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The Impact of Personal and Organizational Moral Philosophies on Marketing Exchange Relationships: A Simulation Using the Prisoner's Dilemma Game

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ABSTRACT. The purpose of this research is to examine the impact of individual and firm moral philosophies on marketing exchange relationships. Personal moral philosophies range from the extreme forms of true altruists and true egoists, along with three hybrids that represent middle ground (i.e., realistic altruists, tit-for-tats, and realistic egoists). Organizational postures are defined as Ethical Paradigm, Unethical Paradigm, and Neutral Paradigm, which result in changes to personal moral philosophies and company and industry performance. The study context is a simulation of an exchange environment using a variation of the prisoners' dilemma game. A literature review is provided in the opening section, followed by details on the simulation, discussion of the results, and the implications for theory and practice.

KEY WORDS: moral philosophies, marketing exchange relationships, prisoner's dilemma game.

> Since it is uppermost in the minds of businesspeople to survive and preferably survive well, will not moral business activity put businesspeople at a competitive disadvantage?
>
> (Klein, 2003: 394)

Introduction

The concept of morality has a lengthy history of debate in the field of philosophy as well as the subfield of applied ethics. While definitions abound, one perspective suggests that the term refers to thinking patterns and subsequent actions that impact the lives of ordinary citizens (Brinkmann, 2002). Within both personal and professional contexts, morality implies a set of internal rules and regulations that distinguish right from wrong and potential rewards and punishments for appropriate behavior (Schroeder, 2000). Moral responsibility exists where the agent is identifiable and has the ability to exercise freedom of choice in actions or reactions to moral dilemmas (Grcic, 1985). Moral behavior evolves and changes over time as individuals meet their obligations in uniquely successful ways that become acceptable within the larger society (Gick, 2003).

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Awareness of the existence of moral problems is a function of individual factors that come together to form a person's cognitive moral development (Ho et al., 1997). According to Kelley and Elm (2003: 141), these factors include intrapersonal attributes such as "values and mindsets, individual perception filters, and gender, as well as a variety of additional cognitive processes." This perspective notwithstanding, most theoretical models of moral decision-making put forward an interactionist perspective that assumes these individual variables operate within and are impacted by the context in which they are embedded (Kelley and Elm, 2003; Trevino, 1986). The most important of these contextual influences is the social situation, often defined by the group memberships of the agent wrestling with the moral issue.

Studies of human behavior in small groups reveal a high degree of similarity in moral actions due to the natural conforming effect that ensures group survival (Gick, 2003; Grcic, 1985). The level of approval agents expect to receive from moral referent groups impacts their degree of moral conformity (Ryan and Ciavarella, 2002). As Klein (2003: 390) aptly notes, "people seek other people's approval and they shun disapproval; therefore sympathy tends to produce conformity to social norms, both in attitude and behavior." However, as implied earlier, individuals who deviate from group norms but are successful in meeting the larger goals and objectives of the collective may permanently change the moral climate. Such survival-based actions are often inspired by the ebb and flow of cooperation and competition within and outside the focal group's domain (Schroeder, 2000).

Morality, marketing and business ethics

Discussions of morality in business practice are rooted in applied ethics, which help "to analyze, handle and prevent conflict in professional contexts, by addressing or introducing a moral dimension" (Brinkmann, 2002: 161). Consistent with our previous discussion, operatives and agents utilize ethical principles to solve business dilemmas that are consonant with their personal moral philosophies (Singhapakdi, et al., 1999). However, once again the literature suggests that the organizational setting and the larger environment frame ethical issues and influence attitudes and behaviors (Singhapakdi et al., 1999; Valentine and Barnett, 2002; Wotruba, 1990). As a result Bruce and Stephens (1998: 163) contend, "The subject of workplace integrity overestimates the agency of freewill and understates the role of social power."

Whether by formal design or informal methods, a firm's ethical climate is a socializing mechanism that instills employees with its mores and values (Ferrell and Gresham, 1985; Kelley and Elm, 2003). The resulting practices seek conformity among agents in exchange for meeting their social, financial, and other personal needs (O'Boyle and Dawson, 1992). Continued reinforcement of these norms occurs through explicit and implicit outcome expectancies that the company conveys to its members (Wright, 1995). Thus, in the final analysis personal integrity "is a multifaceted attribute that reflects, among other things, moral courage (i.e., the will to do what one knows one should do), the ability to balance institutional loyalty with moral autonomy, and the avoidance of hypocrisy and self-deception (i.e., practicing what one preaches)" (Bruce and Stephens, 1998: 165).

