Explanatory strategies beyond the individual/holism debate.

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1. Introduction: The *topics*, *methods* and *aims* of the individualism/holism debate.

Central in the individualism/holism debate figures the idea of *methodological individualism.* It "amounts to the claim that social phenomena must be explained by showing how they result from individual actions" (according to the *Stanford Encyclopedia of Philosophy*). Its contender, *methodological holism,* negates this claim and defends that good social explanations may also invoke social structure, culture or social functions without references to individual actions. We all know there exist many variations of methodological individualism and holism, but I will not spell them out here (see, e.g., Udehn 2001). Rather, I want to focus on some of the characteristics of the individualism/holism *debate.*

It is striking how often scholars commenting on the debate seem to be dissatisfied about it; calling it, e.g., a "notoriously unfruitful controversy" (Ylikoski, 2012:21), "confused" (Zahle, 2006:312), or associating it with "despair" and "frustration" (Bhargava, 1992:5). Whatever the exact reasons for this dissatisfaction, I do think the debate would benefit greatly from making the *topics*, *methods* and *aims* of the debate more explicit (and giving up the *winner-takes-all* approach, discussed in section 2 below). Not that all participants should agree unanimously what the topic, method and aims are or should be, but rather that each participant is explicit about her specific angle to the debate.

Considering past contributions to the individualism/holism debate, different options have been explored:

- *Topics*, e.g. individualism – methodological, ontological, political, logical, semantic, legal, epistemological, axiological, … ; contrasted with holism or collectivism – methodological, ontological, political, … (see, e.g., Bunge 2000).
- *Methods*, on which basis do we analyse the topics, e.g., on the basis of intuitions, metaphysical commonplaces, conceptual analysis, logical discussion, transcendental arguments, political convictions, importing philosophy of mind machinery, analysing social scientific practice, … .
- *Aims (and scope)*, should it lead to elaborating one's own social theory, a social ontology to be adopted by all social scientists, elucidating scientific practice, improving scientific practice, … within a specific approach, or a discipline, or the social sciences at large.

Clearly explicating which *topic(s)* one is discussing, might help avoiding mixing up *topics* as frequently happens in the debate, where sometimes arguments for *political* individualism automatically imply a defense of *methodological* individualism, where *ontological* holism immediately follows from advocating forms of *methodological* holism, and, ontological individualist arguments are used to

prove methodological individualism right (cf. section 3 below). Further, the lack of stipulating what individualism or supra-individualism, holism and collectivism exactly means level-wise, i.e. on what 'level' it can be found and which other 'levels' are in play, is a source of confusion as well (for holism versus collectivism, see e.g. Pettit, 1993). Thus, clarifying the topic(s) seems imperative.

Next, one should decide how to investigate and argue for, i.e. what *method* to use in scrutinizing the topic(s). Method has not received enough attention in the debate, although the recent popularity of the field of social ontology does trigger questions about method, e.g., Kincaid (2012) wondering whether philosophers of science, scrutinizing the practice of the scientists (e.g. biologists), would ask them to follow the philosopher's ontological *a priori* speculations, just like some philosophers of social science seem to do. Kincaid questions methods like the one advocated by Searle that give primacy to ontological reflections on the basis of conceptual analysis, developing "a clear conception of the nature of the phenomena", before turning to methodology and social research practices, cf. "social ontology is prior to methodology'' (Searle, 2009: 9).

Finally, why are we having these debates? What are the *aims* and the *scope*? These questions are hardly ever addressed in the debate. One has the impression that some are more concerned with developing (and defending) their own social theory, while others want to describe the actual assumptions of social scientists (or of a particular approach within social science) vis-à-vis the individualism/holism debate. A third group aims at stipulating normative guidelines for a better social science or improving a particular approach or social theory. There might be other aims as well, what I want to point at here is that the aims of the debate deserve more explicit discussion in order to improve the debate's sharpness and focus.

In this paper, I take the following position to discuss the individual/holism question:

- *Topics*, I focus on methodological/explanatory individualism and holism (with nuances about the 'levels' of explanation).
- *Method*, I start from the actual explanatory practice of social scientists, which I aim to clarify and evaluate on the basis of philosophy of science literature.
- *Aims and scope*, I do think the debating should not primarily be done for philosophy's sake, but for a social science able to serve multiple aims adequately (cf. the different explanatory interests of scientists) and I hope my approach is useful for social scientists themselves.

Starting from this position, I will highlight the plurality of explanatory strategies (on several levels) in scientific practice and advocate explanatory pluralism (as a normative endorsement or legitimization of the plurality) in section 2. Based on the insights of this section, I revisit some key issues in the individualism/holism debate, namely emergence, reduction and the idea of micro-foundations in section 3. Then, these key issues are integrated in a discussion about the different understandings of explanatory pluralism in section 4. The exact understanding of pluralism will be put forward as the next question, furthering the debate. Section 5 concludes.

2. Explanatory strategies in social scientific practice.

2.1. Introducing the framework for dealing with plurality in explanatory practice.

Across the social sciences we find a plurality of ways in which social scientists try to explain social phenomena. In order to deal with this plurality, I developed a framework for understanding explanatory plurality in scientific practice.[1] The framework works as a tool to (a) *make the explananda as explicit as possible*, and (b) pay attention to the *underlying explanatory, epistemic interests*. This is imperative as it helps to clarify discussions about competing explanations, sometimes not even being competitors; there are many cases where two explanations of the same phenomenon are perceived as competitors, but actually have different *explananda*. The framework employs the erotetic model of explanation that regards explanations as answers to why-questions.[2] Making the explananda as explicit as possible as well as paying attention to the different epistemic interests, can be done by explicating the explanation-seeking questions.

