

The Mirage of Microfoundations

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If the project to bring “microfoundations” into strategic management and organizational analysis (Abel, Felin and Foss 2008, Felin and Foss 2005, 2006, 2009) simply means that we “we stress the need to build microfoundations rooted in individual action and interaction” (Felin and Foss 2009, p. 162) then we should applaud it.¹ But this simple and valid proposition is complicated by added ambiguities.

Strangely, this current project (a) ignores the *failure* in the 1970s of the project to build macroeconomics on secure microfoundations, (b) retains damaging ambiguities, and (c) is ultimately inconsistent in its own terms. I deal with these three issues in turn and focus on the insufficiency and rhetorical bias in their core claims and propositions.

1. The failure of the microfoundations project in economics

Mainstream economics has attempted to place economics on individualistic microfoundations. But this project faced insurmountable difficulties and essentially collapsed under the weight of its own internal problems. This episode has lessons for the current proposal.

Starting from the assumption of individual utility maximization, Hugo Sonnenschein (1972, 1973a, 1973b), Rolf Mantel (1974) and Gerard Debreu (1974) showed that the excess demand functions can take almost any form; there is no basis for the assumption that they are generally downward sloping. Furthermore, a general equilibrium may be indeterminate and unstable unless very strong additional assumptions are made, such as society as a whole behaves as if it were a single individual. As Alan Kirman (1989) has reiterated, the consequences for neoclassical general equilibrium theory are devastating. As S. Abu Turab Rizvi (1994, p. 363) explains, the work of Sonnenschein, Mantel and Debreu is quite general and is not restricted to counter-examples:

Its chief implication ... is that the hypothesis of individual rationality, and other assumptions made at the micro level, gives no guidance to an analysis of macro-level phenomena: the assumption of rationality or utility maximisation is not enough to talk about social regularities. This is a significant conclusion and brings the microfoundations project to an end.

A devastating consequence is the breakdown of the types of analysis based on individualistic ontologies where relations or structures are downplayed (Ingrao and Israel 1990; Kirman 1989).

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The microfoundations project in economics was based on the utility-maximizing individual. The work of James Coleman (1990) – which Teppo Felin and Nicolai Foss support enthusiastically – and of their co-author Peter Abell, also involves rational, utility-maximizing agents. Even if we overlook criticism of utility-maximization, there are further lessons from this former microfoundations episode in economics. While it is important and valuable to consider individuals and their psychology, we cannot get far by considering individuals alone. We have to consider relations between individuals as well. All social analysis requires some consideration of social structures, as well as individuals and their motivations.

Given this, much “microfoundations” rhetoric is one-sided and misleading. While social relations are always present (even if covert) in social science discourse, they are still not given enough emphasis in economics. If they were there would be much more dialogue with sociology.

2. Fateful ambiguities and further problems

Much of the rhetorical power of the work of Peter Abell, Teppo Felin and Nicolai Foss in favor of their “microfoundations” project is based on statements such as the following:

- i. “Organizations are made up of individuals, and there is no organization without individuals.” (Felin and Foss 2005, p. 441)
- ii. “Specifically, there are no conceivable causal mechanisms in the social world that operate *solely* on the macro-level.” (Abell, Felin and Foss 2008, p. 491)
- iii. “We take the position – associated with ‘methodological individualism’ – that the explanation of firm-level (macro) phenomena in strategic management must ultimately be grounded in explanatory mechanisms that involve individual action and interaction.” (Abell, Felin and Foss 2008, p. 492)
- iv. “Combining methodological individualism with an emphasis on causal mechanisms implies that strategic management should fundamentally be concerned about how intentional human action and interaction causally produce strategic phenomena.” (Abell, Felin and Foss 2008, p. 492)

Apart from the questionable definition of methodological individualism – about which more below – I agree with all these statements. But despite their citation of some of the key material in the philosophy of social science, these authors consistently ignore ambiguities and problems that have been raised in this literature. The following statements (by me) are *also* true:

- v. There is no organization without social relations.
- vi. There are no conceivable causal mechanisms in the social world that operate *solely* on the micro-level of the individual alone.
- vii. Explanations of firm-level (macro) phenomena must be grounded in explanatory mechanisms that involve social relations, as well as individuals.
- viii. An emphasis on causal mechanisms implies that we should also be concerned with how intentional human action and interaction are themselves caused.