From the marketers' perspective, applied ethics involves "marketing morality," with a focus on issues related to product, place, promotion, and price (see Brinkmann, 2002; Hunt and Vitell, 1986). Additionally, marketers' unique perspective on the interests of various stakeholders, especially consumers, and the inclusion of these interests in their decision calculus lead to a set of important moral challenges. Under ideal circumstances, transparent and mutually beneficial activities define the marketplace, and exchange processes are typified by trust and cooperation (Klein, 2003). Stable long-term relationships are formed, with buyers and sellers assured of the ethical character of each other (Sommers, 1997). However, moral hazards arise when one party to an exchange is able to act in self-serving ways that the other party cannot observe, monitor, or resolve (Kurland, 1995).

This self-serving persona is characterized as egoism, which may be juxtaposed against altruism whereby marketers "are sensitive to the needs, wants, and desires of many different publics" (Goolsby and Hunt, 1992, p. 58). Sommers (1997) explained that these agents should be prone to acts of unselfish goodwill in an attempt to ensure that other parties profit from their interactions. The American

Marketing Association posits a middle ground, defining such relations through the principle of equivalence and its two-part set of obligations for both sellers and buyers (O'Boyle and Dawson, 1992). These responsibilities require that exchange partners trade items of equal value that impose burdens of equal cost. This mutual gain/mutual pain perspective is best characterized as reciprocal altruism that values the long-term benefits of reciprocity (Klein, 2003).

The personal moral philosophy of the agent notwithstanding, scholars believe that the boundary-spanning function of marketing and the diversity of interests it assimilates increase the likelihood of unethical behavior (Goolsby and Hunt, 1992; Valentine and Barnett, 2002). This dilemma is particularly acute in the sales profession because it often is the primary source of income for the firm (Dubinsky, 1998). As a result, the contexts in which salespersons operate "requires the agent to conceive all persons and employ all relationships as sources of potential prospects, [which] is inconsistent with the possibility of trust" necessary for ethical practice (Oakes, 1991: 679). The typical performance evaluation process, with its focus on short-term results rewarded on a commission basis, further complicates the situation (Kurland, 1995; Singhapakdi and Vitell, 1991).

Of course organizational leadership is capable of ensuring compliance to moral directives (Wright, 1995). Research shows "the attitudes and behavior of top management toward ethical issues influence the behavior of subordinates" (DeConinck, 1992: 791). However, the reward system to compensate salespeople also has a direct impact on managers' performance pay. Because of this connection, managers are more likely to impose negative sanctions on salespeople with poor records of performance who violate moral dictates than their more accomplished counterparts (Bellizzi and Hite, 1989). Thus, impressive sales performance may result in less disciplinary action, despite the use of unethical practices to accomplish this goal and organizational procedures designed to punish such actions without prejudice (Bellizzi and Hasty, 2003).

Our research purpose

The purpose of this investigation is to examine the impact of personal moral philosophies and organizational ethical postures on exchange relationships. Personal moral philosophies are operationalized as the pure prototypes of "true altruists" to "true egoists" along with three hybrids that represent middle ground (i.e., "realistic altruists," "tit-for-tats," and "realistic egoists"). Firm ethical postures are operationalized through changes in personal moral philosophies that occur based on performance measures and/or moral orientation. The context for this study is a computer simulation of an exchange environment that mirrors the outcomes of sales transactions. Details on the method of simulation are provided in the next section, followed by a discussion of the results and the conclusions/implications for future research.

Simulating morality in marketing exchanges

This simulation is based on Axelrod's (1984) Iterative Prisoner's Dilemma (IPD) in which two computer-generated agents conclude transactions by cooperation or defection, with exchange partners ignorant of the others' decisions until they are finished (also see Axelrod and Hamilton, 1981). Points are awarded after each transaction: if only one agent selects defection that agent receives five points while the other receives none; if both agents choose to cooperate they each receive three points; if both agents defect one point is awarded to each. The adaptation for our study involves simulated marketing agents who have various moral philosophies and work in virtual companies with specific ethical cultures, exchanging with agents and firms who possess their own philosophies/cultures (see Bazzan et al., 2002 for other forms and the Appendix). Guttman (2003: 633) examines a similar marketing context in which: "Each party to the transaction may choose to uphold his or her side of the bargain, a move which we denote by C (cooperate), or to renege, which we denote by D (defect)."

