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*Competitive markets, collective action,
and the Big Box Retailer problem*

Brent D. Beal



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Abstract: I use a stylized scenario—the Big Box Retailer Problem—to demonstrate that the presence of behavioural interdependence in economic markets may result in deficient outcomes that are both stable and supported by ongoing participant behaviour. I present a theoretical discussion of social dilemmas and use the Big Box Retailer Problem to illustrate that these characteristics—stability and ongoing support—cannot be reliably employed as indicators of outcome efficiency. Equally important is the conclusion that upfront costs and the ongoing necessity of monitoring and encouraging contributory behaviour are not reliable indicators of the relative inefficiency of outcomes associated with collective action. Questions are raised regarding the ethical responsibilities of business educators and the implications of social dilemmas for corporate social responsibility research.

Keywords: corporate social responsibility, behavioural interdependence, economic markets, market failure, social dilemmas

Introduction

The market system is justly described as a social wonder. It is a “global coordinator of cooperative performances of at least 2 billion people. . . [it is] without peer, in a class by itself. It is the world’s broadest and most detailed organizer of social cooperation” (Lindblom, 2001: 41). As Kuttner observes, it is now received wisdom that free and unfettered markets “are both the essence of human liberty, and the most expedient route to prosperity” (Kuttner, 1997: 3). The conviction that uncoordinated economic exchange among individuals will produce collective

outcomes that maximize social welfare is not new. As Alan Greenspan observes in his biography, "our ideas about the efficacy of market competition have remained essentially unchanged since the eighteenth-century Enlightenment, when they first emerged, to a remarkable extent, from the mind of one man, Adam Smith" (Greenspan, 2007: 260). When contemporary economists, for example, extol the ability of the market mechanism to deliver productive and allocative efficiency and to maximize social surplus (see, for example, Bator, 1957; Walters, 1993), they echo Smith's observation that the behaviour of individuals often appears to be guided by an "invisible hand" in the promotion of the general welfare (Smith, 1776/1976).

A market system can be defined as a "method of social coordination by mutual adjustment among participants rather than by a central coordinator" (Lindblom, 2001: 23). A society may ask itself, for example, what resources should be devoted to the production of insect repellent, red licorice, or buttons? In many societies these types of questions are answered by simply leaving individuals alone to "truck, barter, and exchange one thing for another" and waiting for responses in the form of efficient resource allocations to emerge from the apparent chaos (Smith, 1776/1976: 8). There is no need for the process to be centrally coordinated or controlled (i.e. there is no need for a central coordinator). As long as supporting customs and institutions, such as liberty, property rights, and a medium of exchange, are in place, it is assumed that market outcomes, if not perfect, are at least "as good as could be expected if somebody took command and figured out what ought to be done and had a way to get everybody to do what he [or she] was supposed to do" (Schelling, 1978: 22).

In certain circumstances, however, faith in the ability of economic markets to produce outcomes that are as good as could be expected if centrally directed is misplaced. Specifically, in exchange situations involving participant interdependence, economic markets may produce inferior or deficient outcomes that are irrational in the sense that there may be other unrealized outcomes in which all participants would be better off (Heckathorn, 1996; Kollock, 1998; Schelling, 1978). This paper contributes to the broad literature on business and society by demonstrating that in these situations attribution errors often lead to incorrect conclusions regarding the relative efficiency of market outcomes. As the Big Box Retailer problem illustrates, the stability and ongoing individual-level support of market outcomes in these situations should not be employed as indicators of outcome efficiency. Equally important is the conclusion that the upfront costs and ongoing necessity of monitoring and encouraging contributory behaviour should not be

relied on as indicators of the relative inefficiency of outcomes associated with collective action.

This paper is divided into three main sections. In the first section, I distinguish between market activity and collective action by relying on generally-accepted concepts from economics (Greenspan, 2007), economic sociology (e.g. Geary, 2010; Smelser & Swedberg, 1994), and the literature in sociology on collective action and social dilemmas (e.g. Brooks & Strange, 2011; Coleman, 1990; Heckathorn, 1996; Kollock, 1998; Sanyal, 2009). In the second section, I introduce a stylized scenario—the Big Box Retailer Problem—that illustrates key differences between economic markets and collective action. This scenario is intentionally set up as a “fence” dilemma (see Kollock, 1998) and is used as starting point for a theoretical discussion of social dilemmas and their implications for market efficiency and welfare maximization.

In the last section, I argue that the counter-intuitive nature of social dilemmas complicates the assessment of market outcomes and often leads to incorrect conclusions regarding outcome efficiency. Counter-intuitive feedback loops further complicate the assessment of the relative benefits of market activity and collective action. This section concludes with a brief discussion of the relevance of transaction cost economics and problems associated with market-based social dilemma workarounds. The paper concludes with a number of unanswered questions related to the intrinsic value of economic markets, the responsibilities of business educators and the intersection of corporate strategy and corporate social responsibility.

Economic markets vs. collective action

Economic markets

The concept of economic markets is surprisingly difficult to circumscribe (Lie, 1997). For present purposes, I define it as Lindblom does as “a method of social coordination by mutual adjustment among participants rather than by a central coordinator” (2001: 23). The concept of social coordination includes all forms of cooperation and is intended to describe the process through which we “curb epidemics, advance science, or enjoy the pleasures of play and friendship”— it describes, in a nutshell, the process of “helping and being helped” (Lindblom, 2001: 21). Only a subset (albeit an important subset) of social coordination is achieved through economic markets. Mutual adjustment, as defined by Lindblom (2001), is

the opposite of central coordination. It is a form of behavioural give-and-take in which social actors simultaneously (and directly) both adapt to and influence the behaviour of other social actors. The feats of coordination accomplished in properly functioning economic markets are grounded in ongoing and decentralized mutual adjustment processes as individual participants both respond to and influence price signals (and other market-based information).

