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**Methodological individualism and agent-based computational simulation: A reply to  
Kincaid and Zahle**

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**Abstract**

This study reflects on Harold Kincaid and Jule Zahle’s view that there is no necessary association between methodological individualism and agent-based models because the analysis of social phenomena in terms of the latter cannot always be regarded as an implementation of the former. Their view remains in contention with the standpoint of several philosophers of science and social scientists, including Chen and Di Iorio. Kincaid and Zahle’s main argument against such a standpoint is that agent-based simulation is compatible with holistic explanations that are at odds with methodological individualism. The following study argues that Kincaid and Zahle’s conclusion remains untenable since it stems from inaccurate historical assumptions concerning the tradition of methodological individualism and the way the individualism-holism debate is understood within this tradition.

**Keywords**

agent-based models, holism, Menger, methodological individualism, Weber

**Introduction**

In a thought-provoking article entitled ‘Are ABM explanations in the social sciences inevitably individualist?’ published in *Synthese*, Harold Kincaid and Julie Zahle (2022: 2) maintained that ‘there is no necessary association’ between methodological individu- alism (MI) and agent-based models (ABMs) because the analysis of social phenomena in terms of the latter cannot always be regarded as an implementation of the former. Their view remains in contention with the standpoint of several philosophers of science and social scientists, including, as they argued, Di Iorio and Chen (2019), O’Sullivan and Haklay (2000), Sawyer (2005), Wan (2011), and Manzo (2020). Kincaid and Zahle’s (2022: 8 ff.) main argument against such a standpoint is that agent-based simulation is compatible with holistic explanations that are at odds with MI. Expanding upon Di Iorio and Chen’s (2019) analysis of the connection between MI and ABM, this article main- tains that Kincaid and Zahle’s conclusion remains untenable. This is because it stems from inaccurate historical assumptions concerning the tradition of MI and the way the individualism-holism debate is understood within this tradition. Note that my aim here is not to defend all of the positions critiqued by Kincaid and Zahle, but solely to demon- strate that they fail to invalidate Di Iorio and Chen’s aforementioned analysis.

In the following discussion, section ‘Di Iorio and Chen on the relationship between MI and ABM’ briefly reviews Di Iorio and Chen’s (2019) arguments asserting that ABM is an implementation of MI. Section ‘Kincaid and Zahle’s six definitions of MI’ analyzes why Kincaid and Zahle disagree with the above-referenced viewpoint and claim that MI and ABM have no necessary associations. Sections ‘Two elephants in the room: Menger and Weber on social explanation’ and ‘The individualism-holism debate as understood within the tradition of MI’, building on Di Iorio and Chen’s analysis, focus on the short- comings of Kincaid and Zahle’s attempt to illuminate the distinguishing features of MI and demonstrate that ABM is not always an implementation of this approach. Finally, the study provides the same concluding remarks on the MI-ABM connection.

**Di Iorio and Chen on the relationship between MI and ABM**

Agent-based simulation, which is the ‘computational study of social processes as open- ended dynamic systems of interacting agents’, has gained increasing interest during the last few decades (Tesfatsion, 2017: 384; see also Kincaid and Zahle, 2022; Manzo, 2020). An earlier study by Di Iorio and Chen (2019) investigated the relationship between MI and ABM using a thesis defended by Caterina Marchionni and Ylikoski (2013) as the starting point of the analysis. The thesis can be summarized as follows: since MI is often considered to be a form of naive reductionism that cannot account for the systemic or structural properties of the social world because it forbids any reference to social con- cepts, it is confusing and meaningless to assume that agent-based simulation, which is a non-reductionist and emergentist approach, is committed to MI (Marchionni and Ylikoski, 2013).

