Resource-Advantage Theory: A Snake Swallowing Its Tail or a General Theory of Competition?

Deligönül and Çavuşgil (1997) conduct a paradigm-level analysis of resource-advantage (R-A) theory. They argue that (1) Hunt and Morgan (1995) offer resource-advantage theory as a replacement for perfect competition theory, (2) a successful challenger to any theory must come from a new paradigm, (3) but both perfect competition and R-A theory come from the same paradigm. Therefore, (4) the replacement thesis is dubious. We evaluate their argument.

Deligönül and Çavuşgil (1997) (hereafter, DC) conduct a paradigm-level analysis of resource-advantage (R-A) theory, and we thank them for taking the time to do so. Since its original articulation in the Journal of Marketing (Hunt and Morgan 1995) and its subsequent development in management (Dickson 1996; Hunt 1997b; Hunt and Morgan 1996), institutional economics (Hunt 1997a), socio-economics (Hunt 1997c), and evolutionary economics (Hunt 1998a, b), the reactions to R-A theory have been remarkably bipolar. Although many scholars have been extraordinarily positive, others have been equally negative.

DC’s appraisal contrasts sharply with the positive comment of Dickson (1996). Consider, for example, the descriptors that DC use to characterize R-A theory’s structure, foundations, concepts, logic, and intellectual heritage: “hardly a new perspective,” “not at all epistemologically novel,” “a tired tenet” (p. 66), “powerless,” “not well grounded,” “inherently implausible,” “a folk narrative” (p. 67), “loose argumentation style” (p. 69), “folk science,” “like a snake swallowing its tail,” “tautological,” “vague,” “amorphous,” “ambiguous” (p. 70), “trivial,” “uninteresting,” “commonsensical,” “unsurprising,” “uninformative,” “solipsism,” “dated idioms” (p. 71), “loose (heuristic) narrative,” “method of astrologers,” “semantic confusion,” and “fragmented assertions from a folk science” (p. 72). Goodness, there could be, we suggest, no redeeming value to a theory for which even half these descriptors were warranted by sound argument.

For DC, the preceding terms of opprobrium are warranted by their argument, whose central premises appear to be the following: (1) Hunt and Morgan (hereafter, H & M) offer R-A theory “as a replacement” (p. 71) for perfect competition theory; (2) however, a “successful challenger, in addition to meeting a host of conditions, must come from a new paradigm” (p. 71). (3) But both perfect competition and R-A theory are “the products of the same exchange paradigm” (p. 67); (4) therefore, “the replacement supposition is dubious” (p. 72).

Note that DC never quote us on the replacement thesis—and for good reason. Not only does the replacement thesis not appear in H & M (1995), but the thesis is false. As readers will recall, H & M (1995) set for itself an extraordinarily ambitious—some would say outrageously presumptuous—task: to articulate the foundations and structure of a new theory of competition in the confines of a single journal article instead of a monograph or book. Making the task even more difficult was the need to demonstrate the theory’s direct application to current marketing thought. Accordingly, our original submission to JM had two distinct parts. The first detailed the foundations of R-A theory and argued

As we indicated in Footnote 1 of “The Comparative Advantage Theory of Competition” (H & M 1995), we viewed “comparative advantage theory” and “resource-advantage theory” as equally appropriate labels for our theory. We soon came to realize, however, that many readers so strongly associate the label “comparative advantage” with the comparative advantage theory of trade that they misinterpret our theory as focusing on a comparative advantage in physical resources. Nothing could be further from the truth. Our theory focuses on the comparative advantage that a firm might have in both tangible and intangible resources. Indeed, organizational competencies, which are intangible resources in our view, play a major role in our theory. Therefore, given the confusion that the label “comparative advantage” has caused, we now refer to the theory as the “resource-advantage theory of competition.” We ask others to do the same.

We thank J M reviewers for their counsel to refrain from responding in kind to the pejorative language of DC. Although we took no personal offense, readers might find uncivil either DC’s use of certain terms of opprobrium or the sheer number of such terms in one short comment. As Hirschman (1989) points out (and deplores), writers in the paradigm “wars” of the 1980s seemed, all too frequently, to abandon normal academic norms of discourse—and DC’s comment is, if nothing else, a paradigm-level analysis.

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that it could contribute to explaining why market-based economies were more productive and more innovative than command economies; the second showed how a market orientation could be a firm resource. Reviewers, quite properly, brought up a host of issues on both sections that required clarification, elaboration, and justification. Responding to the reviewers meant that the manuscript began to grow—and grow.