Mutual adjustment and absence of a central coordinator distinguish economic markets from other social coordination mechanisms. Lindblom illustrates these concepts by using the example of a group of six men working to launch a boat. The owner of the boat might direct the efforts of the other five by issuing orders from the comfort of a lawn chair. In this case, the owner would be exercising a type of centralized or unilateral control. On the other hand, the six men might coordinate their efforts by carefully observing each other and both responding to and influencing each others' actions while they work. In this case, their efforts would exhibit decentralized or multilateral control. For present purposes, therefore, economic markets are defined as a method of achieving social coordination through mutual adjustment characterized by decentralized or multilateral control (Lindblom, 2001).

Considerable intellectual effort has been devoted to fleshing out and describing the operational details of economic markets, although the broad outline remains remarkably similar to what Adam Smith sketched more than two hundred years ago (Greenspan, 2007). For example, market systems require personal liberty, property rights, quid pro quo exchange, the sale of activities and performances, intermediaries, entrepreneurs, and the emergence of collectives (Lindblom, 2001). If markets are to be sufficiently competitive, there should be a large number of independent buyers and sellers, no pricing power, product homogeneity, no barriers to entry or exit, no artificial restraints on prices, and all participants should have complete information (Walters, 1993). If these conditions are met, competitive pressures will lead to productive and allocative efficiency, and the maximization of social welfare (Bator, 1957, 1958).

Collective Action

Collective action can be defined, simply, as "something people do together" (Oliver, 1993: 276). I define it for present purposes as social-coordination achieved through centralized or unilateral control. There is an extensive literature in sociology and

related fields that addresses collective action (see, for example, Coleman, 1990; Heckathorn, 1996; Oliver, 1993; Sanyal, 2009; Tang, 2008).

One of the central issues in collective action research is the nature of the relationship between individual interests, shared interests, and subsequent group action. Prior to the publication of Mancur Olson's influential book, *The Logic of Collective Action* (1965), it was mistakenly assumed by most social scientists that there was often an "unproblematic congruence" between individual interests and group interests and that group interests and subsequent action were linked in a straightforward manner (Oliver, 1993:273). Just as individuals were presumed to act in their own self-interest, it was assumed that groups of individuals with common interests would also act in support of those shared interests. As Olson explains, "if the members of some group have a common interest or objective, and if they would all be better off if that objective were achieved, it has been thought to follow logically that the individuals in that group would, if they were rational and self-interested, act to achieve that objective" (Olson, 1965: 1). As Olson demonstrates, however, "self-interested individuals will not act to achieve their common or group interests" and that the commonly accepted notion that groups will act to further their interests is "unjustified, at least when it is based, as it usually is, on the (sometimes implicit) assumption that groups act in their self-interest because individuals do" (1965: 2). By implication, therefore, the failure of a group to act cannot reliably be taken as evidence of the absence of shared interests or as an indication that the group might not be better off if they were to act. Although Olson's analysis has been amended and extended in important ways over the years (see, for example, Kollock, 1998; Oliver, 1993), his central assertion that the relationship between shared interests and group or collective action is problematic remains valid.

Economic Markets vs. Collective Action

A strict dichotomy that categorizes all economic activity as either market-based or collective in nature may not reflect the complexities of economic reality (see, for example, Hennart, 1993; Perrow, 1986). A focus on these categories as ideal types, however, facilitates comparison and contrast (Doty & Glick, 1994). Outcomes derived from economic markets emerge organically from self-interested individual exchange. There is no attempt to constrain, direct, or influence individual activity so that it contributes to desired outcomes once the necessary institutional supports and "rules of the game" have been established (Friedman, 1970). In properly

functioning economic markets, there is no central coordinator, although the social benefits derived from market activity (i.e. productive and allocative efficiency, maximization of social surplus) may lead an observer to conclude that it appears as though there is. Collective action, in contrast, involves the articulation of— and intentional movement toward— a specific collective outcome. Collective goals— or group objectives— are elevated above individual interests and individual behaviour is often constrained, directed, and/or influenced with the explicit intention of channeling it towards desired outcomes. In the case of collective action, unilateral control is exercised by a central coordinator. In the context of the modern corporation, collective action is similar to the concept of hierarchical control as defined in transaction cost economics (Coase, 1937; Hennart, 1993; Williamson, 1985). Collective action, as defined here, also applies to coordination in other non-market contexts, such as the family or household.

The Big Box Retailer problem

The Big Box Retailer problem is a stylized scenario designed to serve as an example of a situation in which rational behaviour by individuals in a market context can lead to collectively irrational (or deficient) economic outcomes. Behavioural interdependence exists when the actions of individual actors change the incentives for other actors in the same interaction context. This creates a moving target, in a sense, as individual actors base their behaviour on the anticipated actions of other actors that are similarly engaged. The Big Box Retailer scenario is utilized to anchor a theoretical discussion of social dilemmas and illustrate that the presence of these dilemmas can lead to incorrect conclusions regarding market efficiency and create deceptive feedback loops that appear to confirm these conclusions. Here is the scenario:

Welcome to Small Town, USA, population 100,000. The town has a central commercial district comprised of relatively small shops arranged around a small, but quaint, plaza. A big box retailer (Big Box Retailer)— a company that operates large free-standing "box-like" general merchandise stores— has petitioned for permission to build a location on the outskirts of town. The following four assumptions delineate the dilemma:

- 1) The larger scale and lower overhead of the Big Box Retailer will allow it to operate on thinner margins than the town's smaller main-street shops. There will, therefore, be some costs savings that will be passed on to the local consumer. The precise value of these cost savings is unknown.*

- 2) *If the Big Box Retailer is allowed to build its store, lower prices will induce individual residents to shift their retail activity to the Big Box Retailer and the smaller shops surrounding the town plaza will go out of businesses.*
- 3) *The confluence of economic and social activity in the town's plaza enhances the town's sense of community and collective identity. These benefits will be lost if retail activity shifts to the new Big Box Retailer. The townspeople, therefore, place some value on restricting economic activity to the town's plaza, although the precise value is unknown.*
- 4) *There are no other significant factors to consider. In other words, present retail employees are indifferent about whether they work in the town's plaza or in the new Big Box Retailer, the same number of retail employees will be employed regardless of the town's decision, the same percentage of economic profit derived from retail activity will be spent and/or reinvested in the locally community, etc.*

Economic markets or collective action?

