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Economics for marketing revisited

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Abstract

This paper aims to provide evidence supporting the following: *that recent theoretical, empirical and methodological advances in microeconomics are decisive to the progress of marketing science*. That such a notion is not yet mainstream and uncontroversial, we contend, is more due to insufficient knowledge dissemination and outdated perceptions about irreconcilable differences between economists and psychologists than to lack of intrinsic value or cognitive appeal. Evidence is provided by describing these advances in a concise manner, showing how they can contribute to tackle complex marketing issues and providing examples from published matter in which this contribution already takes place.

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1. Introduction

Half a decade after the turn of the millennium it has become clear for marketing scholars that a new, underlying logic must evolve so that adequate guidance for the conceptual thought, research activities and everyday practice that constitute this discipline can continue to be provided. Vargo and Lusch (2004) contend that such an evolution requires a paradigmatic shift away from the economic exchange models of goods between agents that, according to them, make up the core heritage of marketing science, to a way of thinking centered upon intangible resources, collective creation of value and inter-agent relationships. However, and although few can reasonably argue against the wisdom and urgency of this evolution *vis-à-vis* the reality of today's marketing discipline, this proposition falls short of providing a consensual and effective solution to the deadlock it intends to resolve. First and foremost, it downplays the crucial and interactive role that both behavioral and economic sciences have played in the making of marketing's paradigms and heritages. There is very little to be achieved with this, except for:

1. Pushing a perceived strictly managerial agenda of marketing forward, thereby giving behavioral scientists yet another reason to go further astray from its thought and practice, and economics researchers another motive to resent and undervalue marketing as a science (Bolton, 2005; Wilkie and Moore, 2003; Wilkie and Moore, 2005);
2. Feeding a fruitless maniqueísmo between tangible and intangible, statics and dynamics, "economic" behavior and "relationship" behavior, actions and interactions, the *homo economicus* versus "normal people", the self-interest of few against the altruistic good of many, etc., a paradigm which both contemporary economics researchers and behavioral scientists have already themselves abandoned, since it simply does not reflect well the phenomena under study, nor does it help in advancing their comprehension (Camerer, 2003; Friedman and Cassar, 2004; Handgraaf and van Raaij, 2005; MacFadden, 1999).

Secondly, restricting oneself to the creation of a new dominant logic for marketing inherently falls short of providing concrete guidance to scholars and practitioners as to what paradigms and activities must be envisaged, in order to address effectively the fundamental disciplinary issues involved. These are (Lusch, 1999):

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- *How do agents (consumers, customers, governments and firms) really behave, and why?*
- *How do markets really function and evolve, and why?*
- *How do agents and markets really interact, and why?*
- *How agents, markets and societies should interact in the real world, and why?*

Finally, to develop a new disciplinary logic for marketing without simultaneously providing the necessary guidance as to which scientific paradigm should be envisaged in the pursuit of more and better knowledge - or, at least, prompt the debate around the merits of alternative or complementing marketing research methodologies (Hunt, 1991) -, will probably prove itself insufficient in the long-run to motivate a corresponding new *praxis*.

2. Aim

The aim of this paper is to provide evidence supporting the tenet that recent theoretical, empirical and methodological progress in micro-economics can and should play a decisive role in the future development of marketing science. That such a notion can not yet be advanced without raising considerable controversy derives, in our view, more from an insufficient dissemination of knowledge across sciences, plus an outdated perception of supposedly irreconcilable differences between economists and psychologists, than from its lack of intrinsic value or broad cognitive appeal. Evidence supporting our main tenet is put forward by:

1. Providing a concise but clear description of the above-mentioned progresses of economic sciences;
2. Showing how these progresses can contribute to tackle the complex marketing research issues of today;
3. Supplying examples of published research which has already incorporated theoretical, empirical and methodological knowledge deriving from studies in behavioral and experimental economics in the pursuit of effective answers to marketing research issues.

3. Developments in Economics with relevance for Marketing Science

3.1 Game Theory

The actions of individual or collective decision-makers, who are aware of the consequences of these actions upon each other, constitute the object of study of game theory. In this way, game

theory differs from decision theory, given that it considers both the analysis of the (sequences of) decisions and strategies devised when facing uncertainty and the interactions of decision-makers when “playing out” their strategies (Rasmusen, 2001). During the end of the last century, game theory became mainstream economics, being currently used in a wide array of both social and natural sciences. Game theory can be used to analyze such diverse behaviors as those of firms competing among each other, workers reacting to monetary incentives, the dissemination of social norms or gene evolution (Camerer, 2003; Camerer and Fehr, 2003).

