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Abstract

During the last decade, strategy scholars have increasingly converged on organizational capabilities as a key construct in strategy research. We explicate some of the underlying, unstated assumptions of current capabilities-based work by drawing on seminal work in the philosophy of social science, particularly the debate between methodological individualism and collectivism. We argue that a number of explanatory anomalies as well as the apparent lack of progress in capabilities-based work are partly due to much of capabilities-based work being based on collectivist notions that sidestep critical individual-level considerations, including individual action and heterogeneity. In this note we do not deny or reject the notion of routines or capabilities *per se*, but rather call for an increased emphasis on how these collective structures *originate* and *change* as a result of individual actions.

Strategy scholars are increasingly converging on organizational capabilities as a key construct in strategy (e.g., Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997; Henderson & Cockburn, 1994; Nelson & Winter, 1982; Winter, 2003; Zollo & Winter, 2002). Building on resource-based logic (Barney 1991) and notions of routines (Nelson & Winter, 1982), the organizational capabilities approach has become one of the predominant ways of thinking about heterogeneity and performance in strategic management. However, despite over two decades of largely theoretical (and some applied) work, as well as recent efforts to clarify the meanings of organizational routines and capabilities (e.g., Helfat & Peteraf, 2003; Eisenhardt & Martin, 2000; Winter, 2003; Zollo & Winter, 2002; Zott, 2003), fundamental questions about their existence, operationalization, and theoretical status still persist (cf. Williamson, 1999; Foss 2003).

The purpose of this note is to explicate some of the underlying, unstated assumptions of current capabilities-based work in an effort to provide a more solid philosophical foundation for future work. We do so by drawing on seminal work in the philosophy of social science, more specifically the debate on methodological individualism *versus* methodological collectivism (e.g., Elster, 1989; Nagel, 1961; O'Neill, 1972; Popper, 1957, 1959; Rosenberg, 1995; Udehn, 2002). While this debate has seldom been explicitly applied or invoked in the context of strategic management, or the capabilities-based work more specifically, we argue that the field stands to gain from an analysis of its key concepts and ideas. Recent work in strategy has quite persuasively pointed out the value of clearly articulating the philosophical underpinnings of our theory (Powell, 2001, 2002; also see Poole & Van de Ven, 1989). Underlying, philosophical assumptions, though often unstated, not only take sides in ongoing philosophical debates, but also drive the questions being asked in our field (Rosenberg, 1995: 3-4).

To foreshadow our conclusions, we argue that a number of explanatory anomalies as well as the apparent lack of progress in capabilities-based work are partly due to much capabilities-based work being based on collectivist notions that sidestep numerous individual-level considerations, including individual action and heterogeneity. While it seems that the original intention of capabilities based work in economics was to explain firm heterogeneity based on a *figurative* metaphor between individual skills and collective routines/knowledge (Nelson & Winter, 1982: 72, 124; cf. Foss 2003), the latter has received a *literal* life of its own in subsequent research in strategic management (e.g., Brown & Duguid, 1991; Kogut & Zander, 1992; Nahapiet & Ghoshal, 1998). Routines and capabilities, rather than individual behavior,

have become explanatory primitives in this approach. In contrast, we argue for an increased focus on micro-foundations and individual action as an antecedent to collective concepts. Note that we do not deny or reject the notion of capabilities or collective structures *per se*, but rather call for an increased emphasis on how organizational capabilities *originate* and *change* as a result of individual actions. While extant work focuses on the persistence and replication of routines and capabilities - the question of their origin has remained unanswered and elusive (Murmann, Aldrich, Levinthal, & Winter, 2003: 29). Overall, in broad strokes, we call for a theoretical foundation for organizational capabilities research based on a “weak” or “institutional” form of individualism, which recognizes the existence and influence of collective structures, but mandates that they be explained in terms of past and present individual action.

The Debate: A Brief Overview

Reviewing the debate between individualism and collectivism in any exhaustive or comprehensive way is beyond the scope of this research note (see Udehn, 2001 for a recent overview), though a brief review serves our purposes. The general relevance of the debate is perhaps suggested by the fact that it has been front and center intermittently in a number of the disciplines that strategy fields draws on, including: economics (e.g., Arrow, 1974, 1994; Boland, 1982; Brennan & Buchanan, 1985), sociology (e.g., Coleman, 1986, 1990; Homans, 1964; Sawyer, 2002; Wrong, 1961), and philosophy (e.g., Elster, 1989; Hayek, 1952; Popper, 1959). The dividing lines have been such that they have created heated debate and controversy *within* these disciplines, and unlikely, like-minded allies *between* disciplines.