The first assumption explains the second, and these two assumptions make it clear that the town faces an either-or decision— either the town's retail activity will continue to be concentrated in the small shops in the town's plaza (if the town dissuades the Big Box Retailer from building a location), or it will shift to the new Big Box Retailer location (if a new store is built). The third assumption makes it clear that the town faces a trade-off— either it can elect to preserve the enhanced sense of community and collective identity derived from the small main-street shops, or it can reap the benefits of lower retail prices. It cannot do both. The last assumption imposes an “all-else-equal” condition.

The town must decide whether or not to grant a permit to the Big Box Retailer, and in so doing, it will determine important structural characteristics of retail activity in the community. How should this decision be made? A market-based approach might involve issuing a permit to the Big Box Retailer, and then letting individual economic actors— the townspeople— “vote” with their dollars. Given that the value the townspeople attach to the enhanced sense of community and collective identity associated with the existing town's plaza is difficult to quantify, this option may seem particularly attractive because it obviates the need to make this value explicit, relying instead on the popularized concept of revealed preference (Samuelson, 1938). On the other hand, if the value of an enhanced sense of community and collective identity is outweighed by the cost savings associated with the Big Box Retailer,

then it could be argued that this preference will also be “revealed” by the shopping decisions of the town’s residents (i.e. the townspeople will patronize the Big Box Retailer and the small shops in the town’s plaza will go out of business).

A collective approach, on the other hand, might involve engaging the townspeople in some kind of collective decision-making process, either by electing representatives who would deal with the issue on behalf of the townspeople, or through a direct referendum, or some other similar process (Olson, 1965). In this case, the value associated with the enhanced sense of community and collective identity derived from the concentration of retail activity in the town’s plaza must be assessed and weighed against the potential cost savings associated with the Big Box Retailer. In other words, if collective action is to yield an efficient outcome (i.e. if the town’s elected official and/or administrators are to make the “right” decision), information about the benefits of the town’s plaza and potential cost savings from the Big Box Retailer must be made explicit, centralized, and evaluated. In addition to this informational challenge, it can also be assumed that the cost of the collective decision-making process itself will be non-trivial, given that the time and effort of those involved in the process must be compensated in some way. It should also be acknowledged that collective action may require other coordination and compliance mechanisms, further increasing the cost (Coleman, 1990; Heckathorn, 1996; Oliver, 1993).

A market-based approach, therefore, appears to have several advantages over a collective action approach. First, by allowing individual townspeople to “vote” with their dollars, town residents avoid the difficult task of quantifying and communicating the value of the town’s plaza and the value of the potential cost savings associated with the Big Box Retailer to a central coordinator. These processes can instead be outsourced to the invisible hand of the market— and the market outcome, it is assumed, will reflect the collective preferences of the townspeople (for an interesting discussion of this type of “outsourcing,” see Ostas, 2001). The costs associated with collecting and centralizing the necessary information to allow a central coordinator to make the “right” decision are therefore avoided. In addition, it could be argued that a market-based approach may be more reliable, in the sense that it will be based on actual behaviour (i.e. where town residents choose to shop), rather than on hypothetical value assessments. Finally, because a market-based approach will result in an emergent outcome that will be sustained by self-interested individual behaviour, no additional coordination and/or compliance mechanisms will be required.

The rest of the story

The mayor, after carefully considering available options, convenes a town meeting in a nearby football stadium. Remarkably, all 100,000 residents attend this meeting, and in an unprecedented feat of collective introspection, are able to assign a precise monetary value of \$100 per resident per year to the enhanced sense of community and shared identity each resident derives from the town's plaza. In addition, the Big Box Retailer presents the results of a detailed study that demonstrates, to everyone's satisfaction, that each member of the community would experience an annual cost savings of \$50 per year by patronizing the proposed Big Box Retailer location. Given this new information, the mayor immediately calls for a vote on the matter. Given that the value of maintaining the town square in its current form is accurate (\$100 per person per year), and potential cost savings associated with the Big Box Retailer is also accurate (\$50 per person per year), it isn't surprising that the vote is 100,000 to 0 against the Big Box Retailer.

Despite the outcome of the vote, the Big Box Retailer continues to petition for permission to build the new store. The mayor, annoyed by the Big Box Retailer's tenacity, approves the permit for the store, reasoning that given the unambiguous support by the townspeople for the town's plaza, the Big Box Retailer will soon go out of business. Surprisingly, on opening day the store parking lot is full. The Big Box Retailer exceeds its sales projections for the first year and declares the store a success. Unfortunately, all the main street shops go out of business and the town's retail economic activity shifts to the Big Box Retailer.

More than a year later, the mayor watches a press conference in which the CEO of the Big Box Retailer speaks at length about his experience in Small Town, USA. The CEO recounts attempts by the mayor and other town administrators to prevent his company from offering the townspeople a retail alternative to the town's plaza. He notes that once the company's new store was built and residents had a choice of shopping locations, they elected to shop at the Big Box Retailer. He cites the full parking lot and the long lines on opening day as examples of pent-up demand and admonishes other small towns for attempting to prevent his company from building stores. "Consumer choice," he concludes, "is as American as apple pie. Give people a chance to choose—let them vote with their dollars. That's what a free market is all about. If consumers don't like our prices or our service, then they won't shop at our stores. It's as simple as that."