3.2 Experimental Economics

Experimental economics can be loosely described as the systematic evaluation of economic theories under controlled laboratory or field conditions. As models of economic behavior evolved to more intricate and precise forms, their predictive power began to lag behind their sophistication, while theory testing through the econometric treatment of statistical data from existing “natural markets” became more difficult and costly. The use of experimentation in microeconomics has spread widely for the last 20 years, providing an important means of bridging the gap between theoretical tenets and observed economic behavior and complementing empirical analysis (Davis and Holt, 1993; Kagel and Roth, 1995). It is increasingly used to test behavioral hypotheses, stress-test theory tenets, uncover empirical regularities in relations between economic variables, test-bed institutional policy choices, design or improve market institutions, study consumers preferences for and valuations of intangible goods, and teach micro-economics (Bateman and Willis, 2001; Friedman and Cassar, 2004; Harrison, Harstad and Rutström, 2004).

3.3 Behavioral Economics and Economic Psychology

Standard, neoclassical economic behavior models are founded on the assumption that individuals are basically rational and self-interested, *i.e.*, that their decisions and actions are guided solely by the maximization of the expected utility they predict will arise from own material payoff. Though longstanding, convenient and useful, this assumption has suffered many severe blows since the very onset of experimentation in both psychology and economics, as these activities painstakingly went on gathering a mounting amount of evidence against it (Kagel and Roth, 1995; MacFadden, 1999; Tversky and Kahneman, 1974).

In the last 10 years, economists have finally begun to come to terms with the idea that, at the very least, neoclassical economic theory will have to be seriously revised in the short-term, and

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that such a revision will necessarily start by looking beyond optimization and deduction to the study of how people actually behave, how decisions are made, implemented and monitored in organizations and how different markets function and evolve. (Camerer, 2003; Friedman and Cassar, 2004; Handgraaf and van Raaij, 2005). This evolutionary movement from within economic theory had led in the US to the foundation of behavioral economics (Camerer, 2003), a discipline that intentionally makes use of facts, models and methods from other social sciences with the purpose of providing a more accurate description of findings regarding human cognitive ability and social interaction. In this way, economists aspire at expanding their theoretical insights on economic behavior, making more accurate predictions of “natural” phenomena and being able to provide better guidance for policy-making.

Conversely, cognitive and social psychologists are warming up to the notions that (1) robust theory improves dissemination, acceptance and implementation of the knowledge they develop; (2) self-interest and rationality can perhaps explain a great more deal of human behavior than initially thought, and (3) that, even when they don't, they still make useful benchmarks with which to compare actual behavior. This complementary evolution has culminated in the establishment in Europe of Economic Psychology, a discipline that focuses on the psychological foundations of economic decision-making behavior (Handgraaf and van Raaij, 2005; Ding, 2007a).

4. Why should developments in Economics be taken into account when addressing fundamental issues of Marketing Science?

4.1 Conceptual arguments

Economic theory has served marketing science long and well (Wilkie and Moore, 2003). Moreover, as described throughout section 3 of this paper, its on-going scientific growth, in an ever-increasing cooperation and convergence with other social sciences, illustrates not only its vitality but also its intent in continuing to pursue issues that lay at the very heart of progress for marketing science (Lusch, 1999). By recognizing its own limitations, and being willing to expand beyond its conceptual borders to provide us with a better understanding of how individuals, organizations and markets interact, make decisions and ultimately evolve the way they do, economic science remains instrumental for the achievement of marketing's own descriptive, predictive and normative ambitions.

4.2 Methodological arguments

Experimental economic frameworks are, of course, not entirely new to marketing research (Beil, 1996; Lusk, 2003). For instance, the combined application of the theory of value (Lancaster, 1966) and random utility theory (Thurstone, 1927; Manski, 1977) in the design of choice-based, conjoint analysis studies has been steadily diffusing since the early 1980's (Louviere and Woodward, 1983; Carrol and Green, 1995; Ding, Greewal and Lietchy, 2005; Ding, 2007b). But laboratory economic experiments have still more to offer, like a much in the demand capacity to:

1. Reproduce and expand upon each other's studies independently in a controlled environment;
2. Strengthen the robustness of marketing science's findings by generating new observations in a less money- and labor intensive way;
3. Manipulate variables so that observed behavior can be used to evaluate alternative theories and policies (Davis and Holt, 1993; Kagel and Roth, 1995; Friedman and Cassar, 2004).