Di Iorio and Chen (2019) contended that the widespread interpretation of MI in terms of naive and useless reductionism, especially popular among analytic philosophers of the social sciences, ‘is misleading and historically incorrect’. On this basis, the study pro- vided an alternative and more favorable interpretation of the individualist methodology, considering it ‘historically more accurate than the dominant one’ in analytic philosophy, and assessed the compatibility between this interpretation of the approach and the agent- based simulation. In Di Iorio and Chen’s opinion, the former is compatible with the latter because naive reductionism ‘is only the most simplistic variant’ of individualist analysis – a variant that none of the main theorists of MI endorsed and implemented. Di Iorio and Chen (2019) clarified that agent-based explanations must be regarded as explanations in terms of ‘non-reductionist methodological individualism’. In the article, Di Iorio and Chen argued that the analysis of the history and practice of science clearly shows that, while approaches like social contract theories and economic equilibrium models are atomistic, naively reductionist forms of individualism that are rooted in a mistaken mechanistic philosophy – for instance – MI, cannot be equated to these forms. As under- stood by the Mengerian tradition (e.g., Mises, Hayek, and Popper), interpretative sociol- ogy (e.g., Weber, Simmel, Coleman, and Boudon), as well as by these fields’ Scottish Enlightenment precursors like Adam Smith (see Paganelli, 2023), MI is a non-atomistic and structural orientation (regarding this point, see, in particular, Demeulenaere, 2011; Di Iorio, 2023). The assumptions of this orientation should not be confused with those of the above-mentioned non-empirical and unrealistic approaches. As pointed out by the representatives of the non-reductionist individualist tradition, the fact that society is more than a mere sum because emergent properties characterize it is trivially actual and a necessary assumption of empirical research (see Boudon, 1971; Coleman, 1990; Hayek, 1967, 1973, 1978; Menger, 1985 [1883]; Popper, 1957: 82 ff.). This fact entails that the analysis of the social world and the constraints that this world imposes on indi- viduals can only be implemented in structural or systemic terms (see, for example, Di Iorio, 2023; Lukes et al., 2023).

Di Iorio and Chen (2019: 260) also note that, given that analytic philosophers’ con- tinual regard for MI, in all its variants, as committed to a pointless naive reductionism, the risk of conceptual confusion that can be caused in certain intellectual sectors by argu- ing that MI is compatible with the emergentist and structural assumptions of agent-based simulation is real. However, Di Iorio and Chen assert that this risk depends on a lack of historical knowledge about MI, whose leading theorists never endorsed an atomistic view. Di Iorio and Chen also argue that in order to prevent ambiguities, from a practical standpoint, this risk ‘can be avoided without breaking down the association between agent-based simulation and methodological individualism’ by stressing that there are two different variants of the latter and ‘taking care to define agent-based simulation as a non- reductionist methodological individualism rather than simply as methodological individualism’.

The following section discusses the essential aspects of Kincaid and Zahle’s thesis that no necessary relationship exists between agent-based simulations and MI. The sec- tion serves as a preparatory discussion to the remaining two. These, expanding upon Di Iorio and Chen (2019), will demonstrate that Kincaid and Zahle’s thesis is problematic because it stems from some inaccurate assumptions about the individualism-holism debate as understood within the tradition of MI.

**Kincaid and Zahle’s six definitions of MI**

Kincaid and Zahle (2022: 2) highlighted that, since ‘there are different ways to cash out methodological individualism’ to analyze the relationship between this approach and ABMs, it is necessary to take into account and discuss all of them. This is the solution ‘to avoid worries about basing arguments on one possible understanding of individualist explanations that defenders of the agent-based models and methodological individualism connection may not share’. For Kincaid and Zahle, MI is strongly reductionist in its pur- est and classical form (in the sense that explanations must be expressed solely in terms of individual properties). However, it has become progressively less reductionist to the point that it may be doubted that its contemporary advocates are individualist. In their opinion, six different versions of MI can be distinguished, but none of them are necessar- ily implemented by the agent-based simulation.