Agent morality and ethical cultures

Marketing agents and their personal moral philosophies are defined as: True Altruists (TAs) who cooperate with other agents regardless of the results from previous encounters; Realistic Altruists (RAs)

who cooperate when other agents or their firms have cooperated at least two times during the last five interactions while defecting under the remaining circumstances (if there is insufficient history the agent cooperates); Tit-For-Tat (TFTs) are agents who mirror the previous moral decisions of other agents or their firms to either cooperate or defect; Realistic Egoists (REs) who defect when other agents or their firms have defected at least two times over the last five interactions, while cooperating in all other situations (except with inadequate history the sales agent defects); and Egoists (Es) who defect without regard to the previous history of exchange.

The model includes two distinct industries (i.e., buying firms and selling firms) that represent business-to-business trading partners, with each industry divided into five companies containing 10 agents apiece. The moral philosophies among agents in firms vary from unitary (all 10 the same) to imbalance (six of one type and one each of the other four) to balance (two of each type). Additionally, firms may have an orientation to exchange such as: Neutral Paradigm (NP) which allows agents to change moral perspectives toward agents that are the most financially successful; Ethical Paradigm (EP) where agents are able to change perspectives to that of successful agents in their firms as long as movement is towards True Altruism; or Unethical Paradigm (UP) which represents the converse and agents change morality to mirror successful peers as long as movement is in the direction of True Egoism.

Simulating exchange relationships

Agents generate income when they complete a transaction and receive the dollar value equivalent to the IPD point scale (5, 3, or 1). Consider the case of two morally identical industries that exchange with one another (there are no intra-set exchanges). This particular simulation contains an imbalance of personal moral philosophies, with each organization dominated by a different philosophical approach (see Figure 1). The opening round of exchanges begins with the random selection of one agent from each set. They interact according to predetermined moral stances as shown by the Egoist and the Realistic Altruist in Figure 2. At this start, RA has no historical information on E or its firm, so RA

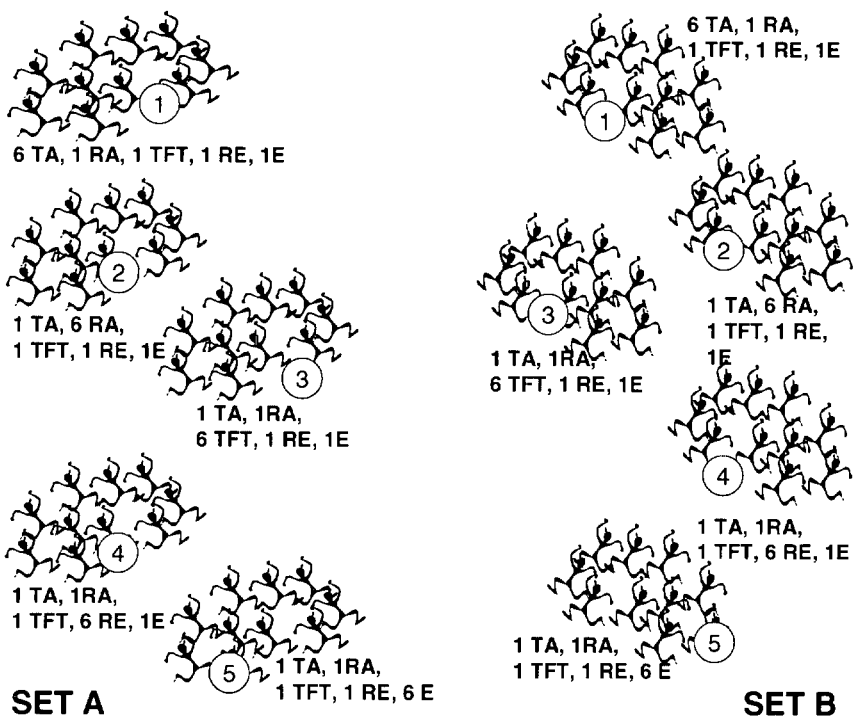

Figure 1. The model contains two sets of firms and each is divided into five companies with 10 sales agents. Each company has a distinct dominate moral philosophy; e.g., Company 1 has 6 TAs, and 1 each of the other 4 types.