Methodological individualism in its purest form builds on the ontological argument that only individuals are real, that they ‘exhaust the social world’ without remainder (Kincaid, 1997), and that theorizing should reflect this. This strong form of individualism denies the existence and causal influence of collectives and institutions and argues that they must be reduced to and explained in terms of individuals – that is, individual endowments, intentions, desires, expectations, and goals (cf. Elster, 1989; Tuomela, 1989). In fact, some radical methodological individualists have advocated the complete reduction of all social phenomena to psychological analysis of the mental states of individuals (“psychologism” e.g., Watkins, 1952); however, most methodological individualists more modestly argue that a focus on individuals, their interaction, and the origin of structure from individual action provides the *raison d’etre* of social science

(Coleman, 1986, 1990; Elster, 1989; Homans, 1964).

In contrast, methodological collectivism starts with the assumption or even assertion of the independence of collectives from individuals (Durkheim, 1952; Udehn, 2002). That is, collectives such as organization and society, and “social facts” such as institutions and culture serve as the independent variables determining individual and collective behavior and outcomes (e.g., DiMaggio & Powell, 1991: 8). The broad argument is that the individual is inherently a social being, or that structure and institutions are *prior to* individuals in influencing choice sets and behavior; an argument that has been endorsed by proponents of the organizational capabilities perspective (Dosi 1995; Spender, 1996). Durkheim’s famous research on suicide is the canonical argument for the influence of these extra-individual forces. This collectivist tradition “... rests wholly on the basic principle that social facts must be studied as things, that is, as realities external to the individual” (Durkheim, 1952: 39; also see Rosenberg, 1995).

As we see it, a number of compelling arguments can be advanced in favor of methodological individualism (e.g., Hayek 1952; Coleman 1990). Reviewing these in a comprehensive manner is also beyond the scope of this note. We simply note that methodological collectivism is an unsatisfactory approach, because it 1) ascribes independent causal powers to collective entities, 2) suppresses more “micro” explanatory mechanisms that are located at the level of individual action, and 3) and therefore also neglects the complicated processes of interaction between individuals (Hayek 1952; Ullman-Margalit 1977). Not surprisingly, there is a strong tendency in methodological collectivism to treat individuals as homogenous. Below we will more carefully explicate the consequences of the pervasive collectivism in extant capabilities-based work.

Methodological Collectivism in the Organizational Capabilities Approach

Knowledge and capabilities based work in strategy often starts with the assumption of collective heterogeneity in routines and knowledge (Nelson & Winter, 1982). While Nelson and Winter discuss the importance of knowledge at the individual level (i.e. skills), their arguments nevertheless quickly move to give primary emphasis to *organizational* routines as guiding individual behavior and in effect being the ‘genes’ of the organization (1982: 9, 14, 134-135). While the metaphor between individual skills and collective routines seems to originally have

been developed as a figurative metaphor, more recent work has moved toward a quite literal direction (Cohen et al., 1996). Moreover, Nelson and Winter's interest was in the analytical levels of the industry and the economy rather than of the firm. Perhaps for these reasons, they did not clarify and solve the aggregation problem of moving from individual to organization level behavior, leaving the ontological status of routines and capabilities unclear.

The problem remains unresolved in the capabilities literature; however, organizational routines and capabilities have assumed a literal life of their own — explicitly independent of individuals. The underlying assumption aligns itself directly with the Durkheimian collectivist tradition discussed above (Durkheim, 1952: 39), which presumes that *a priori* structure and higher-level collectives (or “social facts”) are the *force majeure* influencing or even determining both individual and collective outcomes. Thus, individuals are “rounded out” in the analysis, as social facts – such as routines or capabilities – provide the causal factors in this methodological collectivist strategic theory. This rounding out of individuals has recently been postulated explicitly, with some even making conjectures toward the complete disappearance of individuals from our equations (Murnighan et al. 2003: 27). The assumption of the independence of collectives and routines from individuals is now a prevalent assumption in the capabilities and learning literatures (e.g., Nahapiet & Ghoshal, 1998: 247; also see Levitt & March, 1988: 320). As a practical example of this independence, Kogut and Zander insist that organizational knowledge and capabilities do not change as a function of individual turnover (1992: 383; also see Madsen, Mosakowski, & Zaheer, 2003).