The first, viz., the purest and strongest form of this approach, which is advanced, for example, by the general equilibrium models, assumes that explanations ‘only describe individuals and their nonrelational properties’ (p. 9). Walking, ‘reading, and having red hair and blue eyes exemplify nonrelational properties’. The second form of MI assumes that explanations ‘describe only individuals, their nonrelational properties, and their relations to the physical environment’ (p. 10). The properties created by these relations ‘are identified with properties like “exchanging food with somebody”’. While this form of MI has been discussed and criticized by Epstein (2015), Kincaid and Zahle recognize that its endorsement is not common among individualist thinkers. The third variant of MI assumes that explanations ‘describe only individuals, their nonrelational properties, their relations to their physical environment . . . and to other individuals’ (Kincaid and Zahle, 2022: 11). Relations between individuals may be, for example, ‘social roles’. According to Kincaid and Zahle (2022), starting from the fifties, many scholars – for example, Watkins – endorsed this variant of MI. The obvious problem with this variant ‘is that it prohibits mentioning social entities and social properties as part of the context of action’. This means, for example, that the agents cannot be assumed to ‘act in ways constrained or facilitated by social entities’. This also means, to take another example, that explana- tions cannot ‘describe individuals as acting in a social environment characterized by high unemployment – or by other macro factors like the rate of interest’.

The fourth form of MI considered by Kincaid and Zahle is exemplified by Agassi’s institutional individualism. It assumes that explanations ‘describe only individuals, their nonrelational properties, their relations to their physical environment . . ., their relation to other individuals, and their relations to their social environment’ (p. 12). By ‘social environment’ theorists of this variant mean ‘the institutional or social background . . . – something fixed against which agents act but not an active causal force in the social world’ (p. 13). According to this variant, ‘all the explanatory work comes from the actions of individuals in the sense that they alone are active causal agents in the social world’. This entails that groups cannot be regarded as active causal agents in this world. The fifth form of MI is a micro-foundationalist one that admits everything admitted by the fourth one plus the causal ‘influence’ of social phenomena on the individuals as well as on other social phenomena provided that ‘the individual level mechanisms’ behind social phenomena are specified (p. 15). Like the variants mentioned above, this variant, which is endorsed by Elster and many analytical sociologists, rules out the possibility that groups can be active causal agents in this world. The sixth and last variant, which is defended and used by Coleman and some analytical sociologists, admits everything admitted by the fifth form plus the fact that individualist explanations may ‘describe lower-level social entities’ (i.e., small groups like ‘banks, firms and households treated as maximizing individuals’) without descending at the individual level (p. 17). However, this variant does not permit ‘self-standing explanations of how one higher-level social entity causally influenced another higher-level social entity’. For example, the self- standing analysis ‘of the way in which the behavior of basic agents in the form of demo- cratic states give rise to the development of zones of peacefully co-existing democracies’ (pp. 17–18).

The reasons why none of the six versions of MI considered by Kincaid and Zahle are necessarily implemented by the agent-based simulation strategy remain quite clear. Unlike the first and second versions of MI, agent-based simulation is emergentist and structural. Unlike the third version of MI, agent-based simulation does not prohibit men- tioning social entities and social properties as part of the context of action. Unlike the fourth, fifth, and sixth versions of MI, agent-based simulation admits groups as agents, including higher-level social entities like states. In discussing the limits of the last three versions of MI, Kincaid and Zahle (p. 16) considered the differences between holism and individualism. They insisted that the latter approach rejects holism because ‘purely holist explanations’ are explanations that ‘stand on their own’ in the sense that they are not sup- plemented by a microfoundation (p. 16). Only holism permits explanations ‘in terms of social entities and their properties’ (to be more precise in terms of macro-social entities) without descending at the individual level (p. 8). In other words, the problem is that, while the most recent forms of individualism are ‘characterized by a more tolerant atti- tude toward holist explanations’, they still do not permit ‘purely holist’ explanations (p. 15). Purely holist explanations are the ones ‘in which both the explanans and explanan- dum refer to social phenomena, that is, social entities, social processes, and social prop- erties’ (p. 15). According to Kincaid and Zahle, simply put, holism is precisely ‘the position that either all or some causal explanations should be holist, that is, in terms of social entities and their properties’ (p. 8). MI is not necessarily implemented by agent- based simulation explanations because these explanations ‘may be purely holist ones, that is, ones in which both the explanans and explanandum denote a social phenomenon’ (p. 16).