The editor intervened in the process and pointed out that a complete elaboration of all aspects of R-A theory, including each and every concept—as DC now castigate us for not doing in H & M (1995)—would require an entire JM issue, perhaps more. Therefore, the editor established priorities for our revisions and directed that scores of issues must await future work.³

A major issue that H & M (1995) left unresolved was whether R-A theory and perfect competition were mutually exclusive, complementary, supplementary, or something else. By the time JM had accepted Dickson's (1996) highly constructive comment, we believed that we could argue cogently the following: "R-A theory is a process theory that can explain when neoclassical theory will (and will not) predict successfully, because R-A theory incorporates perfect competition as a limiting, special case" (H & M 1996, p. 113). Furthermore, because R-A theory incorporates, rather than replaces, perfect competition, it "subsumes, by implication, the extant predictive successes of neoclassical theory ... [and] preserves the cumulativeness of economic science" (H & M 1996, p. 113).

Thus, DC's replacement thesis, the starting point for their entire comment, is demonstrably false. DC's original JM submission was in April 1996, before H & M (1996) was published. However, the JM editor has advised us to alert readers to the time line of the review process for DC's comment. Therefore, we ask readers' forbearance for noting the following: (1) the final draft of DC's comment reached JM in January 1997, three months after the publication of H & M's (1996) article that flatly contradicts the replacement thesis; (2) the JM office sent prepublication drafts of both Dickson (1996) and H & M (1996) to DC on September 6, 1996, four months before DC's final draft and one month prior to their next-to-last revision; and (3) the editor's September 6 letter specifically advised DC that these drafts "may be useful to you in your revision." How and why DC's revisions came to be drafted, reviewed, and accepted with an obviously false starting point, we do not know—but will we speculate. What is done, though regrettable, is done. Let us move on to the rest of DC's argument.

R-A Theory and the Exchange Paradigm

DC allege that both perfect competition and R-A theory are "the products of the same exchange paradigm" (p. 67). If, for discussions purposes only, we assume that paradigm-based analyses are useful and that there is such a thing as the exchange paradigm, of which perfect competition theory is a part, what are the paradigm's characteristics? DC state, "Economic agents have preferences over outcomes, agents individually optimize subject to constraints, their choices are manifest in interrelated markets, agents have full relevant knowledge, and observable outcomes are coordinated and must be discussed with reference to equilibrium states" (p. 67).

Clearly, according to DC's membership requirements for their posited exchange paradigm, R-A theory does not belong. It is true that perfect competition assumes that economic agents optimize, for to optimize is to choose, in some context, the single best option. For example, because neoclassical theory is firmly committed to expressing all relationships in the language of calculus (Rosenberg 1992), firms optimize by maximizing profits. But as shown in Table 1, R-A theory specifically rejects the view that firms optimize (or maximize) anything. Instead, R-A theory maintains that "the firm's primary objective is superior financial performance" (H & M 1995, p. 6). As Langlois (1986, p. 252) points out, though economic "agent[s] prefer more to less all things considered," this "differs from maximizing in any strong sense." We argue that firms do not maximize financial performance because (1) managers lack the capability and information to maximize (Simon 1979); (2) managers' self-interests could diverge from those of owners; and, as H & M (1995) emphasizes, (3) financial performance is constrained by managers' (and owners') moral codes.⁴

Furthermore, rather than assuming that agents have full relevant knowledge, R-A theory proposes that firms operate "under conditions of imperfect (and often costly to obtain) information about customers and competitors" (H & M 1995, p. 6). Finally, though it is true that perfect competition insists that competitive processes must be discussed with reference to equilibrium states, R-A theory maintains, " Disequilibrium, not equilibrium, is the norm, in the sense of a normal state of affairs. It is also the norm in the sense of a preferred state of affairs" (H & M 1995, p. 8).

In conclusion, DC's conditions for membership in what they call the exchange paradigm imply that they are manifestly incorrect in claiming that both perfect competition and R-A theory have the necessary conditions. Although both perfect competition and R-A theory deal with exchange (and share other similarities), DC allege falsely that R-A theory is a member of their self-described exchange paradigm.

R-A Theory and Epistemology

R-A theory adopts scientific realism as its epistemology and therefore places the use of reason and evidence at center stage in theory choice: "Specifically, ... each premise is offered as a proposition that can and should be subjected to empirical testing" (H & M 1995, p. 5). In contrast, DC maintain that using reason and evidence for theory choice is, at

³We are grateful to former editor Rajan Varadarajan for his skillful guidance in the revision process. H & M (1995) benefited greatly from his many insights.