A rational decision?

But is it “as simple as that?” Given the scenario’s assumptions, the decision reached through collective action—the town meeting and associated vote—was correct in terms of maximizing social welfare. Despite this initial decision, however, when the town faced the same decision in a market context, it collectively chose to forgo \$10 million ($\$100 \times 100,000$) in value from the town’s plaza in the form of enhanced sense of community and shared identity in exchange for \$5 million ($\$50 \times 100,000$) in the form of retail cost savings. Those familiar with the dynamics of collective action will recognize that the mayor in the Big Box Retailer scenario, by allowing the new store to be built, created a classic social dilemma for individual town residents (Heckathorn, 1996). Social dilemmas can be defined as “situations in which individual rationality leads to collective irrationality. That is, individually reasonable behaviour leads to a situation in which everyone is worse off than they might have been otherwise” (Kollock, 1998). For those accustomed to the idea that economic markets generally yield optimal outcomes, the realization that the invisible hand, in this case, leads to “collective irrationality” may be difficult to understand.

It may be tempting to argue that the observed outcome (in this case, the collectively irrational shift of retail activity in the town to the Big Box Retailer) would not actually occur if the assumptions regarding individual preferences outlined above were accurate. In other words, if the townspeople really placed greater value on the benefits derived from the small main-street shops, then they would not have responded by shifting their economic activity to the Big Box Retailer. Unfortunately, this line of reasoning is flawed. In actuality, even though the townspeople in this example were able to accurately and precisely identify the value they placed on the small main-street shops ($\$100$ per resident per year) and the lower prices offered by the Big Box Retailer ($\$50$ per resident per year), the mayor should have been able to foresee that the townspeople, when confronted with individual choice in a market context, would collectively “choose” to shop at the Big Box Retailer—and would therefore make a collectively irrational decision. The key in this situation is to recognize that the collective identity derived from the confluence of economic and social activity represents a public good (Olson, 1965; Samuelson, 1954) and that attempts to provide (or sustain) a public good through market activity creates what is often referred to as a “social fence” dilemma (Kollock, 1998).

A Primer on Social Dilemmas

Social dilemmas are interaction situations in which rational individual behaviour produces irrational group or collective outcomes. All social dilemmas exhibit at least one deficient equilibrium— an equilibrium that is deficient because there exists at least one alternative, but unrealized, outcome in which everyone would be better off (Heckathorn, 1996; Kollock, 1998). In situations characterized by social dilemmas, it shouldn't be presumed that self-interested behaviour will lead to optimal (or even satisfactory) collective outcomes. As Schelling observers, economic markets, when they function properly, are special cases in which “knowledgeable voluntary exchange of alienable commodities” driven by self-interest are likely to produce good collective results— just as “only some ellipses are circles” (Schelling, 1978: 33).

Most analyses of social dilemmas assume that individuals exhibit a kind of loose utility maximization or a “commonsense notion of purposive action” (Coleman, 1990: 13). There is no significant difference, therefore, between the type of actors assumed to populate economic markets and those assumed to confront social dilemmas. The difference between the predicted outcomes associated with social dilemmas and economic markets lies, instead, in the assumed structure of the interaction context. In the case of social dilemmas, behavioural interdependence among participants is assumed. In other words, it is assumed that actors are affected and/or influenced by the behaviour of others actors. In social dilemmas, behavioural interdependence often manifests itself as jointness of supply, defined as a decrease in average production costs as the number of contributors increases. This means that contribution to a public good by one individual changes the incentives faced by another individual contemplating a contribution to the same public good.

The literature on social dilemmas makes a distinction between two-person and multiple-person dilemmas. Categorizing two-person dilemmas by internal incentive structure yields five distinct categories: Prisoner's Dilemmas, Chicken Games, Assurance Games, Privileged Games and Altruist's Dilemmas (Heckathorn, 1996). The nature and dynamics of social dilemmas can be made clearer by providing a concrete illustrative example. The most well-known of these different categories is the Prisoner's Dilemma— the “game that launched,” according to Kollock, “a thousand studies (actually, several thousand)” (1998: 185).

The Prisoner's Dilemma

The Prisoner's Dilemmas derives its name from the original back story created by Albert Tucker, a colleague of Merrill Flood and Melvin Dresher, the two scientists at RAND Corporation in Santa Monica, California who developed the dilemma in 1950 and used it in an informal experiment (Kollock, 1998: 185). In the original scenario, a law enforcement representative offers two criminals the opportunity to provide evidence against each other in exchange for leniency. They are each informed that if both choose to provide evidence, then the offer of leniency will be retracted and each will receive a relatively long sentence. On the other hand, if neither informs on the other, then the official admits that each is likely to receive a relatively light sentence. The inducement, explains the official, is that if one prisoner provides evidence and the other does not, then the cooperating prisoner will be rewarded with a particularly light sentence while the other will be punished with a particularly long sentence. In other words, there are four possible outcomes: 1) both prisoners cooperate, 2) the first prisoner cooperates, but the second prisoner does not, 3) the first prisoner refuses to cooperate, but the second prisoner does, and 4) neither prisoner cooperates. The chart below displays possible payoffs for each prisoner for each possible outcome.

		Prisoner 2	
		Don't Confess	Confess
Prisoner 1	Don't Confess	3 (6)	15 (16)
	Confess	1 (16)	10 (20)

Prisoner 1 - Upper Left of Cell
 Prisoner 2 - Bottom Right of Cell
 Collective Jail Time in Parentheses

Figure 1 Prisoner's Dilemma Payoff Matrix

The best possible outcome for each prisoner is to confess while the other prisoner refuses to do so. This outcome can be labelled "CD" (confess, don't confess). The next preferred outcome is for neither prisoner to confess (DD), followed by mutual confession (CC), and finally DC (don't confess, confess). This preference order distinguishes a Prisoner's Dilemmas from other types of dilemmas. If, for example, the payoffs in Figure 1 were altered so that each prisoner preferred mutual refusal to cooperate over unilateral confession (i.e. if the most preferred and the second most preferred outcomes were reversed), then the dilemma would be transformed into an Assurance Game (Heckathorn, 1996).