Capabilities-based research argues that routines and capabilities are the genes of the organization, which, evolve over time, provide the key genetic make-up of organization (e.g., Nelson & Winter, 1982: 9, 134-135) and constitute the critical antecedent to performance heterogeneity (Eisenhardt & Martin, 2000). However, this conceptualization has disregarded several key individual level considerations, including the initial conditions of organizational founders who create these structures, individual endowments, subsequent reflexive action by individuals, and the induction of new members into the organization. Furthermore, for an approach that is often taken to be oriented towards “history,” there is a surprising lack of attention to such key historical considerations. Thus, consideration for individuals and their role in creating and enabling collective structures has been lacking, resulting in a reversal of causality from organizational routine to individual skill versus the other way around. Most alarmingly –

more recent arguments are ominously moving even further away from individual-level considerations. For example, Aldrich argues for a potential shift completely away from individuals, conjecturing that “if we truly focused on routines, competencies, practices and so on, we would *not* follow people anymore in our research” (Murmann, Aldrich, Levinthal, & Winter, 2003: 25-27; emphasis in original text).

Recent work has also argued for the existence and importance of aggregates or collections of routines and n^{th} level capabilities (Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003; Nelson, 1991; Winter, 2003; Zollo & Winter, 2002; Zott, 2003). However, this has only further muddied the already muddy waters by piling one enigma upon another. Clarity on the basic construct is first required, before more elaborate explications. For example, Winter (2003) recently attempts to clarify the notion of dynamic capability by introducing a zero level capability in the capability hierarchy. The zero level capability manifests itself in an organization at equilibrium, where “... an organization keeps earning its living by producing and selling the same product, on the same scale and to the same customer population over time” (Winter, 2003: 992). A first-order ‘dynamic’ capability is, for example, product development, or geographic expansion (Winter, 2003: 992; also see Eisenhardt & Martin, 2000). However, treating an organization as a monolithic whole does not advance our understanding of the origin of heterogeneity, or the origin of these potential capabilities. That is, while the link between routine/capability and performance has been explicated, it has been done without providing the underlying microfoundations for their development. This requires careful consideration for the individuals, which create and enable them. The zero level could more fruitfully be thought of as the initial conditions (including founders, managers, and original rules for interaction) of the organization, rather than the equilibrium alluded to by Winter (2003). The equilibrium advocated by us then has close ties to Simon’s equilibrium (1947), which focuses on *individual* inducements and contributions. Overall, while the goal of Winter’s paper is to “reduce the mystery surrounding both the terminology and phenomenon [of organizational capabilities]” (Winter, 2003: 991), the effort does not resolve key questions about the origin of routines or capabilities – a key question given that they are postulated as *the* source of heterogeneity.

Consequences of Methodological Collectivism

The choices that the strategic management community makes with respect to methodological individualism versus collectivism in theorizing have deep consequences. These choices drive the questions being asked in our field and they strongly influence the answers that are given. Therefore, they also have implications for managerial practice. Here we briefly review some of the unfortunate explanatory consequences of the methodological collectivist stance of the capabilities perspective in strategic management.

Routines and capabilities are ill-defined. While extra-individual knowledge structures such as routines and capabilities currently carry cachet and initial appeal, they begin to deflate under closer inspection. Most conspicuously, no clear definition of routines and capabilities has been advanced to date (see the attempts in Cohen et al. 1996). When writers try to proffer definitions, they often pack so much into routines and capabilities that they effectively become identical to the organization itself, including heuristics, strategies, organizational processes and arrangements, cognitive issues (e.g., “organizational memories”), and incentives (“truces”) (Nelson & Winter, 1982). While it may indeed be the case that in actuality “... skills, organization, and ‘technology’ are intimately intertwined in a functioning routine, and it is difficult to say where one aspect ends and another begins” (Nelson & Winter, 1982: 104), nevertheless more clarity is needed. It is one thing to claim that ontologically, things are a mess; it is another thing to openly admit the mess into analysis. However, if there are no individualistic foundations for the analysis of routines and capabilities, we submit that the mess is simply unavoidable. Problems of definition are almost bound to produce problems of empirical application, and the issues of testability and operationalization have indeed plagued this stream of research since its very origins.