⁴Note that Simon's (1979) satisficing does not equate with our view because (1) satisficing (as we understand it) focuses only on factor 1 and (2) satisficing implies good enough, which is different from superior to. We thank a JM reviewer for reminding us to clarify this issue.
<table>
<thead>
<tr>
<th>P1: Demand is</th>
<th>Neoclassical Theory</th>
<th>Resource-Advantage Theory</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>heterogeneous across industries, homogeneous within industries, and static.</td>
<td>heterogeneous across industries, heterogeneous within industries, and dynamic.</td>
</tr>
<tr>
<td>P2: Consumer information is</td>
<td>perfect and costless.</td>
<td>imperfect and costly.</td>
</tr>
<tr>
<td>P3: Human motivation is</td>
<td>self-interest maximization.</td>
<td>constrained self-interest seeking.</td>
</tr>
<tr>
<td>P4: The firm’s objective is</td>
<td>profit maximization.</td>
<td>superior financial performance.</td>
</tr>
<tr>
<td>P5: The firm’s information is</td>
<td>perfect and costless.</td>
<td>imperfect and costly.</td>
</tr>
<tr>
<td>P6: The firm’s resources are</td>
<td>capital, labor, and land.</td>
<td>financial, physical, legal, human, organizational, informational, and relational.</td>
</tr>
<tr>
<td>P7: Resource characteristics are</td>
<td>homogeneous and perfectly mobile.</td>
<td>heterogeneous and imperfectly mobile.</td>
</tr>
<tr>
<td>P8: The role of management is</td>
<td>to determine quantity and implement production function.</td>
<td>to recognize, understand, create, select, implement, and modify strategies.</td>
</tr>
<tr>
<td>P9: Competitive dynamics are</td>
<td>equilibrium seeking, with innovation exogenous.</td>
<td>Disequilibrium provoking, with innovation endogenous.</td>
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Source: Adapted from Hunt and Morgan (1995).

best, insufficient because in comparing theories “we lack a supracriterion for their contest” (p. 72). For DC, because “we cannot establish definitive criteria for superiority,” choosing between theories in science equates with “Which is more beautiful: Mozart’s 40th symphony or Beethoven’s 7th?” (p. 66). Instead of focusing on the importance of reason and evidence, DC cite Kuhn and Polanyi for authority and “propose that social choice settles the score” (p. 72).

Unfortunately, DC adopt one of the most thoroughly discredited epistemologies of the 20th century: Kuhn’s conceptual framework-relativism. Because the massive epistemological and moral problems plaguing all forms of relativism have been extensively discussed in JM and elsewhere (Hunt 1990, 1991, 1992, 1993, 1994), we need not detail those arguments here. Instead, we use DC’s version of conceptual framework-relativism to illustrate why even Kuhn, in his later years, rejected relativism.

All genuine forms of relativism have both a relativity thesis (something is relative to something else) and a nonevaluation thesis (one cannot evaluate objectively across the “something else”) (Siegel 1987). DC’s paradigm-relativism holds that (1) the knowledge claims of competing theories are relative to their respective paradigms and (2) the knowledge claims of competing theories cannot be evaluated objectively, impartially, or nonarbitrarily across paradigms because “we lack a supracriterion” (p. 72) for such comparisons.

Consider, then, how DC’s paradigm-relativism would answer Kuhn’s famous exemplar of a paradigm: Does the sun revolve around the earth or does the earth revolve around the sun? To this question, DC’s relativism can only respond: First I must know whether you subscribe to the paradigm of Copernicus or Ptolemy, for these paradigms—like all paradigms—“lack a supracriterion” (p. 72) for theory choice, and therefore, there is no truth to the matter of celestial body rotation independent of the paradigm you hold. Indeed, for DC’s relativism, even if there were a truth to the matter we “cannot establish definitive criteria” (p. 66) for knowing it.5 It must, therefore, be a matter of “social choice” (p. 72), like choosing between “Mozart’s 40th symphony or Beethoven’s 7th” (p. 66), as to whether you believe the sun truly revolves around the earth or vice-versa.

In short, DC’s epistemology, as Kuhn came to realize, is neither to adopt a healthy critical attitude toward knowledge claims nor to be tolerant of different claims; it is to adopt nihilism. All previous versions of relativism offered for marketing’s consideration have degenerated into nihilism. It should not surprise anyone that DC’s version constitutes no exception. Marketing, we propose, deserves better.

### R-A Theory and Command Economies

DC allege that R-A theory is “powerless” (p. 67) to explain differences between market-based economies and command economies on issues such as relative abundance. There is an obvious starting point for DC’s critique of our position. We state: “[R-A theory] explains the greater abundance in market-based economies on the basis that rewards, through time, flow to the efficient and the effective” (H & M 1995, p. 8). (As discussed subsequently, effective is a key word

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5Note that DC fall prey to the philosopher’s fallacy of high redefinition (Hunt 1990) in their demand for definitive criteria.
here.) Instead of this passage, DC (p. 67) state that H & M’s “explanation is contained in three paragraphs” and quote from our pages 3 (on “signals”), 4 (on “production functions”), and 8 (on “higher quality”). They then maintain, “The third point parallels the first, so we take these two in combination and refer to them as the first” (p. 67), before concluding that “both their statements are extant paradigm explanations” and “ironically, the first one requires only the basic NTNC assumptions” (p. 67). There are three problems here.