Analyzing social scientific practice, different explanation-seeking questions or requests can be distinguished. I do not consider the questions and motivations mentioned here as the only possible ones, but I do believe they are omnipresent in social science practice. At least five types of explanatory questions can be distinguished:

(E) Why does *x* have property *P,* rather than the expected property *P'?*
(I) Why does *x* have property *P,* rather than the ideal property *P'?*
(I') Why does *x* have property *P,* while *y* has the ideal property *P'?*
(F) Is the fact that *x* has property *P* the predictable consequence of some other events?
(H) Is the fact that *x* has property *P* caused by a familiar pattern or causal mechanism?

First, explanation-seeking questions can require the explanation of a contrast, e.g. of the form (E), (I) and (I'). Contrastive (E)-type questions, for instance, can be motivated by surprise: things are otherwise than we expected them to be and we want to know where our reasoning process failed (which causal factors did we overlook?). Contrastive questions of type (I) and (I') can be motivated by a therapeutic or preventive need; they request that we isolate causes which help us to reach an ideal state that is not realised now, comparing the actual fact with the one we would like to be the case (therapeutic need) or to prevent the occurrence of similar events in the future (preventive need).

The form of a *contrastive* explanation (i.e., an answer to a contrastive question) enables us to obtain information about the features that differentiate the actual causal history from its (un)actualized alternative, by isolating the causes that make the difference; this information does not include information that would also have applied to the causal histories of alternative facts.

Second, non-contrastive explanation-seeking questions, like (F) and (H), concerning plain facts, are also omnipresent in social science. These non-contrastive questions can have different motivations. One possible motivation is sheer intellectual curiosity, with a desire to know how the fact "fits into the

[1]This framework was developed by analyzing discussions about 'the best explanation' among social scientists with case-studies done in sociology, economics, international relations, history, medical science, etc, see, e.g., Van Bouwel (2003, 2004b), Van Bouwel and Weber (2002a, 2008a), Weber and Van Bouwel (2002).
[2] For more details on the erotetic model, see, e.g., Garfinkel (1981), Kincaid (1997), Risjord (2000) and van Fraassen (1980).

causal structure of the world" or to know how the fact was produced from given antecedents via spatio-temporally continuous processes. A more pragmatic motivation is the desire to have information that enables us to predict whether and in which circumstances similar events will occur in the future (or the anticipation of actions of persons/groups). Another possible motivation concerns causally connecting object *a* having property *P* to events we are more familiar with.

The form these explanations of *plain facts* (answers to non-contrastive questions) have, can be to show how the observed fact was actually caused, which implies providing the detailed mediating mechanisms in a (non-interrupted) causal chain across time, ending with the explanandum, or – considering the second motivation – the explanation can follow a covering law/law-based model.

By making the different possible explanation-seeking questions explicit the motivation, i.e. the explanatory interest, and the explanatory information required will be taken into account. As one social phenomenon can be the subject of different questions, and in order to answer these different kinds of explanatory questions in *the best possible way* different forms of explanation are indispensable. In order to decide on *the best possible way*, we consider (a trade-off between) the criteria (a) *accuracy* – relation with reality, precise description, (b) *adequacy* – relation to what the explainee expects from the explanation addressing the explanatory interest, and (c) *efficiency* – amount of work and/or information needed for the explanation. To clarify these criteria and the idea that there often is a trade-off between them, let us compare explanations with maps. A subway map like the one of the Paris Metro is *adequate* for its users because it *accurately* represents specific types of features (e.g. direct train connections between stations, number of stations between two given stations, …) while other features are consciously *less accurately* represented (the exact distances between the stations, the relative geographical orientation of the stations, …). If the latter would be represented more accurately, the map could become less *adequate* for its intended users and a perfectly accurate representation mirroring every detail would be utterly useless. Furthermore, one could make the map more accurate, less adequate (without being completely inadequate), but also a lot less *efficient* in use (e.g. by making it less abstract, providing more cumbersome, obsolete information or by being too demanding or complicated to use). Other maps (e.g. Paris' shopping or tourist attractions maps) require other kinds of information (relating to e.g. distances, details about street names, etc.) in order to be useful – there being a different best trade-off between accuracy, adequacy and efficiency depending on the interests or desiderata at play. Thus, on the one hand, because of different interests or desiderata, it is impossible to make a map that is ideal in all possible situations. On the other hand, not all maps are equally good, as one can make claims of superiority that are bound to specific situations. The same can be said for forms of explanation.[3]

Summarizing, an explanation is an answer that should be evaluated in relation to a question that is a specific request for information (and the precise meaning of the question is therefore important). Making the questions as explicit as possible may show that a (apparently) similar question about one social phenomenon, given that explanatory interests and contexts select distinct objects of explanation, results in very different questions and answers in which the most *accurate*, *adequate* and *efficient* explanatory information (in relation to the explanatory interest) is provided. Hence,

[3] Also see Van Bouwel and Weber (2008) for more about these criteria.

different forms of explanation on different levels are indispensable to answer the respective explanation-seeking questions in the best possible way.

As concerns the debate between methodological individualists and holists this implies, first, that the claims of methodological individualists are not tenable, and, second, that the claims of methodological holists should (at least) be qualified, specifying to what extent outspoken individualist and reductionist explanations are allowed. Methodological holists have been focussing mostly on formulating arguments against methodological individualism and they do not have not invested enough in developing their own ideas of what a satisfactory explanation looks like. Furthermore, when debating, individualists and holists have adopted similar yet flawed ways of reasoning, as I will elaborate below. I hope to go beyond these ways of reasoning by introducing the framework and focusing on explanatory strategies. Let us first give an example of how the framework can be used in dealing with social scientific practice.