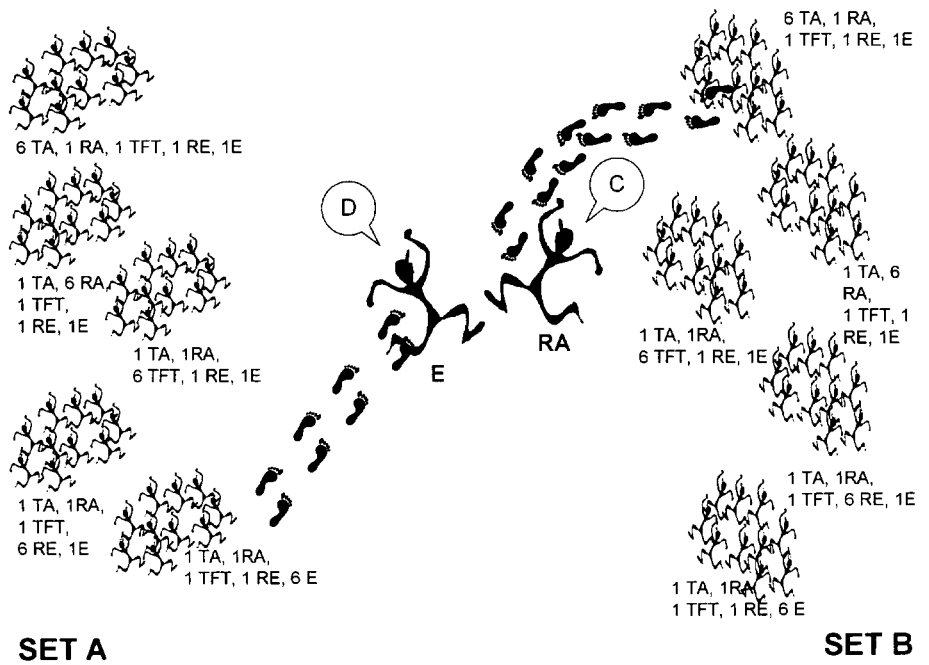

Figure 2. The first round commences when a randomly selected agent from each industry meet and decide whether to cooperate or defect. In this first round, the RA has yet to learn that the E is a defector.

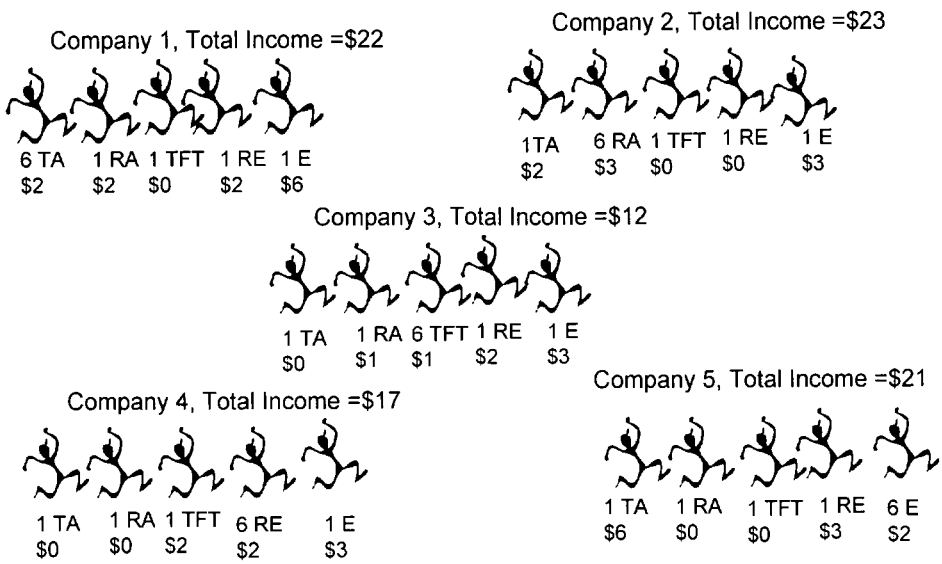

Figure 3. Total revenue and average income for each moral philosophy is tallied after each round. The random selection of agents causes the variation in earnings.

cooperates while E defects. The first round concludes when all agents, who continue to be selected at random, have had a chance to make a transaction.

Figure 3 reveals the income for each company along with the average revenue for each agent perspective within firms after one complete round of the simulation. Dollar amounts are not identical across moral perspectives or firms because of the random nature of selection associated with the IPD. The simulation also included a firm-wide cultural shift through the EP (Ethical Paradigm), resulting in three TFT (Tit-For-Tat) agents within Firm 3