The Prisoner's Dilemma, as described above and represented in Figure 1, has a deficient equilibrium, defined as an outcome in which no participant has incentive to alter his or her behaviour despite the existence of at least one other outcome in which all participants would be better off. The Prisoner's dilemma is also characterized by a dominating strategy, defined as a strategy "that yields the best outcome for an individual regardless of what anyone else does" (Kollock, 1998: 185). In Figure 2, solid arrows represent the choices available to Prisoner 1, while outlined arrows represent the choices available to Prisoner 2. As Figure 2 illustrates, regardless of the behaviour of the other prisoner, each prison is always better off confessing. The structure the prisoner's dilemmas, therefore, creates a context in which rational individual-level behaviour leads to a collectively irrational outcome (in this case, a combined total of twenty years in prison, the worst possible collective outcome).

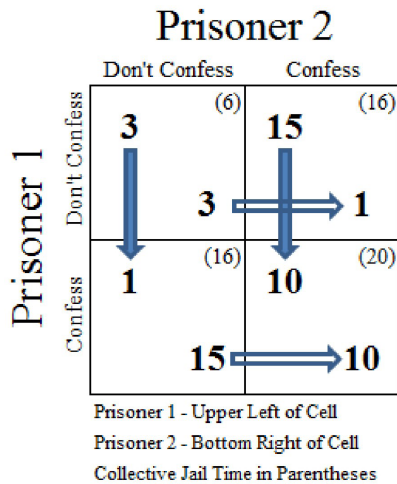


Figure 2 Prisoner's Dilemma payoff matrix with decision arrows

Multiple-person dilemmas

When two-person dilemmas are generalized to multi-person dilemmas, two broad categories emerge: social fence dilemmas and social trap dilemmas. In social fence dilemmas participants incur immediate costs that generate a public good that is shared by everyone. In contrast, in social trap dilemmas individual participants extract an immediate private benefit while simultaneously imposing costs on everyone else. In the first case, participants have an incentive to attempt to avoid the direct cost of participation (i.e. to free ride), while finding a way to take advantage of the benefit generated by the participation of others. In the second case, incentives are reversed and the best possible outcome is for the individual participant to extract immediate private benefit while all other participants refrain from doing so. In the case of social fence dilemmas, if all participants attempt to free ride, then the ability of the group to realize collective objectives will be undermined, even if everyone would have been better off if the group's efforts had been successful. In the case of social traps, if everyone attempts to extract a private benefit, the benefit may be outweighed by the costs imposed on each individual by other individuals in the group.

Utility maximization, social dilemmas and the Big Box Retailer problem

Specialization, division of labour, mutually-beneficial exchange, coordination, and processes related to equilibrium and mutual adjustment are all integral to properly functioning markets and require a certain degree of rational and self-interested behaviour by market participants (Cassidy, 2009; Lindblom, 2001; Walters, 1993). At minimum, therefore, participants in economic markets are assumed to exhibit a "commonsense notion of purposive action" and are generally assumed to be motivated by self-interest (Coleman, 1990: 13). It is often assumed that if individuals are left alone to engage in purposive self-interested behaviour, their efforts, when summed or aggregated, will lead to positive collective outcomes. Market systems are supposed to work the "way ant colonies work" in the sense that in properly functioning economic markets unconstrained individual activity should produce positive outcomes when aggregated (Schelling, 1978: 21-22). As Adam Smith observed, it is as if individual participants in economic markets are led by an "invisible hand" to promote the general welfare, even though their only immediate intention may be to further their own interests.

In contrast to how economic markets are expected to function, the Big Box Retailer— and the preceding discussion of social dilemmas in general— demonstrates that unguided individual behaviour motivated by self-interest, under certain conditions, will produce suboptimal outcomes.

The Big Box Retailer Problem outlined above is an example of a social fence dilemma and exhibits many of the same characteristics as the Prisoner's Dilemma. Given the relative value the townspeople placed on the town's plaza, the optimal outcome would have been for the townspeople to have continued to patronize the small shops in the town's plaza. Instead, the incentive structure of the situation created an incentive for individual townspeople to attempt to free ride on the public good generated by the buying decisions of other town residents. Because each resident faced the same incentive structure and chose the same course of action, the townspeople, considered collectively, irrationally elected to shop at the Big Box Retailer, thereby putting the main street shops out of business. As Kollock observes, in the social dilemmas "individual rationality leads to collectively irrationality" (1998).

Markets from the inside

The popular notion of economic markets is only loosely connected to the well-developed theoretical models that formally address systemic outcomes, such as productive and allocative efficiency and maximization of social surplus (Bator, 1957; Smith, 1776/1976). Popular perceptions and beliefs about economic markets, however, are generally more proximate to individual behaviour, and are often more important in determining the nature of collective action (or lack thereof). In other words, what market participants observe, and how they make sense of their observations, is not only essential to an understanding of individual market behaviour, but also to an understanding of the decision to coordinate behaviour through market processes rather than through collective action.

The Big Box Retailer scenario illustrates why it is often difficult for individual actors to assess the efficiency of systemic outcomes based on the observable behaviour of other actors. In particular, the Big Box Retailer problem illustrates two common, but logically suspect, attributions that are often made by market participants based on observed customer demand. The Big Box Retailer scenario also serves to highlight the counter-intuitive nature of associated feedback loops that, unless properly interpreted, may erroneously be perceived to support market-based approaches to collective decision-making (i.e. approaches designed to "let the market decide").