2.2. The framework in social scientific practice.

Graham Allison's classic study *Essence of Decision* (1971/1999) offers an interesting example to briefly illustrate how the framework just introduced helps us to understand plurality. Allison provides us with three different models to explain the Cuban Missile Crisis (1962). These are:

- Model I: *Rational Actor Model*, in which unitary nation states act on a rational basis;
- Model II: *Organizational Process Model*, which opens the black box of the unitary state and points at the myriad of organizations constituting the state (driven by the logic of organization instead of a logic of optimization/maximization);
- Model III: *Governmental Politics Model*, which zooms in on actual people that make up states and organizations, their personal power, networks, skills of persuasion, etc.

Allison himself does not offer many instructions on how to deal with the plurality of explanatory models. Is one of the three models the correct one, does one have to add them up to get a satisfactory explanation, do they cancel each other out? The framework introduced above provides us with a satisfactory solution for dealing with the plurality.[4] None of the three routes that were suggested as possible ways to deal with the problem of the plurality of explanations convinces: picking one model as the best one is not desirable, because none of the models performs well for all possible explanatory interests; adding up the three models also fails, because this means using models to satisfy interests they are not suited for; discarding all models is not an option either, because the models do succeed in satisfying some of the explanatory interests. How to make sense, then, of the plurality of explanations? The solution is to systematically choose the model that best serves the epistemic interests as made explicit in the explanation-seeking question.

Model I, the *Rational Actor Model* is apt for answering the questions *(F) Is the fact that x has property P the predictable consequence of some other events?* and *(H) Is the fact that x has property P caused by a familiar pattern or causal mechanism?* As concerns (F)-questions, predictions demand a model that makes lawlike statements. For this, the statements must be general and necessary. From Model I it could be inferred for example that whenever there is a missile gap between countries and these countries have a disagreement, the weakest country will have a strong desire to close that gap. This

[4] In an earlier paper, I extensively show how the framework can be used in to deal with this question, see De Langhe, Weber and Van Bouwel (2007).

statement is both general enough and gets its necessity from the underlying expected utility calculus which yields an unambiguous solution. Dealing with (H)-questions, the coarse-grained, unrealistic nature of Model I is compensated by its ability to bring any situation down to a simple calculus. In this model, the USSR wondering whether or not to put nuclear missiles in Cuba is in all Model I respects similar to being at a bakery pondering about whether to have just bread or to go for the croissant. As such, Model I is by far the best option for creating a sense of familiarity. Thus in answering the (F) and (H) questions, Model I will focus on the desire of the USSR to close the missile gap. As such, this desire creates familiarity and the level of analysis on which it is situated allows for regularities.

Model II, the *Organizational Processes Model* addresses questions of the form *(E) Why does x have property P, rather than the expected property P'?* very well. As the actions emerging from large organizations can take very strange, unfamiliar forms due to organizational biases, and raise serious doubts concerning the rationality of the organizational process as a whole, unexpected events can be explained as outcomes of long and slow processes of organizational struggle, often resulting in actions nobody ever wanted; or the presence of 'standard operating procedures' (SOPs) which were designed not for the present situation but for some previous circumstance.

An example of Model II satisfying the (E)-interest is the following: *Why did the USSR decide to place offensive missiles in Cuba without camouflaging the nuclear sites during construction, while they did so (only) after U-2 flights pinpointed their locations?* The organizational processes model explains this unexpected aspect the best. The implementation of the USSR decision is assigned to organizations that operate by SOPs; as the Soviets never established nuclear missile bases outside of their country at the time, they assigned the tasks to established departments, which in turn followed their own set procedures. The department's procedures were designed for Soviet, not Cuban, conditions; hence, mistakes were made that allowed the U.S.A to quite easily learn of the program's existence. Such mistakes included Soviet troops forgetting to camouflage and even decorate their barracks with Red Army Stars viewable from above.

Model III, the *Governmental Politics Model* is very well suited for answering questions of the form (I) *Why does x have property P, rather than the ideal property P'?* On the whole, being the most fine-grained of the three models, it is probably best suited to serve *therapeutic* or *preventive* I-interest. Thanks to its specificity, Model III allows to describe problems in greater detail and also suggests solutions that, due to their particularity, minimize collateral damage. Additionally, due to the human scale on which it operates, the solutions suggested are easier to implement than in other models; it is easier to fire a rotten apple than to change a balance of power. Consider, e.g., the question: *Why did the Soviet Union decide to place offensive missiles in Cuba, rather than not place offensive missiles (and try to improve its bargaining position in another way).* This question emphasizes the actual decision of placing the missiles. From Krushchev's perspective, closing the missile gap was only one of the options to increase his bargaining position concerning Berlin. It was not the most rational one, because the situation might have led to total annihilation of both sides. To explain this non-ideal action, Model III suggests the path of trying to get a closer understanding of what person Krushchev was and how he looked at the world. Furthermore, Model III emphasizes Krushchev's personal responsibility and suggests that had someone else been in power, the Cuban Missile Crisis might never have happened.

The crucial point this example based on Allison's work illustrates is that we need more than one explanatory model to best answer the different explanation-seeking questions, taking into account the accuracy, adequacy and efficiency of the answers. The three explanatory models provide us with different forms of explanation at different levels and they are indispensable if we want different possible explanation-seeking questions to be answered as good as possible. I do neither claim that one model is always linked to one specific form of questions, nor that there would never be any competition (or cooperation) among the three models in answering a question of a specific form.[5]

2.3. Consequences of the framework for the individualism/holism debate.

In the remainder of the paper, I elaborate three lessons that the framework for understanding explanatory strategies in social scientific practice teaches us in relation to the individualism/holism debate: (1) we should shift away from debating in terms of one single best form and level of explanation; (2) we should question ontological defences of forms/levels of explanation; and, (3) we should move from a monist mindset to a pluralist mindset, advancing explanatory pluralism to go beyond the individualism/holism dichotomy.