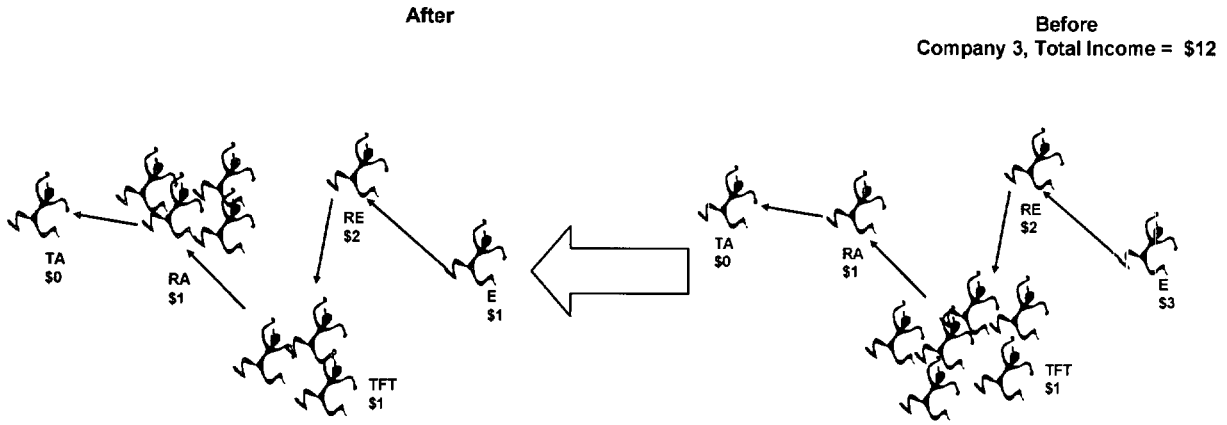

Figure 4. Income amounts are used to determine a company-wide cultural shift. In the Ethical Paradigm, agents migrate to moral philosophies closer to True Altruism. Our demonstration reveals that some of the TFT agents made nothing and therefore became RAs.

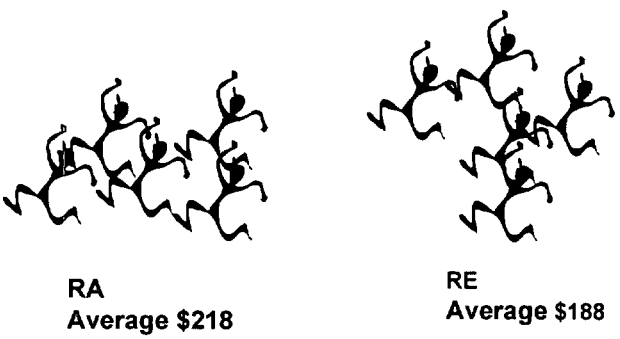

Figure 5. Play concludes after 100 rounds, and our results show a split between RA and RE personal moral philosophies.

changing their moral stance to that of an RA (see Figure 4). The simulation ends after 100 rounds and Figure 5 shows Firm 3's final agent distribution. The results presented next report data after each simulation was completed, with a grand total of 16 separate scenarios. Similarities and differences within three categories of runs are also presented, emphasizing statistically significant results across firms.

Results from the simulation

The discussion of our results includes simple cases involving unitary moral philosophies juxtaposed against one another as well as several more complex combinations of philosophies and organizational ethical postures. The first subsection chronicles data from 10 distinct simulations that examine all dyadic combinations among firms composed of True Altruists, Realistic Altruists, Tit-For-Tats, Realistic Egoists, or Egoists. The second subsection presents results involving an imbalance of moral philosophies run separately under the three postures of Ethical Paradigm, Unethical Paradigm, and Neutral Paradigm. The third subsection mirrors the previous analysis except that the moral philosophies are in balance. Statistics include mean revenue by industry and firm followed by significance tests,

TABLE I

Mean income for unitary moral philosophies

	TA	RA	TFT	RE	E
TA		1993.16	1998.94	1997.66	995.24
RA	1503.68		1500.35	1240.71	994.82
TFT	2000.06	1990.76		1511.28	1503.00
RE	2000.34	1786.67	1511.51		1488.57
E	2007.35	1007.18	998.70	1008.59	

Shaded boxes represent significant differences. Values should be read by rows.

TABLE II

The agent distribution by company for the Ethical Paradigm and imbalanced moral philosophies

	Agent distribution by type				
	TA	RA	TFT	RE	E
Company 1	7.42	0.26	1.10	0.90	0.32
Company 2	6.87	1.47	0.10	1.04	0.52
Company 3	5.32	1.21	2.63	0.32	0.52
Company 4	3.88	0.87	2.34	2.71	0.20
Company 5	2.35	0.58	2.25	2.20	2.62

The number of TA agents in all companies increased.

along with agent distribution by philosophical orientation.

Unitary moral philosophies

The combination of unitary moral philosophies includes 10 pair-wise comparisons. Across all simulations, four revealed statistically significant differences in mean income (see Table I for more details). For example, a comparison of the "pure" philosophical forms shows that True Altruists ($995.24) earned significantly less revenue than their Egoist counterparts ($2007.35; $t = 2.37$, $p < 0.05$). However, Egoists attained significantly less income than the more pragmatic Tit-For-Tats ($998.70 versus $1503.00; $t = 2.95$, $p < 0.05$) or Realistic Egoists ($1008.59 versus $1488.57; $t = 3.62$, $p < 0.05$). Finally, the Tit-For-Tats ($1990.76), with their brand of reactive ethics, bested the Realistic Altruists ($1500.35) as well ($t = 2.20$, $p < 0.05$). These findings suggest the primacy of middle ground personal moral philosophies over the extreme forms, with a modest lean towards egoism.