Organizations are *more than* individuals: without social relations and social positions they would not be organizations. They would simply be aggregates of isolated individuals. So statement (i) has to be supplemented by the observation (v) that organizations involve social relations, and there is no organization without social relations.

Statement (ii) is also valid but inadequate. Ignored is the equally valid proposition (vi) that there are no conceivable causal mechanisms in the social world that operate *solely at the individual level*. The individual too is made up of component parts with biological, neurological and psychological causes. The supra-individual and sub-individual levels have also to be taken into account.

Statement (iii) defines “methodological individualism” as if such a task were simple and uncontroversial. But the historical and analytical literature on the term reveals that it is deeply ambiguous and there is no consensus over its meaning (Udéhn 2001, Hodgson 2007). Among the several meanings used by its advocates are the following prominent options:

(x) Social phenomena should be explained entirely in terms of individuals *alone*.

(y) Social phenomena should be explained in terms of individuals *plus* relations between individuals.

Although the difference may appear slight, it has enormous consequences. Emphatically (x) has never been achieved in practice: *all* viable explanations of social phenomena so far encountered involve relations between individuals as well as individuals themselves (Nozick 1977, Arrow 1994).

By contrast, the content of version (y) is acceptable, because of its inclusion of both individuals and social relations in the *explanantia*. But consider what it means: social relations *as well as* individuals are essential to explain social phenomena. Many social theorists define *structures* as social relations. Accordingly (y) is equivalent to the idea that social phenomena should be explained in terms of individuals *plus* social structures. Both versions of (y) invoke dual *explanantia*. So its description as “methodological individualism” is misleadingly biased towards one side of the story. It would be equally biased and erroneous to describe (y) as “methodological structuralism”. Neither is the term “methodological collectivism” acceptable. The problem with (y) is of labels rather than content. We *always* have to start from relations/structures *and* individuals. There is no other viable explanatory strategy. Biasing the label in one direction or the other is highly misleading (Hodgson 2007).

Abell, Felin and Foss do mention individual interactions, and these necessarily involve social relations. So I assume they align with (y). But they seem unaware of the bias involved in labelling this as methodological individualism. They should also follow one of their mentors, Friedrich Hayek (1967. pp. 70-1) and mention such relations explicitly:

The overall order of actions in a group is ... more than the totality of regularities observable in the actions of the individuals and cannot be wholly reduced to them. ... [The] whole is more than the mere *sum* of its parts ... these elements are related to each other in a particular manner ... [and] the existence of those relations which are essential for the existence of the whole cannot be accounted for wholly by the interaction of the parts but only by their interaction with an outside world ...

Like others (Kontopoulos 1993, Weissman 2000), Hayek was clear that relations between individuals must be included in our social ontology. Unfortunately the aforementioned advocates of “microfoundations” are imprecise about the nature of the foundations upon which we have to build. I ask them to clarify their position on (v)-(viii), (x) and (y) above. Without such clarification we are invited into a swamp of ambiguity and rhetorical bias. In particular, to be even-handed, it is important for them to acknowledge the validity of statements (v)-(viii), as well as their valid emphasis on the individual.

3. Levels of analysis

Statement (iv) emphasizes causal mechanisms and says we “should fundamentally be concerned” with “intentional human action and interaction”. But why is this individual level “fundamental”? As scientists, aren’t we also obliged to examine the “nuts and bolts” of individuals as well? Aren’t we also required to explain the *causes* behind individual capacities and intentions, or do we regard these as somehow uncaused, or beyond the reach of science?