A lop-sided view of economic organization. The collectivist focus of capabilities-based work is evident in the essentially *ad hoc* assumption that knowledge inside firms can be communicated at low costs, while knowledge between firms can only be communicated at high cost — an assumption that may make sense if it is implicitly assumed that individuals within a firm are basically homogenous or work voluntarily. Of course, this ignores the fact that knowledge, even within organizational settings, is not voluntarily shared in a seamless

production environment (as argued by Kogut & Zander, 1992: 384), but rather is exchanged (cf. Teece, 2003). That is, it cannot be assumed that individuals only have the collective good in mind, as individuals after all are *the key* value creators and appropriators (Coff, 1999; also see Osterloh, Frost, & Rota, 2001). Furthermore, for capabilities-based work it has been easy to postulate that “firms know more than their contracts can tell” and that all organizational aspects are “intertwined in a functioning routine.” If instead the analysis had started in an explicit methodological individualist mode, that is, from individual choice behavior, the argument that communication costs within, for example, certain business units may be lower than the communication costs between people in the unit and people in a supplier firm, might have been derived as an outcome of a properly specified model instead of being postulated. The problem is that there *is* no theory of individual choice behavior in the organizational capabilities approach, so that writers in the organizational capabilities approach have to treat economic organization in a methodological collectivist way, namely in terms of postulating somewhat crude causal relations between capabilities and economic organization, little attention being paid to the microanalytic issues involved.

Routines and capabilities may be bad for practice. What are the practical implications and microfoundations for such collective theorizing without consideration for individuals? The collectivist orientation underlying the capabilities approach provides a radical departure from the *raison d’etre* of strategic management, which ought to provide actionable and useful theoretical insights for the practicing manager (Rumelt, Shendel, & Teece, 1994; cf. Whetten, 2002). If individuals can be disregarded, it is hard to make sense of organizational strategy, including installing incentive schemes, delegating decisions to empower employees, etc. The more fundamental questions of strategy are individual level indeed – including questions about the origin of structure, decision-making power, motivation, appropriation etc. – all outside the purview of current capabilities-based work. Nelson and Winter insightfully recognize that in theorizing - “theorists should aim to tell the truth in their theorizing, but they cannot aim to tell the whole truth. For to theorize is precisely to focus on those entities and relationships in reality that are believed to be central to the phenomenon observed – and largely ignore the rest” (Nelson & Winter, 1982: 134). Overall, we believe that capabilities-based work has focused on the wrong ‘central’ elements of extra-individual routines, while starting with individuals and

individual action and interaction provide a better starting point, particularly given that our field needs to offer useful theoretical insights, even for the practising manager.

Future Directions and Unanswered Questions

A methodological individualist perspective suggests that collective structures and interaction are artefacts (or a “phenotype,” to retain the evolutionary language) of individual action, and thus are only of secondary interest in theorizing about the firm, with the individual (of necessity) receiving primacy.² While studying these artefacts can perhaps be of some material value to strategic management, they should be dependent, rather than independent variables. Studying the individuals creating and enabling these artefacts provides a more fruitful focus of investigation. That is, the central feature or focus of organizational and strategic analysis is the individual (cf. McKelvey, 1982; also see Barnard, 1938; Simon, 1985), rather than the routine.

Overall we have discussed the current collectivist focus of extant capabilities-based work. While we do not have an alternative theory, nevertheless we briefly point to unanswered questions and potential conceptual directions for future research. Our original methodological individualism versus collectivism dichotomy provides the overall intuition for what is needed in the future. While we do not advocate a completely atomistic, individualistic approach, we do believe that a weak or institutional form of individualism provides an adequate amount of consideration for individuals, though it also recognizes the causal influence of routines and/or other collective structures. In broad strokes we discuss three areas that deserve further consideration, in an effort to move capabilities-based work ahead toward a more careful explication of underlying microfoundations.