Imbalance of moral philosophies

The simulations involving an imbalance of moral philosophies included five firms on each side of the exchange, with six sales agents operating under a single philosophy that differs by company and one agent for each of the remaining four options. The first run employed the cultural orientation of Ethical Paradigm, and the number of agents in the TA category increased in all cases (see Table II for the final distribution of agents). Further, ANOVA revealed significant differences in revenue across firms ($F = 2.94$, $p < 0.01$), with a mean total income of $1821.48. Significance tests performed on all two-firm combinations show that this difference is a result of higher earnings between the company initially dominated by TAs ($1845.45) versus those originally concentrated with REs ($1798.15) or Es ($1809.80), along with the RA firm ($1828.68) besting the RE firm (see Table III).

TABLE III

Mean income differences for imbalance in moral philosophies and ethical paradigm

	Company 2	Company 3	Company 4	Company 5
Company 1	16.77	20.13	47.30	35.65
Company 2		3.36	30.53	18.88
Company 3			27.17	15.52
Company 4				11.65

Shaded boxes represent significant differences ($F = 2.94$, $p < 0.01$).

TABLE IV

The agent distribution by company for the Unethical Paradigm and imbalanced moral philosophies

	Agent distribution by type				
	TA	RA	TFT	RE	E
Company 1	4.01	2.71	1.20	1.07	1.01
Company 2	0.49	5.91	1.38	1.10	1.12
Company 3	1.05	2.17	4.06	1.24	1.48
Company 4	0.76	1.47	0.83	4.27	2.67
Company 5	0.70	1.27	0.74	1.21	6.08

There is only a slight shift in agents toward Egoists.

The second run contained the same set of companies using the Unethical Paradigm, resulting in a much more modest shift in marketing agents away from their original moral philosophies toward Egoists (see Table IV). Income differences among firms are significant ($F = 21.89$, $p < 0.01$), with mean total revenue of $1432.31. Significance tests demonstrate that this result is based on higher earnings for the first initial philosophy emphasis versus the latter: TA–RA, TA–TFT, TA–RE, TA–E, RA–E, TFT–E, and RE–E (see Table V). The third run had a Neutral Orientation applied to these firms, and the data illustrate a more pronounced bias towards Egoists than the Unethical Paradigm (see Table VI). Differences in revenue show a marked lack of significance, yet the mean income of $1131.45 reinforces that movement away from TAs in favor of Es negatively impacts performance.

Balance of moral philosophies

Balanced moral philosophies require that firms contain two of each type (i.e., TAs, RAs, TFTs, REs, and Es). Since each firm has an identical assortment of agents at the start of the simulation, our prediction was that there would be no real differences in total revenue between and across firms, regardless of ethical orientation. Results confirm this finding, and the three F statistics of the ANOVAs are below 1.0 and all individual tests have p values greater than 0.05. Additionally, the Ethical Paradigm simulation confirms a marked transfer of agents to True Altruists (Table VII) while the Unethical Paradigm run reveals less movement in the opposite direction (Table VIII). Once again, the most pronounced change towards Egoists occurs within the Neutral Paradigm (Table IX), and the mean revenue figures decrease from the EP ($1880.23) to the UP ($1330.79) to the NP ($1081.71).

Implications for marketing morality

Summary of findings

Our model of exchange among marketing agents is based on the Iterative Prisoner's Dilemma, which provided an environment for examining the impact of moral philosophies and organizational climates on exchange relationships. The simulations involving unitary moral philosophies suggest that an extreme form of altruism may leave parties vulnerable to exchange partners with completely self-serving perspectives. Additionally, self-serving behavior that is tempered by experience may represent the most productive ethical tone, giving agents the advantage during transactions with purely selfish partners or more practical altruists. Interestingly, while some of the remaining differences between firms bordered on significance, most were inconsequential and suggest that less extreme

TABLE V

Mean income differences for imbalance in moral philosophies and unethical paradigm

	Company 2	Company 3	Company 4	Company 5
Company 1	75.20	75.27	105.11	195.43
Company 2		0.07	29.91	120.23
Company 3			29.84	120.16
Company 4				90.32

Shaded boxes represent significant differences ($F = 21.89$, $p < 0.01$).