Moreover, psychologists and economists are increasingly converging to common ground in such crucial design issues as the monotonicity, salience and dominance of rewards and subjects' privacy and absence of deceit (Camerer, 2003; Hertwig and Orthman, 2001; Handgraaf and van Raaij, 2005). Therefore, all the necessary conditions are in place for marketing researchers to be able to collect, analyze, combine and interpret as many types and as much behavioral data as they see fit to their purposes.

5. Marketing studies with a contemporary economic foundation

5.1 Valuing intangibles

Perhaps the most disseminated application of experimental economics in marketing research so far is the use of experimental auctions to price and test market new food products and production technologies (Hayes, Shogren and Kliebenstein, 1996; Hoffman, Menkhaus, Charkravarti, Field and Whipple, 1993; Lusk, 2003). Less known, but equally relevant for marketing science is the design of experiments that enable a deeper understanding of how individuals value environmental goods (Bateman and Willis, 2001; Hanley, Wright and Adamowicz (1998) and consumer information (Lee and Hatcher, 2001; Shogren, Fox, Hayes and Roosen, 1999).

5.2 Understanding transactional/social relationships and designing new markets

One of today's most popular fields of research in economic behavior is on-line markets. For instance, Ariely and Simonson (2003) have recently conducted a series of laboratory and field experiments with the aim of analyzing individual's bidding behavior in online auctions, while Spann, Skiera and Schäfers (2004) have looked into the question of how to collect on-line buyers' willingness-to-pay information and use it in the design of on-line sellers' pricing mechanisms. In an entirely distinct approach, Camerer and Fehr (2003) have devised a set of experimental games for measuring social norms and preferences with the aim of studying strategic interactions among people who are concerned with the pay-offs and economic outcomes of others than themselves.

5.3 Policy analysis and institutional engineering

Apart from other purposes, experimental and behavioral economics can help devise which policies are "right" and which institutional design is appropriate given specific set of temporal, financial and societal circumstances. For instance, experiments can be conducted to evaluate existing or future government policies regarding the environment or market regulation, or help firms decide if, when and how they should enter new markets (Camerer, 2003; Rasmusen, 2001). On the other hand, institutional engineering, which hardly existed 20 years ago, nowadays dominates the landscape of several important private and public transactions, namely through the design of on-line and institutional auctions (Friedman and Cassar, 2004; McCabe, Rassenti and Smith, 1991; Milgrom, 2000; Span, Skiera and Schäfers; 2004).

6. Concluding remarks

Although necessarily brief and concise, the evidence presented so far allows the maintenance of the core tenet of this paper: *that recent theoretical, empirical and methodological progress in economics can and should play a decisive role in the future development of marketing science*. It is our hope that with this paper, a significant contribution has been given to an increased awareness amongst marketing scholars and practitioners of the continued existence, validity and usefulness of scientific developments in economics. Additionally, we would like to believe that this paper sticks yet another nail to the coffin that will eventually helped bury that outdated myth about economists and psychologists not being able to work together. What can better disprove

this than the tradition of complex challenges and common grounds that marketing science has always been able to provide then and will certainly continue to supply?

References

- Ariely, D. and Simonson, I. (2003). Buying, bidding, playing or competing? Value assessment and decision dynamics in online auctions. *Journal of Consumer Psychology* 13(1-2), 113-123.
- Bateman, I.J and Willis, K.G. (Eds.) (2001). *Valuing Environmental Preferences*. Oxford: Oxford University Press.
- Beil, R.O.Jr. (Ed.) (1996). Laboratory experimentation in economic research: an introduction to psychologists and marketers [special issue]. *Psychology & Marketing* 13(4), 331-340.
- Bolton, R.N. (Ed.) (2005). Marketing renaissance: opportunities and imperatives for improving marketing thought, practice and infrastructure [special issue]. *Journal of Marketing* 69, 1-25.
- Camerer, C.F. and Fehr, E. (2003). Measuring social norms and preferences using experimental games: a guide for social scientists. In Camerer, C.F. and Fehr, E. (Eds.) *Foundations of human sociality – experimental and ethnographic evidence from 15 small-scale societies*.
- Camerer, C.F. (2003). Behavioral game theory: experiments in strategic interaction. In C. Camerer and E. Fehr (Series. Eds.), *The roundtable series in behavioral economics*. Princeton NJ: Princeton University Press.
- Carrol, J.D. and Green, P.E. (1995). Psychometric methods in marketing research: part I, conjoint analysis. *Journal of Marketing Research* 32, 385-391.
- Davis, D.D. and Holt, C.A. (1993). *Experimental Economics*. Princeton NJ: Princeton University Press.
- Ding, M. (2007a). A theory of intraperson games. *Journal of Marketing* (forthcoming).
- Ding, M. (2007b). A truth telling mechanism for conjoint analysis. *Journal of Marketing Research* (forthcoming).
- Ding, M., Greewal, R. and Liechty, J. (2005). Incentive-aligned conjoint analysis. *Journal of Marketing Research* 42(67-82).
- Friedman, D. and Cassar, A. (2004). *Economics Lab: an intensive course on experimental economics*. London and New York: Routledge.