**Two elephants in the room: Menger and Weber on social explanation**

Kincaid and Zahle’s article recognizes different forms of MI and that this approach is not equatable to a naive reductionism forbidding any reference to non-individual properties. However, their analysis of the relationship between the individualist tradition and the agent-based simulation program is based on debatable and problematic assumptions. From the standpoint of Di Iorio and Chen’s (2019) line of reasoning, there are two main issues with Kincaid and Zahle’s analysis.

The first is that their account of how MI historically evolved from its purest reduc- tionist form to less reductionist variants – less committed to the actual program of MI – seems incorrect. Scholars usually assert that the two originators of MI as a spelled-out scientific program are Carl Menger and Max Weber (see, for example, Bouvier, 2023). However, quite surprisingly, Kincaid and Zahle’s article makes no reference to these two well-known authors, whom Di Iorio and Chen (2019) regard as paradigmatic non-reduc- tionist methodological individualists. Menger (1985 [1883]: 142–147), building on a theory of the unintended consequences of human action, argued that society is a macro- structure that is composed of many sub-systems (e.g., firms and families) and individuals and that this whole macro-structure influences its parts and vice versa. According to Menger’s (1985 (1883): 133) MI, a crucial aspect of this micro–macro relationship is that the way macro factors influence human action is not direct and ‘mechanical’ but mediated by the interpretive and evaluative skills of the individual.

The very definition of social action provided by Weber (1968 (1922) clarifies that sociology is relational for him (see also Greve, 2023). Moreover, Weber (1958), like Menger, allows for explanations that refer to social institutions with the precision that these institutions should not be understood as something different than the either inten- tional or unintentional result of the meaningful ‘human interaction’ of ideal-typical actors (p. 55; see also Greve, 2023). The simple fact that Menger and Weber describe the methodology of social science as centered on analyzing the unintended consequences of human action clearly shows that their approach has nothing to do with the naively reduc- tionist view that social properties must undergo semantic reduction to individual ones. This stance emerges based on the unforeseen and systemic nature of these consequences irreducible to individuals’ mental and behavioral properties (Di Iorio, 2022, 2023; Lukes et al., 2023). For example, as clarified by Hayek (1967: 70) following Menger, the expla- nation of the market society, in terms of an invisible hand, refers to the global behavior of a complex, self-organizing system that goes beyond the economic agents’ power of prediction and control. In this reading, this society ‘is more than the mere sum of its parts’ and is characterized by the fact that its constituent parts ‘are related to each other in a particular manner’. Moreover, as pointed out by Bouvier (2023), since its inception in the 19th century, MI recognized that the social environment demonstrates statistical macro-properties and studied their nature (Kincaid and Zahle deny this). For example, in *The Protestant Ethic and th*e Spirit of Capitalism, Weber (2001 [1904–1905]: 3–12; foot- notes: 131–138) focused, in particular, on the correlation between religious affiliation and entrepreneurship.

It is worth clarifying that the multiple-realization problem is not a valid argument against traditional MI, as understood by Di Iorio and Chen. This point is not only because the interpretation of this approach in terms of a naive reductionism that rules out the pos- sibility of developing explanations, including predicates about social and institutional factors, does not fit with the way MI was understood by Menger and Weber (as already pointed out, these two originators of MI never defined their methodology in terms of this linguistic exclusivism, but used social predicates abundantly and conceived social phe- nomena as systems of interaction that entail structural constraints for the agents), but also due to another reason (see Lukes et al., 2023). According to the multiple-realization problem (see Hansson Wahlberg, 2019; Kincaid, 1985), a social phenomenon like, for example, a competitive market is not reducible to the properties of concrete individuals because it is compatible with different micro-level implementations. A competitive mar- ket can be implemented by diverse individuals, who may be interrelated in different ways. One of the reasons why the multiple-realization problem does not allow us to reject classical MI is what Weber (2001 (1904–1905)) calls the ideal-typical nature of individualist explanations. These explanations do not account for a macro-level phenom- enon like a competitive market regarding concrete individuals and their biographical features. As explained by Schütz (2011: 86–92), they refer to ideal-typical ‘puppets’ and ideal-typical forms of action and interaction (see Lukes et al., 2023). For example, the ideal-typical concept of the capitalist entrepreneur is a highly abstract scheme that does not account for the complexity and specificity of any concrete individual existing in space and time. Rather, it is a simplified model of an agent that is formed by the accen- tuation of selected features that are considered common among diverse particular capi- talist entrepreneurs, such as their tendency to seek profits and reinvest. It is worth noting that the utilization of abstract models representing simplified typical agents and social systems of interaction is a practice shared by MI and ABM. For further insights on this matter, refer to Bulle and Phan (2017) and Sugden (2002) in particular.