First, it is bizarre that DC believe it “ironic” that the signals argument on our page 3 is consistent with neoclassical perfect competition. As readers will note, the quote occurs not in the section discussing R-A theory, but in a section titled “The Neoclassical Explanation” (H & M 1995). In fact, both the first and second quotes come from the section of our article where we were exploring, not R-A theory, but the extent to which neoclassical theory could potentially contribute to explaining differences between command and market-based economies. It is difficult to know how to respond to a comment that quotes passages from a section on perfect competition in H & M (1995), proceeds to evaluate the passages as if they referred to R-A theory, and then finds it “ironic” that the passages bear striking resemblance to those that might be found in discussions of perfect competition.

Second, even DC’s quote from our page 8 (which at least comes from the relevant section titled “Explaining Abundance”) does not—contra DC’s claim—“parallel” the first quote’s argument. The passage on our page 8 addresses a motivational, not informational, deficiency of planned economies. It is important to distinguish between motivational and informational problems (as we discuss subsequently).

Third, when they quote from our page 3, DC ignore the word potentially and our footnote 4, which states, “We add the qualifier ‘potentially’ because the standard view of neoclassicists up until the collapse of the Eastern bloc was that neoclassical theory provided no grounds for preferring market-based over planned economies” (p. 3 n.). We now elaborate on this point that had to be relegated to a footnote in H & M (1995).

As Lavoie (1985) documents meticulously, when mainstream economists and economic historians interpret what is referred to as the “socialist calculation debate” between the “Austrian” economists and advocates of command economies, it is through the lens of neoclassical theory’s view that the efficiency problems of real economies can be approximated by a set of general equilibrium equations. Hence, when socialist economists in the debate argued that central planners in command economies would solve directly for the Pareto-optimum solution in the general equilibrium equations (instead of relying on the wasteful groping of firms toward Pareto-optimum equilibrium in market-based economies), mainstream economists agreed with socialists that neoclassical theory provided no theoretical grounds for predicting the superior efficiency of market-based economies.

After the debate (but prior to the collapse of the command economies), the Austrian arguments in favor of the superior efficiency of market-based economies were customarily described derisively by neoclassical economic historians as little more than the ramblings of ideologues. The conclusion of Lekachman (1959, pp. 396–97, italics added) is typical: Socialist economists “proved that a Central Planning Board could impose rules upon socialist managers which allocated resources and set prices as efficiently as a capitalist society of the purest stripe, and much more efficiently than the capitalist communities of experience.”

Indeed, the conclusion that socialism is equally as efficient as capitalism became textbook conventional wisdom:

But it would be a mistake to dwell on the shortcomings. Every economy has its contradictions and difficulties.... What counts is results, and there can be no doubt that the Soviet planning system has been a powerful engine for economic growth (Samuelson and Nordhaus 1989, pp. 840, 842).

In short, though H & M (1995) gave neoclassical theory the benefit of the doubt as to its potential for contributing to explaining observed differences between market-based and command economies, the standard view among mainstream economists, economic historians, and specialists in comparative economic systems (Goldman 1971) is that it does not do so. In effect, the mainstream view is that neoclassical theory is explanatorily impotent regarding the observed efficiency differences between command and market-based economies. As Nobel laureate Knight (1936, p. 255) put it, “The problems of collectivism are not problems of economic theory... and the economic theorist, as such, has little or nothing to say about them.” We argue that R-A theory, in contrast, has something to say.

Four Requirements

If DC characterize falsely our position, then how do we argue that R-A theory can contribute to explaining observed differences between command and market-based economies? What does R-A theory say? At the outset, any satisfactory theory of competition must avoid the four pitfalls illuminated so brightly by the socialist calculation debate. First, competition is a process that cannot be approximated by a series of moving equilibria. Second, the efficiency problems of real economies cannot be approximated by a set of equilibrium equations. Third, organizational learning must be endogenous to the process of competition. Fourth, societal institutions must affect the process of competition because such institutions contribute essentially to competition’s wealth-creating capability in a market-based economy. We examine other aspects of DC’s argument in the context of exploring how R-A theory addresses these four requirements.