Let me start here with lesson (1), shifting the debate away from thinking in terms of one single best form or level of explanation. The plurality of forms of explanation in social scientific practice made social scientists and philosophers discuss about what the best way of explaining a phenomenon would be, often thought of as being *one single* form of explanation (e.g., intentional explanation) or one theoretical perspective (e.g., rational choice theory), and made them advocate that this type or model of explanation had to be implemented in all of the social sciences. I have called this way of discussing the best form of explanation the *winner-takes-all*-approach.

According to this approach, first, it seems that the successfulness of a form of explanation in one particular field, or in relation to one particular question, for many people suffices to claim that it should be used in all possible fields in the social sciences. Second, in the same spirit, it seems that giving one counterexample to a form of explanation that has been favoured as the best one, suffices to not take the form of explanation into account anymore. Against the winner-takes-all-approach, I defend – in line with the framework presented – that, first, there are *no general preference rules*, i.e. do not expect all answers coming from one and the same account, the same form/level of explanation, and, second, there are *no general exclusion rules*, i.e. there are different interests to be addressed, so a form of explanation that fails to answer some explanation-seeking questions convincingly, might always perform well on other (current or future) explanation-seeking questions. Thus, we need a rich toolbox with different forms and levels of explanation. Using the framework, one can articulate the strengths and weaknesses of different forms and levels of explanation with respect to different explanatory questions and leave the winner-takes-all-approach behind.

To give you an example of such a winner-takes-all-approach, consider the *fine-grain preference qua explanations* (cf. Elster 1983, Taylor 1988). Two fine-grain preferences can be distinguished: *the small-grain preference* and *the close-grain preference*. In the social sciences, the *small-grain preference* advises to look for detailed individualistic micro-accounts that replace holistic macro-level accounts, like functional and structural explanations. The *close-grain preference* is a matter of

[5] I refer the interested reader to our 2007 paper for further details.

favoring explanations that provide the detailed mediating mechanisms in causal chains across time; explanations satisfying this preference will not leave any causal gaps in the temporal chain of events. So any explanatory factor that is at a temporal remove from the fact explained should be replaced by a factor closer, more proximate to the fact, leaving no substantial temporal gaps in the causal chain leading to the event or fact that is explained.

Using the framework of section 2.1 in relation to the close grain preference, it can be shown that both remote and proximate causes can be (un)interesting or at least not as interesting as the causal information provided by the other kind of cause (viz proximate or remote). Thus ignoring remote causes means ignoring possibly important causal information.[6] The small-grain preference deals with the levels of explanation (and is clearly linked to the individualism/holism debate). The discussion turns around whether the best explanations should be found on the individual (lower) level or on the social (higher) level. I showed how sometimes the lower-level and sometimes the higher-level explanation is the better one.[7] Most defenders of the fine-grain preference neglect the differences in explanatory information between the social higher- and individualistic lower-level explanations, and seem to motivate their fine-grain preference mainly by ontological arguments. While this example focuses on arguments made by methodological individualists, methodological holists also seem to be tempted at times by the idea of there being one single best form of explanation (as will be shown in the example of Lloyd in section 3.1), rather than acknowledging the strengths and weaknesses of different forms and levels of explanations – be they individualist or holist.

3. Emergence, reduction and micro-foundations in light of explanatory strategies.

Equipped with the framework for understanding explanatory pluralism and its consequences, let us now revisit some of the central topics in the individualism/holism debate, i.e. emergence, reduction and micro-foundations (their importance in the debate is discussed by Zahle, 2006). I will evaluate the role emergence plays in contemporary versions of methodological holism in section 3.1. In section 3.2., I discuss reduction pondering whether methodological holists have been investing too much in arguing *against* methodological individualism at the cost of loosing positive aspects of the reductionist drive out of sight. Sometimes, in relation to some explanation-seeking questions, it is very useful to make abstraction of, or distort, the higher-level and apply an individualist explanatory strategy. The approach I want to promote in this paper focuses on the strengths and limitations of the respective explanatory strategies of holists and individualists, which differs from the ways of reasoning that have dominated the individualism/holism debate; that is why the title of this paper talks about going *beyond* the current debate. In section 3.3., I discuss one form of rapprochement between individualists and holists, i.e. the microfoundations requirement, but a couple of questions remain – questions that will be dealt with in section 4.

3.1. Emergence.

Keith Sawyer is one of the researchers that put *emergence* and the use of other concepts of philosophy of mind high on the agenda in the philosophy of social science. Emergence would help to conceptualize the relation between individual and society and to defend higher-level causation and

[6] Cf. Van Bouwel and Weber (2002a).
[7] Cf. Weber and Van Bouwel (2002).

explanation (cf., Sawyer 2001, 2002, 2003). Even though Sawyer acknowledges the "error of making ontological arguments in support of methodological claims" (Sawyer 2002:538), most of his attention goes to ontological questions when discussing ways of explanation in social science.[8]

Sawyer's main concern is to develop a full-blown metaphysical picture in order to legitimize social explanations (while sometimes mixing up ontology and methodology). It is important here to explicate the difference in approach between on the one hand Sawyer on emergence (and many other philosophers in the debate) and on the other hand the approach I advocate. As done in section 1, it should be highlighted that the individualism/holism debate involves an ontological part and a methodological part (as well as a semantic, legal, ethical, political, etc. part which we will not discuss here). The framework for understanding different explanatory strategies focuses and intervenes on the methodological part of the debate. This *methodological* focus should be differentiated from an *ontological* focus.

