guns
Retailer	45-Retail Trade	sporting, recreational stores
Ownership OF a Firearms Company		
Ownership BY a Firearms Company		
Animal Welfare (Calvert)		
Animal Husbandry	11-Agriculture, forestry, fishing, hunting	Equines raising, horse/cattle ranching,
		mule production, pregnant mares/cows
		Agriculture, biological
Biotech firms	54-Professional, Scientific and Technical	
Consumer product testing	54-Professional, Scientific and Technical	
Pharmaceuticals	44-retail	stores, sundry items
Food Industry (fast food)	31-Manufacturing	rice/corn breakfast foods, breakfast cereals
	72-Accomodations & Food Services	fast food restaurants, concessions

Pet stores	45-Retail Trade	
Factory Farms	11-Agriculture, forestry, fishing, hunting	beef cattle feedlots, ranching operations
Circuses	71-Arts, Entertainment, Recreation	
Zoos	71-Arts, Entertainment, Recreation	
Media & Entertainment	71-Arts, Entertainment, Recreation	

Adapted from NAICS Numerical List

Appendix F. Constellations Formed in Industries

5/6 Digit Industry Sector			
Alcohol	**Constellation Network Name**	**Internet address or magazine**	**Characteristics of network and public interest**
Regulation, Licensing, Inspection	None found		
Beverage Manufacturing/ Distilleries/wineries	DISCUS--Distilled Spirits Council of the US—"strong commitment to responsibility is the foundation of everything we do as an organization and as an industry"	discus.org	13 member alcohol manufacturers—"to consider complaints lodged by DISCUS members or other interested parties, including members of the public"
	The Century Council—"leading distillers, promotes responsible decision-making regarding beverage alcohol and fights alcohol abuse, focusing on drunk driving and underage drinking problems"	centurycouncil.org	10 members in strategic partnership—"implements innovative programs and public awareness campaigns and promotes action through strategic partnerships"
	NBWA—National Beer Wholesalers Association	nbwa.org	Unlisted membership list--"lobbying to protect them from overly burdensome federal regulations and mandates, offers pro-beer public affairs initiatives"
Beer	**BFBI Brewing, Food & Beverage Industry* **SIBA Society of Independent Brewers* **NABA North American Brewers Association*	bfbi.org.uk siba.co.uk northamericanbrewers.org	Members, but no SR or sustainability Members, but no SR or sustainability Members, but no SR or sustainability
Food & Beverage Stores	None—mostly advertising, no journals		
Wine	Wine Institute "the voice for California wine" "to promote vineyard and winery practices that are sensitive to the environment, responsive to the needs and interests of society-at-large" CAWG –California Association of Wine Growers "sustainable farming practices and trade policy"	wineinstitute.org cawg.org	864 members of growers and sellers "to address increasing pressure resulting from public and legislative perceptions" Unlisted membership roster "respond to their (public) concerns in a considerate manner"

Drinking places/Taverns, bars, lounges	**Golden Tavern Group—has network, but no SR* MGA—Montana Gaming Group "the public is unaware of the magnitude of the generous charitable giving of the locally-owned taverns"	goldentaverngroup.com montanagaminggroup.com	Rejected--No SR or SR reports 40 taverns 10 alcohol members No SR plan or report 24 members "social policy…overly zealous advocacy groups that pursue their engineered social ends…. Social activists, reformers and prohibitionists are increasingly influential"
Beverage & Product Manufacturing	**ABA-- American Beverage Association* "longstanding commitment to protecting the environment"	ameribev.org	Rejected--No SR or SR reports Membership not listed No SR report "liaison between the industry, government and the public"
Gambling			
Regulation, Licensing, Inspection	None found		
coin operated machines	**AAMA American Amusement Machine Association* "to promote improvement in the economic well-being of the industry"	coin-op.org	Rejected--No SR or SR reports
Casinos	NIGA-National Indian Gaming Association "Advance the lives of Indians economically, politically and socially" Project 21 Operation Betsmart "Encourages responsible gambling and deters underage gambling"	indiangaming.org Harrahs.com	40 members, but no SR site or reports "to provide advocacy on gaming-related issues" 12 members within Harrahs "industry-wide program that encompasses employee training and public awareness about underage gambling" "due to advocacy pressures and liability"