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6In the 1995 edition the quoted passage was deleted in favor of the following: “It appears that in the modern world of open borders and high-quality manufactured goods, the blunt control of the command economy could not match the finely tuned incentives and innovation of a market economy” (Samuelson and Nordhaus 1995, p. 716).
FIGURE 1
A Schematic of the Resource-Advantage Theory of Competition

Societal Resources  
- Resources  
  - Comparative Advantage  
  - Parity  
  - Comparative Disadvantage  
  - Market Position  
    - Comparative Advantage  
    - Parity  
    - Competitive Disadvantage  
  - Financial Performance  
    - Superior  
    - Parity  
    - Inferior

Societal Institutions

Competitors  Consumers  Public Policy

Read: Competition is the disequilibrating, ongoing process that consists of the constant struggle among firms for a comparative advantage in resources that will yield a marketplace position of competitive advantage and, thereby, superior financial performance. Firms learn through competition as a result of feedback from relative financial performance "signaling" relative market position, which, in turn, signals relative resources. Source: Hunt and Morgan (1996).

Process Theory

As Figure 1 shows, R-A theory is an evolutionary, process theory of competition, in which each firm in an industry is a unique entity in time and space as a result of its history. Using Hodgson's (1993) terminology, R-A theory is a phylogenetic, nonconsummatory, evolutionary theory of competition, in which firms and resources are the heritable, durable units of selection, and competition among firms is the selection process that results in the survival of the locally fitter, not the universally fittest (Hunt 1997a; H & M 1996). The competitive process is viewed as the constant struggle among firms for a comparative advantage in resources that will yield marketplace positions of competitive advantage (see Figure 2) and, thereby, superior financial performance. Because superior equates with both more than and better than, it implies that firms seek a level of performance exceeding some referent. For example, the specific measure of financial performance might be profits, return on assets, or return on equity, whereas the specific referent might be the firm's own performance in a previous time period or that of a set of rival firms, an industry average, or a stock-market average. Both the specific measure and referent will vary from time to time, firm to firm, industry to industry, and culture to culture.1

DC maintain that R-A theory views the firm as "an efficiency seeker in production and distribution, as in Chicago

FIGURE 2
Competitive Position Matrixa

<table>
<thead>
<tr>
<th>Relative Resource-Produced Value</th>
<th>Lower</th>
<th>Parity</th>
<th>Superior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Indeterminate Position</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Higher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive Disadvantage</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Parity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6 Competitive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Resource Costs</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7 Higher</td>
<td></td>
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<tr>
<td>Competitive Disadvantage</td>
<td></td>
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<tr>
<td>8 Competitive</td>
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<td></td>
</tr>
<tr>
<td>Indeterminate Position</td>
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<tr>
<td>9</td>
<td></td>
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</tbody>
</table>

1Read: The marketplace position of competitive advantage identified as cell 3 results from the firm, relative to its competitors, having a resource assortment that enables it to produce an offering for some market segment(s) that (1) is perceived to be of superior value and (2) is produced at lower costs. Source: Hunt and Morgan (1996).

School thinking" (p. 66). Although it is true that efficiency seeking is the sole focus of neoclassical theory (and it also might be true of the Chicago school), it is untrue with respect to R-A theory. Indeed, a major distinguishing characteristic of R-A theory is its dual focus on both efficiency and effectiveness. This dual focus contributes to R-A the-
ory's ability to address the observed productivity differences between command and market-based economies.

R-A theory approaches productivity in the manner of evolutionary economics (Nelson and Winter 1982) and the endogenous growth theorists (Grossman and Helpman 1991; Romer 1994; Stoye 1991). That is, because productivity is a ratio of outputs to inputs, R-A theory highlights the fact that increases in productivity can result from increases in either efficiency or effectiveness, that is, from (1) more efficiently creating value or (2) efficiently creating more value. Specifically, R-A theory contributes to explaining the superior productivity of market-based economies on the basis that superior rewards in such economies will flow to those firms (and then to their owners, managers, and so on) that engage in specific kinds of innovative activities. These innovative activities are those that lead to the discovery, creation, or assembling of resource assortments that enable the innovating firms to efficiently and/or effectively produce valued market offerings in such a manner that they will occupy positions identified as cells 2, 3, or 6 in Figure 2. The process of competing, then, motivates productivity-enhancing innovation. Command economies, to their detriment, lack this process. Neoclassical theory, to its detriment, made innovation exogenous to competition.

Organizational Learning

As discussed, DC allege falsely that perfect competition and R-A theory share the premise of "full relevant knowledge" (p. 67). We actually propose that perfect competition theory lacks a powerful means for differentiating command from market-based economies precisely because it assumes perfect knowledge of all possible production functions and all possible resource assortments for producing all possible products. Not only does R-A theory not assume that firms have full relevant knowledge, but it maintains that occupying marketplace positions provides a major source of organizational learning. Specifically, by occupying the marketplace positions identified as cells 2, 3, 6 in Figure 2, firms learn that they are producing efficiently-effectively (and by occupying cells 4, 7, 8, they learn that they are producing inefficiently-ineffectively). That is, the process of competing provides an important mechanism for firms to learn how efficient-effective they are: Competition, as Hayek (1935) stressed, is a knowledge discovery process.