The ontological approach in this debate on explanations is a way of reasoning that starts from arguments about ontological composition to draw methodological conclusions about the best form of explanation. It is present in the fine-grain preference, discussed in Section 2, and in other defences of a single best form of explanation; the disputed *winner-takes-all* approach is fed by this ontological approach. A recent example of this approach is given by Pierre Demeulenaere (2011:4) in his introduction to *Analytical Sociology and Social Mechanisms*: methodological individualism, "can be expressed very simply: Social life exists only by virtue of actors who live it; Consequently a social fact of any kind must be explained by direct reference to the actions of its constituents." Just like many philosophers of social science have done before him, Demeulenaere makes an inference from composition to explanation. He starts with certain *a priori* or necessary truths concerning social ontology, the nature of social reality, thus deciding on the locus of causation, justified by 'metaphysical commonplace', political convictions, doubtful transcendental arguments, or even without further argument … and, then, the methodological consequences, e.g. the best level of explanation, seem to follow 'automatically' from the ontological stance.[9]

A similar way of reasoning seems to be present in the debate on emergence. The argument from emergence can be used against individualists to prove that there are important irreducible aspects to be found on the higher, supra-individual level. While my framework could clarify a form of *epistemological emergence* also articulating the indispensability of higher-level explanations, the ontological approach wants to "prove" that in an ontological way, i.e. by claiming *ontological emergence*.[10] The underlying assumption of the ontological approach is that the explanatory should

[8] See Van Bouwel (2004a, 2010) for details.

[9] I consider drawing explanatory consequences from ontological arguments to be problematic and impoverishing, cf. Van Bouwel and Weber (2002b, 2008b) and Van Bouwel (2004a, 2004c). Notwithstanding the critical questions I raise concerning the ontological approach, let it be clear that ontological debates could play a legitimate role in considering methodological possibilities of a particular theory, model or approach. The ontological moves I criticize are different in that they are often made *a priori* (not on the basis of a thorough study of social scientific practice) and that the results of the ontological statements are to be generalized across the social sciences (not limiting them to the particular theory, model or approach).

[10] *Ontological emergence*, on the one hand, claims that novel, real and irreducible properties do exist (or come into existence) on the higher level. These emergent properties are just as real as physical properties. Following *epistemological emergence*, on the other hand, the concept of emergence is characterized in terms of possibilities of and limits on human knowledge of complex systems: it deals with the (in)adequacy of reducing theories and is

be closely tied to the ontological level; where individualists go from ontological composition to explanation, emergentists seem to go the other way round, from explanation to composition – the indispensability of higher-level explanations to be anchored in ontological emergence.

These ontological arguments concerning emergence are very prominent in contemporary defences of methodological holism. They seem to be mainly made to prove individualists wrong, but little is said about what it actually implies for explanations (besides the point that there cannot be only individualistic explanations); what are the explanatory restrictions on the basis of ontological emergence (and when does a social constellation lead to emergent properties and when does it not, and how to find out)? What does a satisfactory explanation look like according to defenders of ontological emergence? Does every explanation need some form of *macro-covering* or *macro-roof* (analogous to micro-foundations, cf. section 3.3. below) according to this contemporary version of methodological holism?

Looking for answers to these questions, we, first, notice that methodological holists discussing emergence often pay very little attention to the impact on explanation (except for the conclusion that individualist explanations cannot always do the job). Second, for the ones that do the methodological, explanatory consequences often seem to follow 'automatically' from the ontological position. (In that sense, the ways of reasoning of some methodological holists and methodological individualists seem to have a lot in common.) One example can be found in Christopher Lloyd's *ontological* and *methodological structurism*. Lloyd (1993) identifies a group of social scientists, which can be labeled relationists, that emphasize the linkages between agents and structure and often invoke emergence. Their ontological point of view is labeled the *structurist ontology* by Lloyd (1993:42-43).[11] But what does this ontology actually imply for our understanding of what a good explanation should look like? Lloyd sketches this in his definition of methodological structurism: "Methodological structurism approaches explanation by developing concepts of the separate real existence yet mutual interdependence of individuals and institutional structures (...). Thus methodological structurism is explicitly based on an ontology of the social that recognizes two nodes of causal power." (Lloyd, 1993:46) The exact implications for what a satisfactory explanation should look like according to structurists are not spelled out, but the thinking in terms of a tight link between ontology and methodology and the lack of considerations about explanatory pluralism and the different explanatory interests resulting in different explanation-seeking questions, is at least obvious.[12] In section 4, I return to the issue of relating levels and satisfactory explanations.

Summarizing, much of the discussion concerning emergence in relation to the individualism/holism debate is characterized by the ontological approach (just as it was the case with defences of methodological individualism). This approach tends to unnecessarily restrict (or neglect) the explanatory options available and this leads to a suboptimal situation as concerns the amount of explanation-seeking questions that can be dealt with in the best possible way. That is the second lesson to be drawn from the framework introduced above. Moreover, some of the claims defended by the ontological approach to emergence, could be defended more convincingly by the framework.

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based on the fact that it sometimes appears to be impossible to understand the *global* behavior of a complex system by analyzing the *local* behavior of the individual parts. (cf. Van Bouwel, 2010)

[11] Others have labeled this kind of ontology the *Transformational Model of Social Activity* (TMSA).

[12] For an analysis of structurism and TMSA, see Van Bouwel (2004b, 2004c).

3.2. Reduction.

While one can agree with cases of epistemological emergence in answering some explanation-seeking questions about social phenomena, different questions about the same phenomena might be answered best by reductive explanations. While indispensability arguments are normally used to defend higher-level explanations (e.g., Jackson and Pettit, 1992), one could also use them to defend lower-level, reductive explanations (see Van Bouwel et al., 2011).