First, the bridge law or linkage between individual and collective knowledge (or to put it in Nelson & Winter’s terms – between “skills” and “routines”) needs to be explicated, as the link between individual skills and collective routines has remained at the level of a metaphor (1982: 72). The skills-routines metaphor, while intuitively appealing, has received a life of its own and subsequently has provided little of theoretical or practical value for scholars to build on, let alone a useful heuristic for the practicing manager (cf. Whetten, 2002). The linkage question is, how

² The insight of collective interaction and structures as artefact is attributable to the pioneering work of the economist and Nobel Laureate James Buchanan, who persuasively argues that the state is simply an artefact of individual decision making, and thus should not be the primary focus of analysis (Buchanan & Tullock, 1962: 13).

exactly do we aggregate from individual skills to collective routines? Aggregation problems have been notably problematic in the social sciences (e.g., Arrow, 1951), but nevertheless attempts at their resolution are absolutely critical in moving theoretical arguments forward. The aggregation or linkage question has largely been side-stepped by arguing for the emergence, or even complete independence, of collective knowledge from individuals – summarized in the popular dictum: “the whole is more than the sum of its parts”. From a philosophical perspective however, citing emergence at the collective level has simply been characterized as an admission of ones ignorance about the parts, which make up the whole (Nagel, 1961: 380-396). The gold standard for dealing with potentially emergent properties is a proper accounting of the parts (individuals in this case), which make up the whole (Morgan, 1923), though in capabilities-based work they are simply assumed to be homogeneous, “voluntary actors” (Kogut & Zander, 1992).

Second, related to the above, what deserves more careful explication is both the causal relationship and levels assumptions between individual and collective. For example, organizational research, particularly strategy, tends to equate managerial action with organizational action (cf. Klein, Tosi, & Cannella, 1999: 247). This is readily evident in the capabilities literature as well (e.g., Eisenhardt & Martin, 2000; Helfat & Peteraf, 2003). Furthermore, levels assumptions and issues have scarcely been thought about in the strategy content literature, despite recent advancements in levels work with applications to leadership studies and organizational behavior (Dansereau et al., 1999; Klein et al., 1994; Rousseau, 1985). For example, given the organizational level focus, strategy research has implicitly made the assumption of individual homogeneity. The organization, its routines and capabilities, somehow are heterogeneous with homogeneous actors at the lower level. This characterization seems somewhat of a stretch, and simply breaks with the philosophical assumption of supervenience, which states that change at a higher level only happens as a function of change at a lower level (e.g., Sawyer, 2001) – an assumption which seems almost self-evident when applied to organizational analysis.

The third and final fairly evident, though largely overlooked, consideration is the observation that much of what happens within organizations can scarcely be labeled as routine (Williamson, 2002: 426; also see Barnard, 1968: 240; Garicano, 2000: 898). That is, individuals within organizations, particularly managers, deal with exceptions rather than the routine. Therefore, within a given organizational setting, perhaps depending on various task or industry-

specific contingencies, certain individuals provide the parameters or constraints within which action is taken (cf. Brennan & Buchanan, 1985; Elster, 2000). This gives way to a two-stage process where (for example) standard operating procedures and rules of interaction are first created and specified by organizational founders or managers, and then individuals interact given these collective structures or constraints (Foss & Foss 2000). While this perhaps is not completely inconsistent with current conceptualizations of routines and capabilities, extant work does not explicate the origin of these collective structures, or the first step alluded to above. Of course we do recognize that methodological individualist perspective does not rule out the possibility that routines and other collective entities at the organizational level may emerge in a partly unplanned manner (Ullmann-Margalit, 1977). However, purposeful, individual action should provide the starting point for the development of collective structures. Furthermore, given the inevitable ‘degeneracy’ in closed systems of interaction, the key role that external individuals provide in breaking up myopic structures should be recognized. That is, “degeneracy is avoided if there is turnover” (March, 1991: 80), and insight which capabilities-based work implicitly denies given its collectivist focus (Kogut & Zander, 1992: 382).

Conclusion

Our hope is that this note will serve as a clarion call of sorts for capabilities-based scholars to pay more careful attention to their underlying assumptions, and to develop theoretical arguments, which give primacy to individuals. We concur with Barnard that “... the individual is always the basic strategic factor of organization” (1968: 139). Thus, with individuals at the locus of knowledge, the questions for capabilities-based work should shift to explicating how routines are *created and emerge from individual action*, and how they dialectically evolve with the subsequent interaction between individual and collective. Our arguments should not be misinterpreted as a call for completely rational or conscious design of routines and capabilities, but rather we recognize that: “History is the result of human action, not of human design” (Elster, 1989: 91). However, we do challenge the completely behavioral, organic, and structurally-oriented approaches, which have not clearly delineated the origin of this structure. Overall, we think that primacy should be given to managers as the linchpin between opportunity and constraint, that is, in their role as specifying the interaction of individuals.