Furthermore, the process of competition motivates reactive innovation (H & M 1996), which in turn promotes productivity. When firms occupy the positions of competitive disadvantage identified as cells 4, 7, and 8, they learn that they must seek other resources or use existing resources more efficiently and/or effectively. Therefore, they will be motivated to neutralize and/or leapfrog disadvantaged competitors by better managing existing resources and/or by acquisition, imitation, substitution, or major innovation. Should these efforts at reactive innovation succeed, then all firms serving a market segment become more efficient and/or effective. Should these efforts fail, firms seek market segments for which their resource assortments might provide a comparative advantage—thus redeploying these resources will promote efficiency and/or effectiveness in other segments. Should these efforts also fail and financial performance fall below minimum acceptable standards, firms or parts of firms are dissolved or sold and their salvageable resources redeployed by other firms. This redeployment, again, promotes efficiency and/or effectiveness elsewhere.

Finally, recall that R-A theory expands the concept of resources to include such entities as organizational culture, knowledge, and competencies. The intangible nature of such resources implies that, though they may be rare (Barney 1991), they are replicable, not scarce. For example, when a firm successfully imitates or replicates the competency of another, the imitated firm's competence does not decrease (as would a scarce resource). Therefore, a comparative advantage in an intangible resource, such as a new organizational form or competency, can yield a marketplace position of competitive advantage. Thus, rewards flow to firms that successfully create new resources (e.g., competencies), which provides them with a powerful motivation to innovate. In contrast, command economies, by lacking competition, suffer from not only (1) a lack of the means for knowledge discovery (i.e., marketplace positions) and (2) a lack of the means and motivation for efficiently and/or effectively allocating existing (scarce) resources, but also (3) the means and motivation for efficiently and/or effectively creating resources that increase productivity.

Equilibrium

DC allege falsely that R-A theory assumes that competition "must be discussed with reference to equilibrium states" (p. 67). In truth, R-A theory claims that competition is an inherently disequilibrating process. (For example, because all firms serving a market segment cannot be simultaneously superior, the quest for superiority implies motivational reasons for predicting that disequilibrium is the norm.) Yet, DC correctly note that, on occasion, an equilibrium theory of competition has "some predictive and explanatory power" (p. 71). Furthermore, H & M (1996) claim that R-A theory incorporates perfect competition and preserves the cumulative-ness of economic science. Justifying the incorporation theory requires explicating the process by which certain economic circumstances will result in R-A competition producing perfectly competitive equilibrium states. We now identify those economic circumstances and sketch that process.

Consider the following scenario. First, assume that a set of firms producing an offering for a particular market segment within an industry has been competing according to R-A theory. Therefore, because of resource heterogeneity, the firms are distributed throughout the nine marketplace positions in Figure 2. Some firms, because of their comparative advantage in resources, are enjoying superior returns; others have inferior returns; and still others have parity returns.

Next, assume that, through time, both disadvantaged and parity firms learn how the advantaged firms are producing their offerings more efficiently and/or effectively and successfully imitate them by acquiring or developing the requi-

8See Hunt (1997d) for a discussion of how R-A theory can ground endogenous growth models.

9Our discussion here follows closely the analysis in Hunt (1998).
site resources. Then assume that, even though all firms seek superior financial performance, no firm finds it possible to acquire, develop, or create new resources that will enable it to produce a market offering more efficiently or effectively than others do. That is, for some reason or set of reasons, all competition-induced innovation stops, both proactive and reactive. Consequently, all competition-induced technological change stops. Under these economic conditions, then, the resources of all firms serving this market segment become homogeneous, and there will be parity resources producing parity offerings.

Next, assume that the tastes and preferences of consumers in all other market segments served by the firms in this industry shift toward the original segment. Industry consumer demand will then become relatively homogeneous. Suppose further that consumers’ tastes and preferences remain stable throughout a significant period of time and that consumers become very knowledgeable about the relative homogeneity of the firms’ offerings. There will then be parity resources producing parity offerings, which will result in all firms having parity marketplace positions (cell 5 in Figure 2).

Suppose further that all firms have accurate information about competitive conditions and there are no institutional restraints preventing them from producing their market offerings in the profit-maximizing quantity. Accordingly, the industry will experience no endogenous technological change, firms become price-takers, and there will be parity resources producing parity offerings, which results in parity marketplace positions and parity performance (see Figure 1). Under these economic circumstances, a static equilibrium theory of competition, such as perfect competition, will have predictive power, and the industry has now become a candidate for (1) “industry effects” to dominate “firm effects” in empirical studies (H & M 1995), (2) collusion and barriers to entry to become viable explanations for any industrywide superior financial performance, and (3) Bain-type (1956) industry-level theoretical analyses to be appropriate.