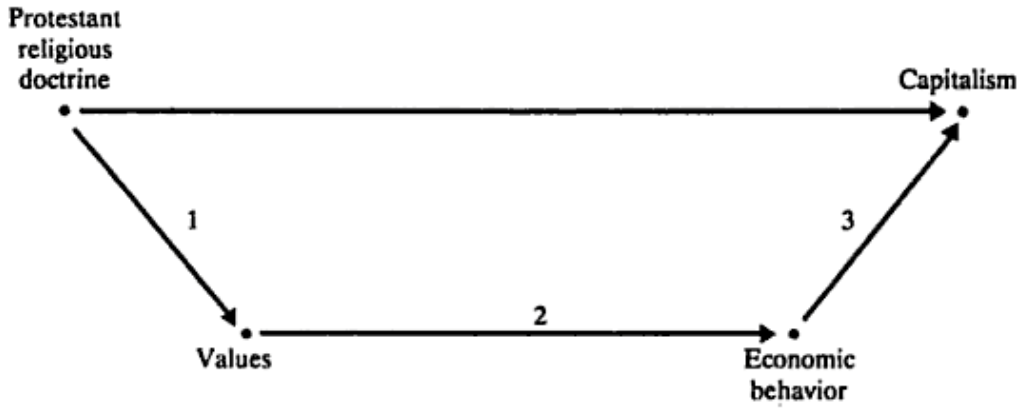
Let it be clear that my defense of reductive explanations does not imply that I support intertheoretic reduction as imperative and a general strategy that always leads to the best and most reliable explanations. Rather, I acknowledge that sometimes explanatory interests are served as accurately, adequately and efficiently as possible by decomposition, by reduction as explanatory strategy. These interests might be more theoretical, e.g., to increase understanding, or more practical, e.g., to find the right level at which to manipulate, to change or to correct. The focus on one kind of factor can be very productive as scientific practice shows; some causal aspects of a phenomenon might be emphasised, while other aspects might be obscured or perhaps even distorted (pointing once again at the strengths, the partiality and the weaknesses of different explanatory strategies).[13]

When discussing reduction, we should also clarify what level to reduce to. Traditionally in the individualism/holism debate it was presupposed that there be some comprehensive, unique, and privileged individual level (cf. Ylikoski, 2012: 26); an individual micro-level which would always be the same level and was contrasted with a macro-level, the social level. However, "more realistic is the understanding that there are social compounds at a range of levels of organization, with different scope and reach" (Little, 2012:138). I do follow Little and Ylikoski in there being multiple levels of social explanation. Furthermore, the amount and specification of levels is perspectival, depending on the phenomenon at hand. Consider, for instance, the example on the Cuban Missile Crisis in section 2.2. and the example on criminal behaviour in a footnote in this section; both use (different) multiple levels in their analysis. These refinements of the traditional dichotomous way of thinking about levels in the individualism/holism debate do not imply that we should stop thinking in terms of higher- and lower-levels, or micro-macro, only that levels are perspectival rather than absolute and unique.

3.3. Microfoundations.

A third central discussion I want to revisit briefly, is the one on the microfoundations requirement. This requirement stipulates **"**that all social facts, social structures, and social causal properties depend ultimately on facts about individuals within socially defined circumstances. Social ascriptions require microfoundations at the level of individuals in concrete social relationships." (Little, 2012: 138) To show this graphically, one often uses the *Coleman boat* representing the microfoundations of a macro-level fact (cf. Coleman, 1998:8).

[13] For those interested, in Van Bouwel et al. (2011), I showed the indispensability of reductive explanations using an example taken from social scientific practice, i.e. comparing the best answers to the following explanation-seeking questions *(I) Why do we have high crime rates in American society? (II) Why does criminal or deviant behaviour manifests itself in American-born students A, B, C, but not in foreign-born X, Y, Z? (III) Why does person A manifest criminal behaviour, while B does not (even though A and B share the same social environment)?*



What does the microfoundations requirement imply for an explanation to be satisfactory? Advocates of the microfoundations approach have been formulating different answers to that question. For some, a macro-explanation (cf. the upper arrow) will never be satisfactory. For instance, Hedström and Swedberg state in their presentation of the social mechanisms approach: "In the social sciences, however, the elementary "causal agents" are always individual actors, and intelligible social science explanations should always include explicit references to the causes and consequences of their actions." (Hedström and Swedberg, 1998:11-12) For them, this does not only imply that we need a micro-level part in every explanation, but also: "that there exist no macro-level mechanisms; macro-level entities or events are linked to one another via combinations of situational, individual action, and transformation mechanisms, i.e., all macro-level change should be conceptualized in terms of three separate transitions (macro-micro, micro-micro, and micro-macro)." (Hedström and Swedberg, 1996:299)

As becomes clear after reading this quote, excluding (macro-to-macro) mechanisms on a macro- level does not mean that the defenders of social mechanisms want to exclude *all* references to entities on the macro-level from social explanations. They just consider a reference to (individual actions on) the individual, micro-level as a condition *sine qua non* of a satisfactory explanation. Underlying this claim seems to be an ontological conviction, a conviction concerning causation, namely that causal agents are always individual actors.

Where some see only the lower-part of the boat as a satisfactory explanation (macro-to-micro, micro-to-micro, micro-to-macro), others see the satisfactory explanation as integrating both macro-level and the micro-level in the explanation. A third option is to consider the macro-level explanation as satisfactory with the condition that an account of the lower part of the boat can be provided (without the latter having to be part of the explanation); microfoundations would play a justificatory rather than an explanatory role. This option is defended by, e.g, Ylikoski (2012) and Little (2012:143): "The requirement of microfoundations is not a requirement on explanation; it does not require that our explanations proceed through the microfoundational level. Rather, it is a condition that must be satisfied on *prima facie* grounds, prior to offering the explanation.(…) In short, we are not obliged to trace out the struts of Coleman's boat in order to provide a satisfactory macro- or meso-level explanation or mechanism." Little adds that one argument for his claim is scientific practice itself, "the fact that good sociologists do in fact make credible use of such claims." (Little, 2012:145) These recent papers of Little and Ylikoski – defending a microfoundations approach that is different from the earlier ideas of, e.g., Hedström and Swedberg (1996) – bring the idea of microfoundations closer

to the spirit of my framework, both by seriously taking into account the actual explanatory practice of social scientists and by avoiding ontological fallacies. A couple of questions remain though.