TABLE VI

The agent distribution by company for the Neutral Paradigm and imbalanced moral philosophies has a pronounced bias toward Egoists

	Agent distribution by type				
	TA	RA	TFT	RE	E
Company 1	1.55	2.88	2.64	0.02	2.91
Company 2	0.09	2.39	4.00	0.12	3.40
Company 3	0.51	0.22	3.47	0.16	5.64
Company 4	0.26	1.06	0.31	0.3	8.07
Company 5	0.30	0.91	1.18	0.03	7.58

TABLE VII

The agent distribution by company for the Ethical Paradigm and balanced moral philosophies

	Agent distribution by type				
	TA	RA	TFT	RE	E
Company 1	5.84	0.72	1.43	1.33	0.68
Company 2	5.73	0.91	1.18	1.42	0.76
Company 3	6.03	0.75	1.10	1.36	0.76
Company 4	5.94	0.84	1.05	1.50	0.67
Company 5	5.80	0.79	1.42	1.25	0.74

The number of true altruist agents in all companies increased.

TABLE VIII

The agent distribution by company for the Unethical Paradigm and balanced moral philosophies

	Agent distribution by type				
	TA	RA	TFT	RE	E
Company 1	1.08	3.11	1.40	1.64	2.77
Company 2	1.54	2.52	1.31	1.90	2.73
Company 3	1.09	2.45	2.16	2.11	2.19
Company 4	1.22	2.81	1.47	1.75	2.75
Company 5	1.03	2.94	1.71	1.60	2.72

There is a slight shift towards Egoists.

TABLE IX

The agent distribution by company for the Neutral Orientation and balanced moral philosophies

	Agent distribution by type				
	TA	RA	TFT	RE	E
Company 1	0.49	1.39	2.09	0.09	5.94
Company 2	0.47	1.56	2.14	0.08	5.75
Company 3	0.52	1.23	1.95	0.15	6.15
Company 4	0.50	1.26	1.77	0.10	6.37
Company 5	0.41	1.47	1.80	0.12	6.20

There is a pronounced bias toward Egoists.

moral perspectives result in similar levels of exchange success for both parties.

The more complex simulations included the full diversity of moral philosophies embedded within corporate cultures that emphasized altruism, egoism, and/or financial success. In all cases, the predetermined organizational ethic resulted in a shift of marketing agent morality in that direction. Interestingly, the amoral focus solely on performance caused the most pronounced movement towards the extreme self-centered position. A comparison of mean incomes across imbalanced firms with either an ethical or unethical culture revealed the dominance of other-serving original moral perspectives over their self-serving counterparts. An equally important finding is that mean industry revenue figures at the end of the simulation are impacted as well, and the final outcome is that more other-centered sets of firms outperform more self-centered sets of firms in every situation.

Marketing theory and practice

The value of this research is dependent, in part, on the extent to which the model's parameters are important and representative of marketing exchange relationships. At the center of this argument is the simulation of the moral philosophies of agents. Previous scholarship has determined that their impact on behavior is significant (Singhapakdi et al.,

1999), and that other-centered behavior such as altruism and self-centered actions defined as egoism are the result. Of course, such actions are embedded in a larger context that impacts their operational character (Kelley and Elm, 2003; Valentine and Barnett, 2002). Calling a firm's climate ethical, unethical, or neutral may be simplistic, but these labels capture the essence of the underlying messages that form the moral values in both responsible and irresponsible firms (see Hill et al., 2003).

At the very heart of marketing is the concept of exchange, whereby both parties pursue their individual interests in an attempt to satisfy their own desires (Hill, 2002). Opportunities to place another's well being front-and-center do exist in efforts such as social marketing, but most of the profession concentrates its attention on maximizing returns through an idiosyncratic focus on individual wants and needs. While our results suggest that extreme forms of altruism leave agents and their firms open to exploitation by unscrupulous others, purely self-centered behavior may represent a dysfunctional moral philosophy. Thus, the optimal approach to exchange relationships from a long-term financial perspective may be more modest forms of egoism that are influenced by experience and captured by Realistic Egoists and Tit-For-Tats.

The impact of these personal moral philosophies notwithstanding, our research concurs with previous scholarship that the climate proffered by an organization exerts a strong influence on individual morality and performance. A firm's ethical posture may result in changes to personal moral positions through modification or attrition, causing an increasing consonance with the dominant corporate culture over time. Movement in the direction of more altruism versus egoism is easier to achieve, suggesting that an ethical climate has some inherent advantages over unethical organizational environments. Of great relevance to marketing theory and practice is the finding that our traditional "value-neutral" perspective that motivates strictly on revenue generation without regard to ethical posture leads to the greatest advancement toward the egoism end of the scale.