Attribution problems

In the Big Box Retailer scenario, townspeople were offered a choice— either shop at the small downtown shops or patronize the Big Box Retailer outlet. An observer might assert the following:

By patronizing the Big Box Retailer, the townspeople are demonstrating that they value the benefits of shopping at the Big Box Retailer more than the public goods derived from the town's plaza.

Unfortunately, this conclusion fails to take into the account the individual-level incentives inherent in this type of social dilemma. In this case, although it may be in the interest of individual actors to patronize the Big Box Retailer, it may not be in the collective interest of the townspeople to do so. In other words, as the literature on collective action demonstrates, the notion of revealed preference cannot be applied at the group or aggregate level with any degree of confidence (Axelrod, 1984; Hardin, 1982; Heckathorn, 1996; Kollock, 1998; Oliver, 1993; Olson, 1965; Schelling, 1978). In social dilemmas, the aggregate behaviour of the group cannot be used to make accurate attributions regarding individual preferences or motives. For example, observation of the collective behaviour of two participants in a prisoner's dilemmas might be used to justify the assertion that the participants prefer to be incarcerated. Why else would they "choose" to spend the maximum time in jail (see Figure 2, the bottom-right cell)? In the case of the Big Box Retailer, individual townspeople are not making a binary value assessment by shopping at the larger outlet, they are making a rational calculation within the context of a social fence dilemma. Given that best outcome for each individual is to patronize the Big Box Retail (as long as everyone else continues to patronize the shops in the town's plaza), individual townspeople are reacting to incentives to engage in free-riding behaviour. As is the case here, a defining characteristic of social dilemmas is that rational behaviour by individual participants leads to irrational group or collective outcomes.

Again, based on observed behaviour, the following might also be asserted:

The fact that the townspeople continue to patronize the Big Box Retailer over time is an indication of the efficiency of the outcome, given that if the outcome were inefficient, corrective market forces would intervene.

As is the case with the first assertion, this conclusion is premised on inaccurate assumptions. In this case, the problematic assumption is that inefficient or deficient

market outcomes are inherently unstable. In the case of typical market commodities, for example, a rise in price generally gives rise to countervailing self-correcting behaviour on the part of market participants that will return the market to a stable equilibrium (Bator, 1957; Walters, 1993). The self-correcting tendencies of the market mechanism, however, are dependent on a number of assumptions, one of which is the behavioural independence of market participants. In situations in which this assumption is violated— i.e. in the case of social dilemmas— there is no assurance that inefficient or deficient outcomes will be checked by corrective forces. For example, in the case of the prisoner's dilemma, even though both prisoners may acknowledge that the bottom-left cell in Figure 2 represent the worst possible joint outcome, neither prisoner may be willing to unilaterally alter his or her behaviour in order to improve the situation. Likewise, in the case of the Big Box Retailer scenario, there is no incentive for individuals to alter their behaviour, even though it may be universally recognized that the collective outcome is deficient. Stability of a collective outcome, therefore, cannot be confidently interpreted as an indication of outcome efficiency.

Deceptive feedback loops

In the Big Box Retailer problem, the mayor could have elected to pursue a market-based "let-the-consumer-choose" approach from the outset. It is interesting to observe that feedback from such an approach would likely have been positive. For example, such an approach would not have required any upfront costs and no constraints on individual behaviour would have been necessary, which would have obviated the need to establish any monitoring or compliance mechanisms. The emergent outcome would have been viewed as legitimate because it would have been supported by the ongoing consumer behaviour of the townspeople. Despite these virtues, however, this approach would have produced (and subsequently did produce) a deficient outcome.

In contrast, feedback associated with collective action is likely to be negative for several reasons. In the specific case of the Big Box Retailer, significant costs were incurred in making individual preferences explicit and available to a central coordinator. Second, a decision to constrain retail activity to the city centre would have required monitoring and enforcement mechanisms, and would likely have been perceived as a constraint on individual behaviour. Finally, the outcome would have been unstable, given that there would have been ongoing incentives for individuals to find a way to enjoy— but to avoid contributing to— the public good generated by the confluence of social and economic activity in the town's plaza. In other

words, there would have continued to be individuals that would have advocated for alternative retail options. Collective action, therefore, in contrast to a market approach, is likely to be costly, require enforcement mechanism, and to be the target of ongoing efforts to undermine it. Despite these disadvantages, in the case of the Big Box Retailer problem (and in the case of social dilemmas, in general), collective action is the most likely to produce optimal outcomes.

"If the outcome is deficient (or suboptimal)," the argument goes, "why would town residents continue to engage in contributory behaviour, thereby 'choosing' the deficient outcome?" If collective action produces an outcome that is the preferred by the town residents, considered collectively, why would residents need continuous encouragement (and/or the threat of punishment) to induce them to continue to 'choose' it? The answer to both these question lies in the counter-intuitive nature of social dilemmas. The Big Box Retailer scenario is designed to illustrate a case in which the easy path—the market approach—produces a deficient outcome that can be improved through collective action.

Application

The attributions referenced above, if generalized, can be observed in a number of different market contexts. The controversy over CEO pay in the U.S., for example, represents a context in which similar attributions are often made in an attempt to justify what appears to be unreasonably high compensation (Owen, 2009). In the Big Box Retailer scenario, it was asserted, by a hypothetical observer, that because the townspeople patronized the Big Box Retailer, their behaviour revealed an individual-level preference for the associated collective outcome. The same attributions are often made in the case of CEO pay (i.e. if companies, considered collectively, pay CEO large sums of money, it is because individual companies, and the individuals that run those companies, prefer to do so). Likewise, it was assumed by a hypothetical observer that because the townspeople continued, over time, to patronize the Big Box Retailer, the outcome couldn't be inefficient, because if it were, market forces would intervene. The same argument is often made with respect to CEO pay packages: "If the pay packages represent an unreasonable expense on the behalf of corporations, the competitive pressures will curtail the practice." In the case of CEO pay, as in the stylized Big Box Retailer scenario, both the notion that collective behaviour can be used as an indicator of revealed preference and the assumption that inefficient (or deficient) market outcomes are unstable support problematic attributions regarding the economic efficiency of market outcomes.

