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Meso-Level Mechanisms and Micro-Level Foundation

by Filippo Barbera

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Social Structure and Macro-Level Outcomes

In his paper, Daniel Little argues that meso-level properties (such as relational and structural ones) may explain social processes: “By referring to structures and mechanisms that are embodied at a level of organization higher than individual actors – organizations, ideologies, legislative systems, training regimes, wars.” But Little argues as well that: “We can legitimately refer to meso-level mechanisms as long as we are mindful of the microfoundations requirement.” In this brief note I will consider Little standpoint and discuss it in the light of analytical sociology literature [see Manzo 2010 for an informative analysis].

With definitions ranging from those centering on population attributes [Blau 1994], on positional considerations [Sørensen 1998] and on social networks [Burt 1992], the idea of social structure is one of the most widespread concepts in the sociological debate, and both classical and contemporary sociology deal with the concept and its applications in a number of ways. For instance, Coleman [1974, 36, 49] argued that in modern societies, social positions are the key element of social structure. They are endowed with identifiable properties (such as material and symbolic advantages, rights to act and power) independent of people’s characteristics. Positions “exist prior to the interaction of individuals filling these positions” [Udehn 2001, 305] and produce important consequences for the explanation of many macro-level phenomena. The structural effect of position arises in two ways [Sørensen 1996,

1334]: first, the location of people in a given social structure affects their micro-level parameters. In labour market research, for instance, the incentives structure of the internal markets affects workers's efforts and skills. Second, positions create effects *independently* of the characteristics of individuals. As wages and rewards in a job are thus not determined by the incumbent's individual resources and productivity, but by being attached to titles or positions [Petersen 2004, 30]. We cannot properly explain many macro-level phenomena (inequality and distribution above all) without knowing about the properties of the positions people occupy.

Human capital models link individual careers only to the positive effects of education and work experience on productivity and therefore do not consider the effect of social structure in terms of positions. In mechanisms parlance, human capital theory supposes that a change in skills generates a change in earnings and consequently creates the empirically observed association of variables [Sørensen 1999, 4]. Human capital theory hence predicts concave career lines with respect to the time axis [Hedström 2004]. Sørensen's well-known contribution has been to add to the human capital equations other parameters of structural kind, which sum up the vacancy creation process inside the organizational system. In the human capital equation (i) $Y(\max)$ is the maximum career level reached and X_i are human capital resources.

$$[i] \quad Y(\max) = d_0 + d_1x_1 + d_2x_2 + \dots d_ix_i \dots + d_nx_n$$

Sørensen transforms equation [i] into the model [ii]:

$$[ii] \quad Y(t) = [(c_0 + c_1x_1 + c_2x_2 + \dots c_ix_i \dots + c_nx_n) / b] (e^{bt} - 1) + y(0)e^{bt}$$

This model expresses the idea that a certain status $Y(t)$ depends on the initial position $y(0)$, on the length of time in the system S , on the human capital resources and on the career opportunities generated inside the system. This structural effect is included in the parameters b . Petersen [2004, 30] summarizes the vacancy competition model as follows:

- 1) There is a fixed occupational structure, characterized by a distribution of jobs;
- 2) opportunities to get ahead will be determined by the rate at which vacancies in the occupational structure open up, through turnover, job creation, and more;
- 3) people differ in the job-relevant resources they possess (e.g. human capital, experience), which help them compete for positions in the occupational structure;
- 4) people want to get ahead in the structure (the action part);
- 5) the rate at which opportunities to get ahead in the occupational structure open up varies systematically between demographic groups.

Points 1, 2 and 5 specify structural properties, while points 3 and 4 define individual-level properties. Of course “structural opportunities” and “positions” *as such* do nothing: they *per se* do not generate, transform, produce or change anything. The role played by structural properties does not entail an *ontological causal power* autonomous and independent from the micro-level causality [Hedström 2005].

Are Meso-Level Properties Causally Generative?

The previous example leads to the difference between causally *relevant* and causally *generative* properties. Following critical realism, causal statements are of two kinds: claims about the objects and events that *produce* effects and claims about the properties of or facts about these objects and events that are *relevant* to these effects [see Glennan 2002]. The former have to do with verbs such as: generate, transform, produce, change, and depend on action-like mechanisms; the latter mean influence, affect, shape, impact, and concern socio-structural dimensions, both at the macro-micro and micro-macro level. This distinction is in line with analytical sociology, for which *generative* causes must be events rather than facts or states, but where social structure is for sure causally *relevant* for the explanation [Hedström 2005]. This is crystal clear in diffusion studies, where different structural conditions (e.g. diffusion space, network interdependence) have, *ceteris paribus*, different consequences for the macro-level outcome. In the same line, Lewis [2000, 263-265] outlined a difference between action-based processes which are adequate to understand generative causation and structural-based accounts *which are causally relevant but not causally generative*.

Manzo and Opp argue (this issue) that Little examples actually confirm that meso-level mechanisms work only through micro-level processes. And even a sympathetic commentator as Sewell (this issue), says: “Although I agree with Little, it seems to me that his account of meso and macro causation remains potentially vulnerable to critique from the analytical sociologists’ position. They could respond that scholars like the above, in spite of the high quality of their work and the general persuasiveness of their arguments, have in effect abbreviated their explanations by tacitly assuming a set of individual-level processes that are in fact necessary to truly account for the claimed causal connections.” It would be acceptable to disregard micro-level events (e.g. actions and interactions) only if macro-level processes are law-like, but as Opp states: “This is the general problem of assigning causality on the macro level: there are no laws that could be applied.”