Therefore, the belief that a sole focus on maximizing income embodies an appropriate firm ethical stance or a "neutral" form of morality is not confirmed by this study. With revenue as the driving force behind their internal culture, companies may implicitly or explicitly reward individual behavior that fails to consider the interests of exchange partners. Regardless of the impact on employees or their parent companies, our findings demonstrate that mean income for the industry as a whole is diminished under these circumstances. In fact, the closer the moral philosophies of agents are to the altruism ideal form, the higher the mean revenue for the collective. This outcome lends credence to the motto often articulated in the post-Enron era that businesses should aspire to "doing well while doing good" (Snider et al., 2003).

Nonetheless, this study has limitations that offer significant opportunities for future research. The use of simulation, no matter how well conceived, fails to capture the nuances and dynamic nature of human belief systems, attitude structures, and behavioral patterns. Pioneers in the field of artificial intelligence have struggled mightily mimicking the way we think and move, and their experiences have revealed the drawbacks to such uses of technology (see Stedron, 2004). One possible extension is the addition of other individual and corporate culture dimensions that have been identified in the literature (see Ferrell and Gresham, 1985; Trevino, 1986 for some examples). While such complexity may increase the external validity of the resulting simulations, scholars must be careful to ensure that the effects of the variables under investigation can be sufficiently isolated.

Another limitation is the extent to which the prisoner's dilemma competition provides a legitimate context for the study of marketing exchange as transpersonal interactions. Our focus is entirely on outcome to the exclusion of process, which fails to capture the salience and impact of relationship selling. An alternative simulated environment might allow marketing agents to modify their perspectives or behaviors as a consequence of these connections. Another option would require using human subjects as players in the game, starting them with a particular moral orientation (either assigned or innate) and allowing changes to occur naturally across the various runs. Once again, the same caveat applies that the potential increase in realism may have a concomitant negative impact upon the internal validity of the investigation.

Concluding comments

Our attention to business ethics in general and marketing ethics in particular waxes and wanes depending upon the immediacy and extent of individual wrongdoings and their publicity. During times of heightened awareness, universities change their curricula to increase coverage of ethical issues, corporations refine their mission or value statements to reflect more emphasis on morality in practice, and governments advance legislation that requires adherence to higher standards of behavior. While these actions may impact moral philosophies and/or ethical climates, they fail to address the taken for granted perspective of most business/marketing professionals that maximizing income or profit is inherently good. This study finds that the opposite may be true for the larger society, suggesting an important avenue for future research and theory development.

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Appendix

Simulation rules

Number of agents. The simulation consists of 100 agents.

Personal moral philosophy of agents. Each agent has one of five moral philosophies. The moral philosophies of agents within firms vary from unitary (all 10 the same) to imbalance (six of one type and one each of the other four) to balance (two of each type). These philosophies are:

1. True Altruists (TAs): cooperate with other agents regardless of the results from previous encounters.
2. Realistic Altruists (RAs): cooperate when other agents or their firms have cooperated at least two times during the last five interactions while defecting under the remaining circumstances (if there is insufficient history the agent cooperates).
3. Tit-For-Tat (TFTs): mirror the previous moral decisions of other agents or their firms to either cooperate or defect.
4. Realistic Egoists (REs): defect when other agents or their firms have defected at least two times over the last five interactions, while cooperating in all other situations (except with inadequate history the agent defects).
5. Egoists (Es): defect without regard to the previous history of exchange.

Industry division. Agents belong to one of two distinct industries that represent business-to-business trading partners. Each industry is divided into five companies containing 10 agents apiece.

Firm orientation. Agents in some simulations may change moral philosophies based on firm ethical orientations. These orientations include:

1. Neutral Paradigm (NP): agents change philosophies to that of successful agents.
2. Ethical Paradigm (EP): agents are able to change to that of successful agents as long as the movement is towards True Altruism.
3. Unethical Paradigm (UP): agents are able to change to that of successful agents as long as the movement is towards True Egoism.

The process of the simulation:

1. An agent from each industry is selected at random.
2. Each agent decides, based on the limited information they have on their opponent and their own moral philosophy, whether to Cooperate or Defect.
3. If both agents choose to cooperate, they both received \$3, if both defect they each receive \$1, and if only one agent defects, the defecting agent receives \$5.
4. The round continues until all agents have had the opportunity to be selected to play.
5. At the end of each round agents may change their moral perspective based on their firm's orientation.
6. Play concludes after 100 rounds.

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