Attempts to address what Owen (2009) refers to as the CEO “pay problem” often run up against the same types of counter-intuitive feedback loops that make market-based solutions both the least costly to implement and enforce, despite the fact that these solutions fail to address the underlying incentives problems and are likely to produce deficient outcomes.

Other markets can be identified in which social dilemmas contribute to problematic and/or inefficient outcomes and in which actor attributions often complicate attempts to address these deficiencies. The U.S. college textbook market, for example, has been described as “broken” because “the primary individuals who choose college textbooks (faculty) are not the people that pay for those textbooks (students)” (Koch, 2006: 1). The separation of the purchase decision and payment has contributed to a set of market participant incentives that result in systemic dysfunction. One industry insider accused the U.S. college textbook of overcharging “a captive audience (students) for needlessly thick, poorly edited tomes,” failing to adequately compensate academic authors that provide the content for these textbooks, and needlessly causing faculty (and students) headaches by releasing new editions “filled with unwanted bells and whistles, on a falsely sped-up publication cycle” (Weir, 2009). There are significant parallels between the textbook market and other markets characterized by a separation of the purchase decision and payment. For example, in the U.S. prescription drug market, doctors generally decide which drugs to prescribe, but the patient is responsible for payment. Another obvious example is the U.S. healthcare sector. In each of these cases, individual-level incentives lead to interdependent patterns of economic interaction that produce suboptimal collective outcomes— and in each case, individual actors often make erroneous attributions, based on observed demand and stability, regarding outcome efficiency. Likewise, feedback loops similar to those identified in the stylized Big Box Retailer scenario complicate attempts to address these deficiencies.

This approach goes beyond traditional discussions of market failure (see, Bozeman, 2002; Stiglitz, 2000) in two ways. First, this approach focuses on social dilemmas, and by association, on behavioural interdependence. This represents a more narrow focus than general discussions of market failure related to externalities, transactions costs, information problems, monopolies, and other factors (Bozeman, 2002). Second, the primary intent is to understand the attributions often made by individual actors in these situations and the often counter-intuitive nature of feedback loops that may encourage acceptance of deficient outcomes— outcomes that could be improved through centrally-coordinate collective action.

Changing the assumptions

The assumptions of Big Box Retailer scenario could easily be altered so that restricting economic activity to the town square is not the preferred collective outcome. For example, the relative values attached to the enhanced sense of community and collective identity, and the cost savings associated with the Big Box Retailer, respectively, could be reversed. It could also be assumed that the collective decision process is inappropriately controlled by residents with a vested interest in the preservation of the city center shops. Under these conditions, collective action might result in the restriction of retail activity to the city center even though the townspeople, considered collectively, would benefit from the entry of the Big Box Retailer.

The point of the Big Box Retailer is not to argue that collective action always produces superior outcomes—it is only intended to demonstrate that collective action *can* produce superior outcomes. The Big Box Retailer scenario is designed to demonstrate that the market mechanism is capable of producing stable, but inefficient, outcomes that are supported by ongoing individual behaviour. I do not assert that the market *always* produces such outcomes—only that such outcomes are likely in contexts characterized by behavioural interdependence. The question is how to distinguish between efficient and inefficient market outcomes, or how to distinguish between efficient and inefficient outcomes associated with collective action. In the case of the Big Box Retailer, neither a full parking lot, viewed as a proxy for demand, or ongoing contributory behaviour by town residents, should be viewed as evidence of the superiority of market outcomes. Likewise, neither the upfront costs associated with collective action, nor the need for ongoing monitoring nor compliance mechanisms should be viewed as indicators that a collective action is unwise.

The Fat Middle

The contrast between markets and collective action is similar to the distinction between markets and hierarchy in transaction cost economics (Alchian & Demsetz, 1972; Coase, 1937; Demsetz, 1988; Hennart, 1993; Williamson, 1985), although there are some important differences. It can be argued, for example, that transaction cost economics assumes the primacy of economic markets and then proceeds to carve out theoretical space for hierarchical relationships by identifying areas in which markets may not function properly. In this respect, transaction cost

economics is a theory of market failure as much as it is a theory of hierarchy or the modern "firm" or corporation (Demsetz, 1988; Hennart, 1988). In transaction cost economics, therefore, corporations are conceptualized as islands in an open ocean of market transactions and the challenge is provide a theoretical explanation for their existence against the backdrop of an overarching suspicion that these islands represent inconvenient imperfections in the seascape.

Although similar in certain respects to the ideas espoused in transaction cost economics, the arguments here are more aligned with similar arguments in economic sociology that view markets as intentional social institutions that depend on collective action for definition, structure and maintenance (Smelser & Swedberg, 1994). Although barter systems, and the human propensity to "truck, barter, and exchange one thing for another"— may be natural phenomena, properly functioning economic market are not (Smith, 1776/1976: 7). Economic markets are complex institutions brought about and preserved through collective action. There is a long list of public goods that undergird market activity, including personal liberty, property rights, social norms governing quid pro quo exchange, the sale of activities and performances, and the emergence of intermediaries, entrepreneurs, and collectives (Lindblom, 2001). Another list of structural conditions must be added to this list first list, including a relatively large number of independent buyers and sellers, the absence of pricing power, product homogeneity, the absence of entry or exit barriers, the absence of artificial price constraints, and the presence of complete and costless information (Bator, 1957; Walters, 1993). These public goods and structural conditions can be conceptualized as the stage upon which economic actors enact economic markets. Absent these public goods or structural requisites, which must be produced through collective action— markets are unlikely to yield positive outcomes.