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- Handgraaf, M.J.J. and van Raaij, W.F. (Eds.) (2005). Fear and loathing no more: the emergence of collaboration between economists and psychologists [special issue]. *Journal of Economic Psychology* (in press).
- Hanley, N., Wright, R.E. and Adamowicz, V. (1998). Using choice experiments to value the environment. *Environmental and Resource Economics* 11(3-4), 413-428.
- Harrison, G.W., Harstad, R.M. and Rutström, E.E. (2004). Experimental Methods and elicitation of values. *Experimental Economics* 7, 123-140.
- Hayes, D.J., Shogren, J.F., Fox, J.A. and Kliebenstein, J.B. (1996). Test marketing new food products using a multitrial nonhypothetical experimental auction [special issue]. *Psychology & Marketing* 13(4), 331-340.
- Hertwig, R. and Orthman, A. (2001). *Experimental practices in economics: a challenge for psychologists?* Berlin: Max Planck Institute for Human Development.
- Hoffman, E., Menkhous, D.J., Charkravarti, D., Field, R.A. and Whipple, G.D. (1993). Using laboratory experimental auctions in marketing research: a case study of new packaging for fresh beef. *Marketing Science* 12(3), 318-338.
- Hunt, S.D. (1991). *Modern marketing theory: critical issues in the philosophy of marketing science*. Cincinnati, OH: South-Western Publishing Co.
- Kagel, J.H. and Roth, A.E (Eds.) (1995). *The handbook of experimental economics*. Princeton, NJ: Princeton University Press.
- Lancaster, K. (1966). A new approach to consumer theory. *Journal of Political Economy* 74, 132-157.
- Lee, K.H. and Hatcher, C.B. (2001). Willingness to pay for information: an analyst's guide. *The Journal of Consumer Affairs* 35 (1), 120-140.
- Louviere, J.J. and Woodward, G. (1983). Design and analysis of simulated consumer choice or allocation experiments. *Journal of Marketing Research* 20, 350-367.
- Lusch, R.F. (Ed.) (1999). Fundamental issues and directions for marketing [special issue]. *Journal of Marketing* 63, 1-2.
- Lusk, J.L. (2003). Using experimental auctions for marketing applications: a discussion. *Journal of Agricultural and Applied Economics* 35(2), 349-360.
- MacFadden, D. (1999). Rationality for economists? *Journal of Risk and Uncertainty* 19(1-3), 73-105.

- Manski, C. (1977). The structure of random utility models. *Theory and Decision* 8, 229-254.
- McCabe, K.A., Rassenti, S.J. and Smith, V.L. (1991). Experimental research on deregulated markets for natural gas pipeline and electric power transmission networks. *Research in Law and Economics* 13, 161-189.
- Milgrom, P. (2000). Putting auction theory to work: the simultaneous ascending auction. *Journal of Political Economy* 10, 105-114.
- Rasmusen, E. (2001). *Games and information: an introduction to game theory* (3rd. edition). Malden, MA, etc.: Blackwell Publishing.
- Shogren, J.F., Fox, J.A., Hayes, D.J. and Roosen, J. (1999). Observed choices for food safety in retail, survey and auction markets. *American Journal of Agricultural Economics* 81(5), 1192-1199.
- Spann, M., Skiera, B. and Schäfers, B. (2004). Measuring individual frictional costs and willingness-to-pay via name-your-own-price mechanisms. *Journal of Interactive Marketing* 18(4), 22-36.
- Thurstone, L. (1927). A law of comparative judgment. *Psychological Review* 4, 273-286.
- Tversky, A. and Kahneman, D. (1974). Judgment under uncertainty: heuristics and biases. *Science* 185 (4157), 1124-1131.
- Vargo, S.L. and Lusch, R.F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing* 68, 1-17.
- Wilkie, W.L. and Moore, E.S. (Eds.) (2005). Invited essays on Wilkie and Moore's "4 Eras" article on the development of marketing thought [special issue]. *Journal of Public Policy and Marketing* 24(1), 127-130.
- Wilkie, W.L. and Moore, E.S. (2003). Scholarly research in marketing: exploring the "4 Eras" of thought development. *Journal of Public Policy and Marketing* 22 (2), 116-146.