So far the answer of our authors to the final question is unclear. In another paper Felin and Foss (2011) argue for “free will,” some causal “wiggle room,” or “indeterminacy”. Hence do they regard intentions as (partially) uncaused, thus beyond the reach of (any eventual) causal explanation? Are intentions *entirely caused* or not? Personally I follow others in claiming that they are (Veblen 1919, Bunge 1959, Hodgson 2004). Do Felin and Foss by contrast believe in the uncaused cause? Does their rhetorical elevation of the individual among *explanantia* result from a belief that human intentions are somehow privileged in nature as causally undetermined? Again they are unclear.

Science is about causal explanation. And all science tries to explain wholes partially in terms of their components. But complex wholes cannot be *entirely* explained in such terms. If they could, then there would be no such thing as social science. We would all have to be subatomic physicists, attempting to explain social and other phenomena entirely in terms of the most elementary subatomic particles. Different sciences exist precisely because this goal is beyond our reach: relations and interactions involve a multiple-layered ontology with emergent properties (Humphreys 1997) and processes that take place through time (Winter forthcoming).

To settle on the individual as the “fundamental” unit of analysis is problematic. Why stop at the level of the individual? Why not get down to the neural structures in the brain? Or the biochemistry of the human organism? Or atomic physics?

The same arguments concerning explanatory reduction from the macro to the micro, and from groups to individuals, apply equally to explanatory reduction from individual to gene, gene to molecule, molecule to atom, and so on. If we can reduce explanations to individuals, then why not further reduce them? To avoid this double standard one must either accept multiple levels of analysis, or reduce everything to the lowest ontological level – the realm of physics. If we admit multiple levels of analysis then there is no reason to assume that the social realm has one level only. Organizations involve emergent properties that render them additional units of analysis, while fully acknowledging that their very existence depends on individuals – just as the existence of individuals depends upon atoms.

Although Abell, Felin and Foss point to some genuine limitations of the routines literature, their proposed “microfoundations” strategy is unclear and misdescribed. They rightly stress the importance of understanding individual psychology and motivations, but this point has already been stressed by many authors (including myself) and we do not need biased “microfoundations” rhetoric to establish this point.

Accordingly, when Linda Argote and Yuqing Ren (forthcoming) identify “transactive memory systems” as part of the “microfoundations” they do not claim that they exhaust the *explanantia*. David Teece (forthcoming) does not have to reduce explanations entirely to individuals to make the point that individual entrepreneurship can be vital. Michael Cohen (forthcoming) points to the crucial role of habit – much in line with my own work in this area (Hodgson 2004, 2008) – but does not claim that habit the sole unit in terms of which

everything can be explained. “Microfoundations,” if it is a meaningful and operative term, cannot mean complete micro-reduction.

Abell, Felin and Foss underplay the role of relations or structures in explanation and are unclear whether explanations can or should be in terms of individuals alone. Alternative accounts of routines do exist that are more in line with reputable philosophy of science.