This view suggests that efficient economic markets should be conceptualized as a special case of social coordination achieved through "mutual adjustment rather than by a central coordinator" (Lindblom, 2001). It is important to recognize both the virtues and limits of economic markets, given that not all markets will yield positive outcomes. This notion is captured succinctly in Schelling's assertion that "only some ellipses are circles" (Schelling, 1978: 33). This argument runs parallel in some respects to Hennart's position that most economic transactions occur in the "swollen middle" and are a mix of market and hierarchy (Cassidy, 2009; Hennart, 1993).

The inseparability of market activity and collective action becomes apparent when remedies for social dilemmas are considered. A natural reaction of market

advocates social dilemmas is to attempt to find a “market” solution— i.e. a solution that emerges in an unguided or unplanned fashion from self-interested individual interaction. For example, if the initial assumptions of the prisoner’s dilemmas were altered to allow for repetition of the same scenario with the same participants, then the repeated interaction might foster cooperation and better outcomes might be realized. In some circumstances, the possibility of facing the same individual in a similar situation at some point in the future might be sufficient to induce cooperation. Regardless of the specifics of particular solutions, the hope is that solutions would arise spontaneously from individual interaction. If such solutions were common, then social dilemmas would not represent a significant threat to the ability of market processes to produce optimal collective outcomes, given that self-interested individuals, when confronted by social dilemmas, would simply negotiate mutually-beneficial cooperative workarounds that would allow optimal outcomes to be realized. In this scenario, social dilemmas could be conceptualized as stones in a streambed— obstacles that that the larger current of market transactions would adjust to or flow around.

There is an active and extension literature on solutions to social dilemmas (Kollock, 1998). Many of these solutions rely on repeated interaction, the presence of trust, the ability to publicly commit to particular courses of action, the emergence of norms (and associated sanctions), or other mechanisms that serve to change the dilemmas dynamics. Axelrod explores “tit-for-tat” and other cooperative solutions to these kinds of dilemmas in an influential book entitled “The Evolution of Cooperation” (1984). Kollock (1998) groups solutions into three categories: motivational, strategic and structural. The prisoner’s dilemmas outlined above is only one of five different dilemmas identified by Heckathorn (1996) in his theoretically exhaustive inventory— each with its own incentive structure and internal dynamics.

The idea of market-like (i.e. emergence, unplanned, and spontaneous) solutions to social dilemmas is problematic for several reasons. First, some types of social dilemmas are more difficult to resolve than others. Social dilemmas that are characterized by a dominating strategy are particularly difficult to resolve. Second, solutions to social dilemmas generally involve either expanding the concept of self-interest to include, for example, consideration of social value orientations (e.g. McClintock & Liebrand, 1988) or group identity (e.g. Kramer & Brewer, 1984), or working together with other participants to monitor behaviour, provide selective incentives, set up sanctioning systems, or establishing an external authority (Komorita, 1987; Olson, 1965; Ostrom, 1990; Rutte & Wilke, 1985; Yamagishi,

1986). In most cases, these types of solutions require effort, planning, organization and resources, and therefore do not conform to the generally-expected notion of unguided or spontaneous ordering generally associated with efficient markets. Many of these solutions are more accurately categorized as examples of collective action— regardless of whether or not market participants find solutions to these social dilemmas themselves or if solutions are implemented by third parties. In other words, collective action is required to resolve these types of dilemmas so that markets can function— and these efforts are more accurately conceptualized as part of the stage upon which markets are enacted than part of the market system itself.

Conclusion

The primary purpose of this article is to demonstrate that faith in the ability of economic markets to produce optimal outcomes is, under certain circumstances, misplaced. In exchange situations characterized by behavioural interdependence, as demonstrated in the Big Box Retailer scenario, social dilemmas arise that can lead to suboptimal outcomes that are stable and supported by ongoing exchange activity. Unfortunately, stability and ongoing contributory behaviour are often inappropriately employed as indicators of market efficiency.

Social dilemmas represent fertile ground for future theorizing. A number of important questions— questions that deserve much more lengthy and careful treatment than can be afforded here— have yet to be mentioned. For example, how much value do market participants place on the absence of a central coordinator? In other words, how much value do market participants place on the characteristics of the market mechanism independent of the merits of specific market outcomes? This question addresses the link that is often made between economic markets and individual freedom (Friedman, 1962; Lindblom, 2001). Collective action often requires coercion in some form to prevent free-riding and other individual behaviour that may run counter to the realization of group objectives. In other words, there may be cases in which collective action would yield significantly better collective outcomes, but participants may prefer suboptimal market outcomes once the value of the absence of coercive structural elements inherent in collective action are taken into account. Another question concerns the degree to which business educators are responsible for teaching the virtues and limits of economic markets? This question is particularly relevant in the ongoing debate regarding the role of business school curriculum and ethics education in recent corporate scandals (Alsop,

2003; Crane & Matten, 2004; Ghosal, 2003; Pfeffer & Fong, 2004). Other questions arise in the context of the intersection of corporate strategy and corporate social responsibility (see, for example, Porter & Kramer, 2011). For example, how should business behave in situations in which promotion of the market mechanism is in the interest of the firm, but not necessarily in the best interest of the community and/or society? Should firms seek to extend market activity beyond the domain in which it is likely to yield optimal outcomes? What are the risks, if any, of doing so?

A clear-eyed analysis of the Big Box Retailer Problem has the potential to simultaneously contribute to our understanding of economic markets and increase our respect for the potential value and efficiency of collective action. Discussion of the respective roles of economic markets and collective action may also contribute in significant ways to larger philosophical issues related to the proper role of business in society.

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