One might ask, for instance, whether we are not providing all of the time all kinds of explanations and causal claims, without knowing the underlying mechanisms or foundations (cf. Kincaid, 1997)? Why would we have this requirement specifically for *social* explanations? What does this requirement mean in practice; when are microfoundations satisfactorily stipulated in order for a macro-explanation to be satisfactory? These are questions that remained to be answered by defenders of the microfoundations requirement. Further, Little links his own account of explanation to pluralism, "this implies the legitimacy of a fairly broad conception of methodological pluralism in the social sciences, constrained always by the requirement of microfoundations." (Little, 2012: 146) It is to be seen to what extent the microfoundations requirement leads to pluralism, or to what kind of pluralism and is it any different from the pluralism defended by me in section 2?

4. Understandings of explanatory pluralism beyond the individualism/holism dichotomy.

Bringing the elements of section 3 together, we notice that rather than dichotomous individualism/holism thinking, the focus of recent contributions has been shifting towards interaction, relationism and pluralism, away from the winner-takes-all approach. The question now is how to be combine individualism and holism, how can they co-exist, interact, be integrated or develop some division of labour? Thus, the debate shifts to how pluralism should be understood.

4.1. Different understandings of explanatory pluralism.

The visualization of the Coleman boat and structurism (or the Transformational Model of Social Action), integrating both levels, seem to share the intuitions of Sandra Mitchell's *integrative pluralism*. Integrative pluralism takes into account both today's highly specialized (sub)disciplinary research and the need of integrating the respective findings concerning a phenomenon. "Developing models of single causal components, such as the effects of genetic variation, or of single-level interactions, such as the operation of selection on individuals (...) need to be integrated in order to understand what historical, proximal, and interactive processes generate the array of biological phenomena we observe. Both the ontology and the representation of complex systems recommend adopting a stance of integrative pluralism, not only in biology, but in general." (Mitchell, 2004: 81). However complex, and however many contributing causes participated, there is only one causal history that, in fact, has generated a phenomenon to be explained. Thus, according to Mitchell's integrative pluralism, "it is only by integration of the multiple levels and multiple causes (…) that satisfactory explanations can be generated." (Mitchell et al., 2006: S78)

Mitchell opposes her integrative pluralism to *isolationist pluralism* or *"levels of analysis" pluralism*. According to that understanding of explanatory pluralism different questions invoke different explanatory schemata, and there is no need to consider explanations developed at levels other than their own or for intertheory relations among the levels. This limits the interaction between various theories offering explanations in a given domain leads to isolation, according to Mitchell. "If there is

no competition between levels, there need be no interaction among scientists working at different levels either." (Mitchell, 2004:85)[14]

There is (at least) one possible understanding of pluralism which Mitchell does not discuss. Let us label it *interactive pluralism*. It is situated in between integrative and isolationist pluralism, as: (a) on the one hand, it claims that satisfactory explanations can also be obtained without having done the integration of multiple levels, so there is no integration imperative, and, (b) on the other hand, it does not discourage interaction as, in some instances, interaction and integration do lead to better explanations.[15]

4.2. Evaluating different understandings of explanatory pluralism.

Spelling out different possible understandings of explanatory pluralism beyond the individual/holism dichotomy, raises the question of which understanding of pluralism is the more convincing one, if any? Below, I briefly raise some doubts and utter some worries concerning integrative and isolationist pluralism, and emphasize the benefits of interactive pluralism.[16]

a) Integrative Pluralism

First, is integration always necessary to obtain a 'satisfactory explanation'? Straightforward reduction might sometimes lead to very satisfactory explanations efficiently serving our explanatory interest (cf. section 3.2). Integration might very well be a good as heuristic advice or play a justificatory role, but why should it be a criterion for a satisfactory explanation?

Second, won't integrated explanations often provide us with too much information and therefore be less efficient in providing the answers we are looking for. In his book *The rise and fall of the biosychosocial model*, Nassir Ghaemi (2010), discusses how this model (for psychiatry) included the idea that adding and integrating "more perspectives is always better". Eventually the approach was made unfeasible in practice by being too general and too vague. Integrative pluralism insufficiently acknowledges that explanations are always a trade-off between generality and preciseness, simplicity and realism, accuracy and adequacy , etc., depending on one's explanatory interests (cf. section 2.1). Integrative explanations might be sometimes far too cumbersome, less efficient, and less adequate than possible alternative explanations. Returning to the example in section 2.2., adding up or integrating Allison's three models (if at all possible) would not lead to better explanations, because it would mean using models (being part of the integration) to satisfy explanatory interests they are not suited for.

Third, integrated explanations might lead to losing *idioms/adequacy* in light of our explanatory interests, losing the capacity of answering some explanation-seeking questions in the most adequate way (*i.a.* strengthening hermeneutical injustice).

Fourth, in relation to the third worry, what would the integration imperative imply for *heterodox,* non-mainstream theories? What is the impact on the dynamics between research approaches? Think in particular about situations in which there is epistemic inequality, in which one

[14] Further, Mitchell also distinguishes *Anything Goes pluralism* and *moderate pluralism*, the former speaks for itself, the latter is an understanding of pluralism that promotes a temporary plurality of competing theories as a means toward achieving a unified theory in the long run. I will not discuss these forms of pluralism here.
[15] For more taxonomies of pluralism, see, e.g., Kellert, Longino, Waters (2006) and Van Bouwel (2009).
[16] For a more extensive discussion and evaluation of different understandings of pluralism, also see Van Bouwel (2009).

research program at one level is a lot bigger and more elaborated than another one at another level and where integration risks minimizing dissent, overlooking diversity, eliminating differences and/or a homogenisation in terms of the bigger one. Would the integration imperative then not boil down to adjusting to the mainstream?

b) Isolationist Pluralism

First, does isolation always lead to better explanations? And, second, how to know given the lack of competition between explanations within this understanding of pluralism? According to Mitchell's characterisation of this position, the idea that some questions are better answered on one level and others on another leads to an isolationist stance with respect to the separate questions. Now, if there is no interaction or no intention of competition between levels, then there need be no interaction among scientists working at different levels either. Thus, this form of pluralism does not do much more than recognizing plurality; it does not suggest any way of making the plurality epistemically as productive as possible. Revisiting the example of 2.2., Allison himself provides us with three different models but without any instruction of how the three models relate to each other or should be used. Without further instruction or framework they just each in isolation give an explanation of the Cuban Missile Crisis at a different level.