While we have no ontological problems with the existence and potential influence of collective structures on individual behavior as such (contrary to ‘strong’ forms of methodological individualism – e.g., Watkins, 1952), nevertheless we argue that strategy has partially lost its problem or original question by *beginning* analysis with structures and routines, *while their origin* should be of interest and the primary focus (cf. Williamson, 1999; also see Coleman, 1990: 31; Wrong, 1961: 183). That is, structure and routines are an artifact of past individual decision making and heterogeneity, and do not emerge exogenously or ex nihilo. While there most certainly are (for example) exogenous institutions, which partially determine firm level outcomes (cf. Oliver, 1997), they nevertheless influence firms more or less equally and thus are not a source of heterogeneity, while an internal focus proves more fruitful (Barney & Hesterly, 1996). Overall, we believe that a weak form of methodological individualism can help us uncover and account for the origin of routines and rules of interaction.

References

- Agassi, J. 1975. Institutional individualism. *British Journal of Sociology*, 11: 244-270.
- Argote, L., & Ingram, P. 2000. Knowledge transfer: A basis for competitive advantage in firms. *Organizational Behavior and Human Decision Processes*, 82: 150-169.
- Arrow, K.J. 1951. *Social choice and individual values*. New York: Wiley & Sons.
- Arrow, K. J. 1974. *The limits of organization*. New York: W.W. Norton.
- Bacharach, S. B. 1989. Organizational theories: Some criteria for evaluation. *Academy of Management Review*, 14: 496-515.
- Barnard, C. 1968. *The functions of the executive* (18th printing). Oxford: Oxford University Press.
- Barney, J.B. 1991. Firm resources and sustained competitive advantage. *Journal of Management*, 17: 99-120.
- Barney, J., & Hesterly, W. 1996. Organizational economics: Understanding the relationship between organizations and economic analysis, in: S. R. Clegg, C. Hardy, W. R. Nord (eds.), *Handbook of Organization Studies*, London, 115 - 147.
- Boland, L. W. 1982. *The foundations of economic method*. London: George Allen and Unwin.
- Brennan, G., & Buchanan, J.M. 1985. *The reason of rules: Constitutional political economy*. Cambridge: Cambridge University Press.
- Coff, R. W. 1999. When competitive advantage doesn't lead to performance: Resource-based theory and stakeholder bargaining power. *Organization Science*, 10: 119-133.
- Cohen, M. D., Burkhart, R. Dosi, G. Egidi, M., Marengo, L. Warglien, M., & Winter, S. 1996. Routines and other recurrent action patterns of organizations: Contemporary research issues. *Industrial and Corporate Change*, 5: 653-698.
- Coleman, J. S. 1990. *Foundations of social theory*. Cambridge (Mass.)/London: The Belknap Press of Harvard University Press.
- Collis, D.J.1994. How valuable are organisational capabilities? *Strategic Management Journal*, 15: 143-152.
- Dosi, Giovanni. 1995. Hierarchies, markets and power: Some foundational issues on the nature of contemporary economic organizations, *Industrial and Corporate Change*, 4: 1-19.
- Dosi, G., Levinthal, D., & Marengo, L. 2003. Bridging contested terrain: Linking incentive-based and learning perspectives on organizational evolution. *Industrial and Corporate Change*, 12: 413-436.
- Elster, J. 1989. *Nuts and bolts for the social sciences*. Cambridge: Cambridge University Press.