References

- Abell, Peter, Felin, Teppo and Foss, Nicolai (2008) ‘Building Micro-foundations for the Routines, Capabilities and Performance Links’, *Managerial and Decision Economics*, **29**, pp. 489-502.
- Argote, Linda and Ren, Yuqing (forthcoming) ‘Transactive Memory Systems: A Microfoundation of Dynamic Capabilities’, *Journal of Management Studies*, forthcoming.
- Arrow, Kenneth J. (1994) ‘Methodological Individualism and Social Knowledge’, *American Economic Review (Papers and Proceedings)*, **84**(2), May, pp. 1-9.
- Bunge, Mario A. (1959) *Causality: The Place of the Causal Principle in Modern Science* (Cambridge, MA: Harvard University Press).
- Cohen, Michael D. (forthcoming) ‘Perceiving and Remembering Routine Action: Fundamental Micro-Level Origins’, *Journal of Management Studies*, forthcoming.
- Coleman, James S. (1990) *Foundations of Social Theory* (Cambridge, MA: Harvard University Press).
- Debreu, Gerard (1974) ‘Excess Demand Functions’, *Journal of Mathematical Economics*, **1**(1), March, pp. 15-21.
- Felin, Teppo and Foss, Nicolai J. (2005) ‘Strategic Organization: A Field in search of Micro-Foundations’, *Strategic Organization*, **3**(4), pp. 441-55.
- Felin, Teppo and Foss, Nicolai J. (2006) ‘Individuals and Organizations: Thoughts on a Micro-Foundations Project for Strategic Management and Organizational Analysis’, *Research Methodology in Strategy and Management*, **3**, pp. 253-88.
- Felin, Teppo and Foss, Nicolai J. (2009) ‘Organizational Routines and Capabilities: Historical Drift and a Course-Correction Toward Microfoundations’, *Scandinavian Journal of Management*, **25**, pp. 157-67.
- Felin, Teppo and Foss, Nicolai (2011) ‘The endogenous origins of experience, routines, and organizational capabilities: the poverty of stimulus’, *Journal of Institutional Economics*, **7**(2), June, pp. 231-56.
- Hayek, Friedrich A. (1967) ‘Notes on the Evolution of Systems of Rules of Conduct’, from Hayek, Friedrich A. (1967) *Studies in Philosophy, Politics and Economics* (London: Routledge and Kegan Paul), pp. 66-81.
- Hodgson, Geoffrey M. (2004) *The Evolution of Institutional Economics: Agency, Structure and Darwinism in American Institutionalism* (London and New York: Routledge).

- Hodgson, Geoffrey M. (2007) 'Meanings of Methodological Individualism', *Journal of Economic Methodology* **14**(2), June, pp. 211-26.
- Hodgson, Geoffrey M. (2008). 'The Concept of a Routine', in Markus C. Becker (ed.) (2008) *Handbook of Organizational Routines* (Cheltenham UK and Northampton MA: Edward Elgar), pp. 3-14.
- Humphreys, Paul (1997) 'How Properties Emerge', *Philosophy of Science*, **64**(1), March, pp. 1-17.
- Ingrao, Bruna and Israel, Giorgio (1990) *The Invisible Hand: Economic Equilibrium in the History of Science* (Cambridge, MA: MIT Press).
- Kirman, Alan P. (1989) 'The Intrinsic Limits of Modern Economic Theory: The Emperor Has No Clothes', *Economic Journal (Conference Papers)*, **99**, pp. 126-139.
- Kontopoulos, Kyriakos M. (1993) *The Logics of Social Structure* (Cambridge: Cambridge University Press).
- Mantel, Rolf R. (1974) 'On the Characterization of Aggregate Excess Demand', *Journal of Economic Theory*, **12**(2), pp. 348-53.
- Nozick, Robert (1977) 'On Austrian Methodology', *Synthese*, **36**, pp. 353-92.
- Rizvi, S. Abu Turab (1994) 'The Microfoundations Project in General Equilibrium Theory', *Cambridge Journal of Economics*, **18**(4), August, pp. 357-77.
- Sonnenschein, Hugo F. (1972) 'Market Excess Demand Functions', *Econometrica*, **40**(3), pp. 549-63.
- Sonnenschein, Hugo F. (1973a) 'Do Walras's Identity and Continuity Characterize the Class of Community Excess Demand Functions?' *Journal of Economic Theory*, **6**(4), pp. 345-54.
- Sonnenschein, Hugo F. (1973b) 'The Utility Hypothesis and Market Demand Theory', *Western Economic Journal*, **11**(4), pp. 404-10.
- Teece, David J. (forthcoming) 'Dynamic Capabilities: Routines versus Entrepreneurial Action', *Journal of Management Studies*, forthcoming.
- Udén, Lars (2001) *Methodological Individualism: Background, History and Meaning* (London and New York: Routledge).
- Veblen, Thorstein B. (1919) *The Place of Science in Modern Civilisation and Other Essays* (New York: Huebsch).
- Weissman, David (2000) *A Social Ontology* (New Haven, CT: Yale University Press).
- Winter, Sidney G. (forthcoming) 'Capabilities: Their Origins and Ancestry', *Journal of Management Studies*, forthcoming.