Third, why do isolationist pluralists presuppose interaction cannot be productive while fruitful interactions between (sub)disciplines have characterized much of the history of science?

Fourth, as concerns the dynamics between research approaches, isolation, lack of engagement between the orthodoxy and heterodoxy, e.g. in economics, seems to create a very static, non-productive situation with the traditional heterodoxy aiming to become the new monism, the new mainstream substituting the current orthodox one and the heterodoxy serving as a constitutive outsider for the scientificness of the orthodoxy or mainstream (cf. Van Bouwel, 2009).

c) Interactive Pluralism

Interactive pluralism, the possibility not discussed by Mitchell, might be a third option that avoids some of the worries about integrative and isolationist pluralism.

First, where there is a presumption of reconcilability with integrative pluralism, and irreconcilability in isolationist pluralism, interactive pluralism considers the ir-/reconcilability to be an open question, up for interaction.

Second, interactive pluralism questions whether integration would always lead to a better explanation as well as integration is necessary to obtain a 'satisfactory explanation'. As concerns the former, integrative explanations might sometimes be too general, vague and cumbersome, i.e. not always the most efficient. Mitchell does not take into account the adequacy and efficiency criteria in stipulating what is the most satisfactory explanation. As concerns the claim that integration would be necessary to obtain a satisfactory explanation, I defended above that we should rather consider the trade-off between accuracy, adequacy and efficiency of explanations in labelling what is 'satisfactory'. Always focusing on integration, irrespective of one's precise explanatory aims and needs in a given context, would — if even possible — unnecessarily complicate matters and even paralyze research and decision-making.

Third, even though integration is not imperative, interactive pluralism rejects isolation and endorses interaction and engagement, be it without the presumption of always reaching a consensus

or an integration. The respective explanation-seeking questions can be channels of interaction between competing research programs. Going back to Allison in section 2.2., I demonstrated how we choose the model that best serves the epistemic interests as made explicit in the explanation-seeking question. Some (but definitely not all!) explanation-seeking questions might require a combination, integration of cooperation of models, e.g. Model II and III, in order to address our explanatory interests as good as possible.

Fourth, contrary to integrative pluralism the mainstream and non-mainstream approaches start on equal footing. But even for heterodox approaches that cannot be easily integrated, the interaction with orthodox or other heterodox approaches is endorsed, because approaches are sharpened as a response to challenge and criticism, methodologies refined, concepts clarified, etc. Moreover, the interaction between explanatory approaches might also make the limitations of each approach evident by the articulation of questions that they are not designed to answer.

4.3. What's next?

The discussion of different understandings of explanatory pluralism above points at a direction in which the individualism/holism debate might move, namely away from a winner-takes-all debate to a debate about how the different approaches should be combined, related or interact. Integrative pluralism might be in line with the ideas of many of the emergentists and microfoundations advocates, while the interactive pluralism fits well with the framework I have presented in section 2. In scientific practice, many scientists might call themselves pluralists and rather think in terms of isolationists pluralists or as monists tolerating, but not engaging with, competing approaches. There might very well be plurality in the social sciences, while most social scientists still have a monist mindset.

If you take (one of) the pleas for pluralism of the more active kind (i.e. integrative and/or interactive pluralism) as convincing, then, first, we should continue discussing which understanding of pluralism is the most productive in social science. Second, we should reflect on how that understanding of pluralism can be operationalised and promoted. How can we shape a pluralist mindset among social scientists? How to structure the interaction among competing research approaches in practice? The framework for explanatory pluralism I presented is a possible tool to pay more attention to plurality, a tool by which strengths and weaknesses can be articulated and the winner-takes-all monist mindset can be left behind. Moving beyond the monistic mindset was the third lesson I wanted to draw from the framework for understanding explanatory strategies in social scientific research. It also seems to imply to move beyond the dichotomous individualism/holism debate to a debate about pluralism.

5. Conclusion: What to debate about?

Starting from the from the plurality of explanatory strategies in scientific practice, I presented a framework for explanatory pluralism - as a normative endorsement of plurality – to go beyond the individualism/holism debate on explanation. Rather than aiming for (or imposing) a full-blown metaphysical picture, I seek to optimize practice; evaluating research approaches against one another, not against a monistic ideal of a single complete and comprehensive account.

Having developed a framework that can be used as a tool for articulating the strengths and weaknesses of different forms and levels of explanation with respect to different explanatory questions, we can leave the winner-takes-all-approach behind, question the ontological defences of the best form/level of explanations, and start moving from a monist mindset to a pluralist mindset.

The next step in the debate is not about developing the ultimate individualistic approach or defending the holist approach, but rather to understand how different approaches can interact, co-exist, integrate, develop a division of labour, … . The pluralism question. That is an actual problem that many social scientists face in their practice and try to find a solution for, for instance, in international political economy (Phillips & Weaver, 2011), international relations (Sil & Katzenstein, 2010) and in heterodox economics (see Van Bouwel, 2004c). I hope my clarifications of the different explanatory strategies beyond the individualism/holism debate might be useful for those social scientists.

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