- Foss, K., & Foss N.J.. 2000. Competence and Governance Perspectives: How Much Do They Differ? And How Does It Matter? in N.J. Foss and V. Mahnke, eds. *Competence, Governance, and Entrepreneurship*. Oxford: Oxford University Press.
- Foss, N.J. 2003. Bounded Rationality and Tacit Knowledge in the Organizational Capabilities Approach: an Evaluation and a Stocktaking. *Industrial and Corporate Change* 12: 185-201.
- Garicano, L. 2000. Hierarchies and the organization of knowledge in production. *Journal of Political Economy*, 108: 874-904.
- Hayek, F.A. v. 1952. *The Counter Revolution of Science*. Chicago: University of Chicago Press.
- Helfat, C. E., & Peteraf, M.A. 2003. The Dynamic Resource-Based View: Capability Lifecycles. *Strategic Management Journal*, 24: 997-1010.
- Hempel, C., & Oppenheim, P. 1948. Studies in the logic of explanation. *Philosophy of Science*, 15: 135-175.
- Kogut, B., & Zander, U. 1992, Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3: 383-397.
- March, J.G. (1991), Exploration and exploitation in organizational learning, *Organization Science*, 1: 71 – 87.
- Madsen, T. L., Mosakowski, E., & Zaheer, S. 2003. Knowledge retention and personnel mobility: The nondisruptive effects of inflows of experience. *Organization Science*, 14: 173-191.
- Nagel, E. 1961. *The structure of science: Problems in the logic of scientific explanation*. New York: Harcourt, Brace & World, Inc.
- Nahapiet, J., & Ghoshal, S. 1998. Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23: 242-266.
- Nelson, R.R., & Winter, S. 1982. *An evolutionary theory of economic change*. Cambridge, MA: Harvard University Press.
- Oliver, C., 1997. Sustainable competitive advantage: Combining institutional and resource-based views. *Strategic Management Journal*, 18: 697-713.
- O'Neill, J. (Ed.). 1973. *Modes of individualism and collectivism*. Heinemann Educational Books Ltd.
- Osterloh, M., Frost, J., & Rota, S. 2001. *Solving social dilemmas: The dynamics of motivation in the theory of the firm*. Working paper, University of Zurich.
- Popper, K.R. 1959. *The logic of scientific discovery*. London: Hutchinson & Co.
- Rosenberg, A. 1995. *The philosophy of social science*. Boulder, CO: Westview Press.
- Rumelt, R.P., Schendel, D., & Teece, D.J. 1991. Strategic management and economics. *Strategic Management Journal*, 12: 5-29.

- Sawyer, R.K. 2001. Emergence in sociology: Contemporary philosophy of mind and some implications for sociological theory. *American Journal of Sociology*, 107: 551-585.
- Simon, H. A. 1985. Human nature in politics. *American Political Science Review*, 79: 293-304.
- Simon, H. A. 1991. Bounded rationality and organizational learning. *Organization Science*, 2: 125-134.
- Spender, J. C. 1996. Making knowledge the basis of a dynamic theory of the firm. *Strategic Management Journal*, 17 (Winter special issue): 45-62.
- Sutton, R. L., & Staw, B. M. 1995. What theory is not. *Administrative Science Quarterly*, 40: 371-384.
- Teece, D.J. 2003. Expert talent and the design of (professional services) firms. *Industrial and Corporate Change*, 12: 895-916.
- Tsoukas, H. 1996. The firm as a distributed knowledge system: A constructionist approach. *Strategic Management Journal*, 17 (Winter special issue): 11-25.
- Udehn, L. 2001. *Methodological individualism: Background, history and meaning*. London, New York: Routledge.
- Udehn, L. 2002. The changing face of methodological individualism. *Annual Review of Sociology*, 28: 479-507.
- Ullman-Margalit, E. 1977. Invisible-hand Explanations. *Synthese*
- Watkins, J.W.N. 1952. Ideal types and historical explanation. *British Journal for the Philosophy of Science*, 3: 22-43.
- Whetten, D.A. 2002. Modeling-as-theorizing: A systematic methodology for theory development. In D. Partington (Ed.), *Essential skills for management research*: 45-71. Thousand Oaks, CA: Sage Publications.
- Williamson, O.E. 1999. Strategy research: Governance and competence perspectives. *Strategic Management Journal*, 20: 1087-1108.
- Williamson, O. E. 2002. Empirical microeconomics: Another perspective. In M. Augier & J. March (Eds.), *The economics of choice, change and organization: Essays in memory of Richard M. Cyert*: 419-441. Northampton, MA: Edward Elgar.
- Winter, S. G. 1986. The research program of the behavioral theory of the Firm: Orthodox critique and evolutionary perspective, in B. Gilad and S. Kaish, eds. 1986. *Handbook of Behavioral Microeconomics, Vol. A*. Greenwich: JAI Press.
- Winter, S. G. 2003. Understanding dynamic capabilities. *Strategic Management Journal*, 24: 991-995.
- Wrong, D. 1961. The oversocialized conception of man in modern sociology. *American Sociological Review*, 26: 183-193.

Zollo, M., & Winter, S. G. 2002. Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13: 339-352.

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