Casino hotels, resorts	MGG—Montana Gaming Group—"fair and reasonable operating environment" for liquor/gaming. Owners of Montana's licensed businesses strive to run responsible enterprises. AH&LA (American Hotel & Lodging Association) We embrace the value of diversity, and we welcome and care for all individuals without regard for difference. IH&RA (International Hotels & Restaurant Association) "award programmes to promote environmental awareness among hotels and recognise the efforts being made to "green" the industry from within"	montanagaminggroup.com ahla.com ih-ra.com	2500 members "Social activists, reformers and prohibitionists are increasingly influential" 100's of members in hotels and lodging "national advocacy on Capitol Hill, public relations and image management" 75,000 members in global network "Formulate pro-active strategies to ensure that H&RA interests are considered & protected advocating or defending the interests of a specific sector before public (and sometimes private) sector decision-making bodies"
Bingo parlors, lottery	work to reduce the incidence of problem gambling, reduce the harmful impacts of excessive gambling, and ensure the delivery of gambling in a manner that encourages responsible gambling and healthy choices.		
slot machines parlors	Same as above		
gambling cruises, Cruises, Riverboat casinos	ICCL International Council of Cruise Lines "Minimizing the environmental impact of its vessel operations on the ocean and marine life" **Cruise Industry Coalition* "…keeping the oceans clean and being gracious visitors to the many destinations we touch… We want to preserve and reinforce this image to the public" CLIA—Cruise Lines International Association	iccl.org cruising.org	16 members of cruise lines "keep the public informed of developments in the cruise industry, especially efforts demonstrating good corporate citizenship and industry growth" Members, but no SR sites or references All advertisements

Tobacco			
Tobacco leaf, processing, aging, preparing	Responsible Care-International Council of Chemical Associations "work together to continuously improve health, safety and environmental performance" **TMA—Tobacco Manufacturers Association* "defends the legitimate interests of its member companies"	responsiblecare.org the-tma.org.uk	Members in 52 countries "to communicate with stakeholders about their products and processes" No members and no SR plan.
Farming/Tobacco, corn and bean growing	ITGA-- International Tobacco Growers Association "tobacco industry has been one of the leaders in promoting good agricultural practice (GAP) and social responsibility" **BTGCA-- Burley Tobacco Growers Cooperative Association*	tobaccoleaf.org burleytobacco.com	Many members in 20 countries world wide "**ITGA** emphasises the need for tobacco growers to join forces to counter anti-tobacco-growing pressure" "the intention is to ensure a safer, healthy up-bringing (for children)and raise awareness among all stakeholders" No SR related activities or information
machinery manufacturing			
tobacco stores, merchant wholesalers	NATO-- National Association of Tobacco Outlets--encourages all of its members to uphold and abide by the highest professional standards when serving the adult public…expansion of the tobacco outlet marketplace segment of the tobacco industry in a responsible and law abiding manner"	natocentral.org	15 plus members They are grouping together to influence public opinion: "grassroots activation techniques to respond to and oppose restrictive tobacco-related legislation"
Tobacco warehousing and storage	None found		

Military Weapons			
Rockets, Tanks, armored vehicle	**AUSA--Association of the United States Army—* "companies are involved in research, development and production of weapons and equipment for the Army"		100's of Sustaining Members—rejected--no SR defending the rights of sportsmen, hunters, recreational shooters
Vehicle parts	None found		
Uniforms	None found		
military schools, academics, training	None found		
Military messes	None found		
Military museums	None found		
Military hospitals	None found		
Military bases, camps services	None found		

Nuclear Power			
electric power generators	None found		
nuclear power generators	WNA-World Nuclear Association "To reconcile global human need and environmental preservation" IAEA—International Atomic Energy Agency "promote safe, secure and peaceful nuclear technologies" CNA—Canadian Nuclear Association "growth of nuclear technologies for peaceful purposes"	world-nuclear.org iaea.org cna.ca	Member list not available "speak pro-actively on behalf of nuclear energy amongst policymakers, opinion leaders, the media and the public... clean, environmentally friendly energy on a massive scale" 142 member states Transparent reporting "a more popular and positive view of nuclear power" development and beneficial utilization of nuclear science and technology for peaceful uses 6 other nuclear and 100 others in total "resolution of problems of concern to members, to industry, or to the Canadian public"
nuclear plants, waste disposal sites	NEI—Nuclear Energy Institute "ensure the formation of policies that promote the beneficial uses of nuclear energy safe for environment"	Nei.org	280 members in 15 countries "serves as a unified industry voice" "timely information on the nuclear industry to members, policymakers, the news media, and the public"
Construction	*"Betterbricks.com*—"help commercial building professionals use energy efficient strategies to achieve sustainable, high performance buildings."	betterbricks.com	Unlisted membership list make tenants and shareholders content for better business
nuclear reactors	None found		
application valves	None found		
radiation detection devices	None found		
waste casks, heavy metal	None found		
np scrap reprocessing,	None found		