Next, assume that the preceding process occurs in every industry in an entire economy. Then, if this set of economic circumstances persists through time, all competition-induced technological change ceases, all endogenous technological progress stops, and all endogenous economic growth ceases. In such an economy, growth comes only from exogenous sources, including those sources (e.g., government research and development or a state planning board) that might develop innovations that result in exogenous technological progress. Under these circumstances, a general equilibrium theory (such as Walrasian general equilibrium) is applicable (i.e., it will have predictive power).

Note that the preceding analysis begins with the process of R-A competition for a market segment and proceeds to sketch the special economic circumstances that must prevail for competitive processes to result in a static-equilibrium situation in an industry. Among other conditions, it shows that an important circumstance is that all endogenous innovation must stop (or be stopped). Such a stoppage might come as a result of collusion, complacency, institutional restrictions, governmental fiat, or lack of entrepreneurial competence.

The analysis then sketches the special circumstances for a long-run general equilibrium to develop, and again, it shows that all endogenous technological progress in all industries in an economy must cease. Therefore, perfect competition with (or without) Walrasian general equilibrium can be viewed as a limiting, special case of R-A theory. R-A theory relates to perfect competition in the same way that Newtonian mechanics relates to Galileo’s Law: The former incorporates the latter. Therefore, by explaining when perfect competition theory predicts successfully, R-A theory preserves the cumulativeness of economic science.

To conclude this section, note that DC’s criteria for membership in their exchange paradigm imply that perfect competition and R-A theory do not share the same paradigm. Yet we argue the following: (1) Sometimes the process of R-A competition can stagnate, (2) perfect competition theory will have explanatory and predictive power at such times of stasis, and therefore, (3) R-A theory (a process theory) incorporates perfect competition (an equilibrium theory). The lesson to be learned is clear.10

As Suppe (1984) recounts, ever since Kuhn’s (1962) highly publicized work, many social scientists have uncritically accepted Kuhn’s view that all scientific work takes place within totally encapsulated, rigid, self-justifying, incommensurable frameworks, or “paradigms.” Thinking of science and its practice in terms of such paradigmatic cocoons, argues Suppe (1984, p. 89), is both “bad history of science and fundamentally defective philosophy of science.” We agree. Indeed, DC’s paradigm-level perspective shows clearly how viewing science as cocoon-like will likely impede cogent analysis. Because R-A theory is an interdisciplinary theory that draws from several research traditions (while being isomorphic with none), the lesson to be learned is that such questions as “What is R-A theory’s paradigm?” and “Do R-A theory and perfect competition share a paradigm?” are nonfruitful starting points for analysis. Instead, ask, “How well, compared with other theories, does R-A theory explain, predict, or help us understand economic phenomena?” In short, “Is it true?”

**Socio-Political Institutions**

DC claim that an understanding of command economies requires a theory that accommodates “noneconomic considerations,” for such factors as “political, social, ethnic, geographic, and so forth—may take precedence” (p. 67) in the decisions of central planners and state enterprises. DC further argue that R-A theory fails to account for such sociopolitical factors. Indeed, R-A theory offers “inherently implausible models of human behavior” (p. 67).

What, then, is R-A theory’s model of human behavior that is, allegedly, inherently implausible? Drawing on the work of Etzioni (1988), R-A theory proposes that “humans are motivated by constrained self-interest seeking,” where “both consumers and managers are constrained in their self-interest seeking by considerations of what is right, proper, ethical, moral, or appropriate” (H & M 1995, p. 6). Why is this view inherently implausible? Do DC believe, for exam-

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10We thank the JM reviewers for pointing out that this issue should be addressed.
people, that people never pursue self-interest, or always pursue self-interest, or never are constrained by ethics? Because DC never argue specifically for their allegation, we do not know. Nonetheless, a clue appears when DC claim that H & M believe that “firms are universally not opportunistic” (p. 70).

Once again, readers should note that DC provide no direct quotation from H & M—and again, it is for good reason. The meaning of an English sentence with a not depends crucially on where the not is placed. Rather than “firms are universally not opportunistic,” we actually state, “universal opportunism is not assumed” (H & M 1995, p. 9). Therefore, DC incorrectly read us as claiming that firms will always act not opportunistically. Instead, our actual view is that firms will not always act opportunistically. If we have deciphered DC correctly, no wonder they thought our view of human behavior inherently implausible. Indeed, the view they attribute (falsely) to us is silly.

Now consider DC’s claim that R-A theory does not accommodate such “noneconomic considerations” (p. 67) as political and social institutions. It is true that neoclassical theory is constituted totally by a set of equations that are frictionless and institutionless. Indeed, even the institution of private property plays no essential role in the equations (which contributed to socialist economists convincing neoclassicists that socialism could be as efficient as capitalism). Nevertheless, contra DC, both Figure 1 and our discussion of it show clearly that R-A theory incorporates institutions: “Competitive processes are significantly influenced by five environmental factors: the societal resources on which firms draw, the societal institutions that frame the ‘rules of the game’ (North 1990), the actions of competitors, the behaviors of consumers, and public policy decisions” (H & M 1996, p. 109).