If not causally generative, meso and macro-level accounts are although causally *relevant* for explanatory purposes. In the realist perspective adopted by analytical sociology, causation is the activity of forceful particulars at work. Particulars are causal agents because it is the activity of particular things that actually brings about *changes* in the world [Lewis 2000, 253-255; Porpora 2008]. Accordingly, we cannot speak of causal activities without at the same time referring to entities that are ontologically provided with *causal power*. In sociology, (inter)actions are the main causal activities, and the actors are the entities who produce the changes needed to *generate* – through mechanisms that are to varying degrees (counter)intuitive and (non)linear – social phenomena. As it has been stressed:

The causal efficacy of actions would be readily seen if we were able to press a pause button that suddenly froze all individuals and prevented them from performing any further actions. All social processes would then come to an immediate halt [Hedström 2005, 36].

But micro-level generative mechanisms produce their effect through non-individual properties which are causally *effacious*, among the most important of which are relational properties [*ibidem*, chapter 4]. Likewise, relational properties are crucial to the realist *explanation* in sociology [Porpora 2008]. Not considering relational properties leads to the typical fallacy of atomistic individualism and reductionism [Granovetter 2005]. The role played by relational properties, in any case, does not entail assigning a causal power that is autonomous and independent of the role of the actions involved. This does not mean that the “social structure” has no causal relevance. If the social structure – to produce effects in the world – must pass through the power of human actions, the same actions taking place in different structural contexts *generate different effects* [Jepperson and Meyer 2011]. Thus, though social structure is not appropriate for illustrating and understanding the processes of *generative* causation, nevertheless it is causally *effacious* and relevant for *explanatory* purposes [Lewis 2000, 264].

Conclusion

As far as the social ontology of generative explanation is concerned, analytical sociology is in “solid ground” [Little, this issue], because “social entities, processes, and causal powers always depend on the actions and thoughts of individual actors. Therefore we need to always be able to ‘cash out’ a claim about causal relations and powers in terms of the features of individual agency that constitute those relations and powers. This is what I refer to as ‘microfoundationalism,’ and it is a

valid requirement on social theorizing.” But this ontological claim does not entail a contention about the theoretical primacy of the micro-level upon “structural” level of analysis, both social-organizational and institutional [Jepperson and Meyer 2011, 66]. We can take the well-known “strength of weak ties” argument advanced by Granovetter [1973], which demonstrates how social structure influences information flows over and above individual level properties. The microfoundation of the strength of weak ties argument is trivial: it provides an ontological grounds through which social structure affects the social world, but it does not add much in theoretical terms. Or consider institutions as “chronically reproducing complexes of routines, rules, roles, and meanings. They have organizational aspects – structures of authority and responsibility, often integrated in something like control systems. They also have cultural aspects – generalized models formulating and justifying rules, built up into systems of thought and analysis (legal models, political models, religious models, knowledge systems, professional discourses) [Jepperson and Meyer 2001, 64]. Cultural and organizational aspects *per se* do not generate, transform, produce or change anything without affecting the micro-level of actions and interactions (ontological truism), but this should not deny their causal or explanatory relevance. To evoke social complexity, emergence and multi-level processes risks to be a mere re-statement of the problem of social theory rather than a basis for explanation [Felin, Foss and Abell 2011].

Why bother about the micro-level then? Because, even when structural dimensions make the theoretical added value it is a micro-level (trivial!) translation that help to *select* the structural or institutional dimensions key for the explanation. Without a micro-level translation, in other words, the introduction of structural factors is elusive. Does social structure provide influence or information to people? Does it affect opportunity, beliefs, values or preferences? Furthermore, people *interpret* roles and rules reflexively and this enactment may prove key in the explanation. On the whole, if a microreduction would be unfit for sociology, a microfoundation would rather improve its precision and would allow to *specify* better the structural elements of explanation and their relevance for the social world [Coleman 1990].

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Abstract: The paper discusses Daniel Little's argument about meso-level properties and their explanatory power in the light of analytical sociology literature. The difference between causally relevant and causally generative properties is outlined. Following critical realism, causal statements are of two kinds: claims about the objects and events that produce effects and claims about the properties of or facts about these objects and events that are relevant to these effects. I argue that this distinction is in line with analytical sociology for which generative causes must be events rather than facts or states, but where social structure is for sure causally relevant for the explanation.

Keywords: Social mechanisms, social structure, causation, explanation, analytical sociology.

Filippo Barbera is associate professor of economic sociology at the University of Torino and affiliate at the Collegio Carlo Alberto (Moncalieri). His recent publications include: F. Barbera and S. Audifredi, "In Pursuit of Quality. The Institutional Change of Wine Production Market in Piedmont." *Sociologia Ruralis*, 2012, forthcoming; F. Barbera and S. Fassero, "The place-based nature of technological innovation: the case of Sophia Antipolis" (*Journal of technology transfer*, 2012, DOI 10.1007/s10961-011-9242-7); "J.L. Borges, Reduction of social complexity", in C. Edling e J. Rydgren (eds.), *Sociological Insights from Great Thinkers* (Prager Publishers, 2011).