nuclear fuels,			
medicine	None found		
Nuclear shielding, metal plates	None found		
reactors, control rods	None found		
Steam supply systems	None found		
Adult Entertainment			
Distributor	VSDA—Video Software Dealers Association—"compliance with anti-trust laws and encourage anti-piracy behaviour"	vsda.org	2600 retail owners-- responding to legislative actions that impact the home entertainment industry Establish a public position on major public policy and industry issues that significantly impact the entertainment software industry and utilize direct, grassroots, coalition, and public advocacy resources to ensure our position is adopted.
	EMA—Entertainment Merchants Association--promoted "best practices" throughout the industry, endorsed and encouraged ratings education and enforcement by retailer entertainment software such as motion pictures, video games and sound recordings. better serve the wants and needs of their customers in a responsible, intelligent, and informed manner	entmerch.org	1,000 companies and 20,000 video outlets--legislative advocacy on behalf of its members; act as unifying voice.
	Free Speech Coalition—"Legislative watchdog for the industry… limit the legal risks of being an adult business"	Freespeechcoalition.com	Member list unpublished—"Offers rewards for child pornography, protects adult artists" supports greater public tolerance for freedom of sexual speech"
Owner and Operator	None found		
Producer	None found		
Provider	CES (Consumer Electronics Association)	ce.org	2000 members No SR or SR reports adult videos and shows encourage responsible behaviour and viewing

Ownership by Adult	None found		
entertainment company	None found		
Ownership of an Adult	None found		
entertainment company	IGDA –International Game Developers Association-- legislate against creative expression, overcome challenges of poor working conditions, encourage gaming ratings and viewing by appropriate age groups		10, 632 members, 30 partners world wide—Educate the public on facts about gaming and promote anti-censorship
Firearms			
ammunition, barrels, belts,	Most of the organizations reside under the NRA (National Rifle Association) in which constitutional rights are the focus, rather than social responsibility		
bb guns	"		
gun barrels	"		
dart guns	"		
grenade launchers machine gun belts	"		
pellet guns	"		
revolvers	**WFSA World Forum on The Future of Sport Shooting Activities* Promotion and protection of sport shooting	wfsa.net	No SR plans or reports Collective responsibility of protecting the environment
shotguns, submachine guns,	None found		
tranquilizer guns	None found		
sporting, recreational stores	FCI—Fifty Caliber Institute—"knowledge, safety, responsibility…defending the rights of sportsmen, hunters, recreational shooters"	fiftycal.org	Rejected--No SR plans or reports

Animal Welfare (Calvert)			
Equines raising, horse/cattle ranching	NCBA—National Cattlemen's Beef Association "with a focus on issues like animal health and welfare, the environment and food safety — in order to produce safe, wholesome and tasty beef products for consumers across this country and around the world" NAERIC—North American Equine Ranching Informtion Council—" Horse breeders and ranchers in North America. Science-based horse management to ensure highest possible care standards are utilized in the industry"	beefusa.org naeric.org	Members unlisted "industry and consumer information programs on behalf of the industry" Over 80 independent ranchers in a partnership. "Informs and educates the public by presenting facts on the viable and responsible practices of equine ranching"
mule production, pregnant mares/cows	None found		
Agriculture, biological	BIO--Biotechnology Industry Organization "responsible agriculture practices and support for members"	Bio.org	1,000 member network "concentrates on how to best inform the media and public regarding these issues of cloning, stem cell research and biotechnology"
fast food restaurants, concessions	**National Restaurant Association*	restaurant.org	60,000 member companies No SR or SR report
beef cattle feedlots, ranching operations	AMI--American Meat Institute "efficient use of energy and natural resources, minimizing product waste and overall regulatory environmental compliance" AFAC--Alberta Farm Animal Care—"to promote Promote responsible, humane animal care within the livestock industry"	meatami.com afac.ab.ca	150 member network Have 90% of beef, poultry and pork processing "will boost your public image" Partnership of "communicating to the public that farmers care for their animals" "partnership recognizes that animal welfare issues are a growing international concern and the public expect all animals to be humanely treated throughout their lifetime"

**represents a constellation alliance network within that industry, but missing criteria to be included (usually Social Responsibility transparency*)