The central economic lesson of the 20th century is that market-based economies are more productive than command economies. But if competition among privately owned, self-directed firms is more productive than is cooperation among state-owned, state-directed firms, then why aren’t all market-based economies wealthy? R-A theory answers this question by asserting that the wealth-producing capacity of competition requires favorable sociopolitical institutions for its realization. Our view echoes that of North’s (1990, p. 110) historical analysis:

Third World countries are poor because the institutional constraints define a set of payoffs to political/economic activity that do not encourage productive activity. Socialist economies are just beginning to appreciate that the underlying institutional framework is the source of their current poor performance and are attempting to restructure the institutional framework to redirect incentives that in turn will direct organizations along productivity-increasing paths.

North (1990, p. 3) defines institutions as “the humanly devised constraints that shape human interaction,” and he distinguishes formal institutions (constitutionsal law, statutory law, and common law) from informal institutions (cultural constraints, such as customs, traditions, conventions, and codes of conduct). He also distinguishes institutions (the rules of the game) from organizations (major players of the game). Organizations influence a society’s institutional framework, and conversely, institutions influence organizational activities and performance.

North (1990, p. 33) argues that a society’s institutional framework determines its property rights, that is “the rights individuals appropriate over their own labor and the goods and services they possess.” Property rights, in turn, influence a society’s productivity and economic growth. As Poirrot (1993, p. 892) puts it, “In order for an existing institutional structure to direct an economy along a path that is conducive to economic growth, individuals must be able to reap the gains from innovation.”

North (1990) points out that his work represents only an initial step toward identifying those sociopolitical institutions that make manifest the wealth-creating potential of competitive processes. His work and the work of others has been hampered by the dominance within economics of perfect competition theory’s assumption that an acceptable starting point for analyzing real economies is “wealth-maximizing actors who are unconstrained by other considerations” (North 1990, p. 140). Because R-A theory specifically incorporates institutions, it provides a theoretical foundation for historical explanations, such as North’s (1990), as to how sociopolitical institutions can foster, as well as thwart, productivity and economic growth. However, much hard work must be done on identifying the specific sociopolitical institutions that foster productivity and economic growth.12

Conclusion

DC’s paradigm-level appraisal of R-A theory (as vague, ambiguous, amorphous, poorly grounded, powerless, trivial, uninteresting, commonsensical, unsurprising, uninformative, dated, solipsistic, loose, tautological, astrological, and snake’s tail-swallowing) suggests one hypothesis as to why some scholars react so negatively to R-A theory. Rather than reacting to R-A theory, they might be reacting to a construction that is mostly their own creation. R-A theory (or its presumed “paradigm”) seems to move sensible scholars to make insensible allegations. Future commentators who are so moved are urged to calm down, take a deep breath, and read with care the works developing R-A theory. If at first glance the works appear to say something silly, such as “firms are universally not opportunistic” (DC, p. 70), read them again. Perhaps we have erred. On the other hand, commentators might—just might—find that their first reading was by far too quick.

R-A theory, a work in progress, is an interdisciplinary theory of competition. We thank profoundly those scholars in marketing, management, institutional economics, socioeconomics, and evolutionary economics who are contributing to its development. Works to date show that R-A theory (1) contributes to explaining firm diversity (H & M 1995), (2) contributes to explaining observed differences between mar-

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11See Hunt (1997c) for more on how R-A theory incorporates institutions.

12See Hunt (1997c) and its references for a starting point.
ket-based and command economies (Hunt 1995; H & M 1995), (3) is genuinely dynamic (H & M 1996), (4) provides a theoretical foundation for endogenous growth models (Hunt 1998a; H & M 1996), (5) incorporates the evolutionary, competence view of the firm (Hunt 1998b), (6) provides a theoretical foundation for relationship marketing (Hunt 1997b), (7) has the requisites of a phylogenetic, noncumulative, evolutionary theory (Hunt 1997a), (8) accommodates path-dependencies (H & M 1996), (9) incorporates sociopolitical institutions (Hunt 1997c; H & M 1996), and (10) incorporates perfect competition as a limiting, special case, thereby incorporating the predictive successes of neoclassical theory and preserving the cumulative nature of economic science (Hunt 1998b; H & M 1996).

Is R-A theory "a snake swallowing its tail" (DC, p. 70)? Or is it a general theory of competition? We believe it has the potential, with further development, to be the latter. Others across disciplines and research traditions seem to agree. If you do too, there is still a lot of work to be done—a lot of work.

REFERENCES