Given the textual analysis of Menger’s and Weber’s works, it is legitimate to consider MI relational and systemic since its inception (for more details, see Di Iorio, 2023). Consequently, Kincaid and Zahle’s claim that their first definition of MI in terms of a nonrelational and naively reductionist orientation describes its purest and more classical form, while its latest versions disowned the real individualism seems little defensible. If we were to adopt Kincaid and Zahle’s historical categories, we would be led to the para- doxical conclusion that Menger and Weber, the two renowned originators of MI, actually supported a somewhat impure version of the approach of which they are regarded as the quintessential theorists and empirical practitioners.

In their article, Di Iorio and Chen (2019: 358 ff.) have examined the compatibility between agent-based simulation and the non-reductionist variant of MI, clarifying that this variant is as old as the individualist tradition in sociology and economics. I will not delve into those details again here. For further elaboration on why classical MI is no more reductionist than recent implementations of this approach, readers may refer not only to Di Iorio and Chen (2019) but also to works by Agassi, Bulle and Di Iorio (2023), Bouvier (2023), Bulle (2019), Demeulenaere (2011), Di Iorio (2023), Greve (2023), Lukes et al. (2023), and Rainone (2023).

**The individualism-holism debate as understood within the tradition of MI**

Turning now to the second problem with Kincaid and Zahle’s line of reasoning, it seems that their thesis that the agent-based simulation necessarily implements no version of MI because the former, unlike the individualist approach, is compatible with *pure holist explanations*, is based on a strawman argument. This point is because, traditionally, methodological individualists did not attach to the term holism (or methodological col- lectivism) the same meaning as provided by Kincaid and Zahle’s article (see Bouvier, 2023; Zake, 2023). As is evident via textual analysis, historically, individualist scholars’ definitions of holism (or methodological collectivism) meant an approach based on the following features:

1. A tendency to hypostatize social wholes (ontological holism);
2. A deterministic theory of action assuming that the individual is unconsciously

remote-controlled by these wholes;

1. A deterministic theory of social change (e.g., the idea that there are iron laws of

historical development that can be discovered and scientifically studied).

See in particular Mises (1981, 1998, 2002, 2003), Popper (1957, 1966a [1945], 1966b [1945]), and Hayek (1948, 1952). From a more historically accurate perspective, what distinguishes MI from holism is that the latter does not attribute the causes of action to the meaning attached to action by the individual through his or her evaluative and rational skill; it is not committed to an interpretative approach in Weber’s sense (see Bulle and Phan, 2017; Di Iorio, 2015). Instead, holism seeks these causes in the deterministic laws governing the functioning and evolution of social wholes. These laws are regarded as unconsciously controlling individuals’ ways of thinking and acting. The older and more traditional form of holism, as understood within the tradition of MI, encompasses a com- bination of all three above-mentioned features. This form is represented by historicism and was notably developed by thinkers such as Hegel, Comte, and Marx (see Hayek, 1952; Popper, 1957). However, a more recent form of holism only embodies features I and II, without commitment to a deterministic theory of history. This version is exempli- fied, among others, by French structuralists such as Bourdieu and Foucault (see Boudon and Bourricaud, 1989). Nowadays, the perspective of historicist holism, the older and more traditional form, has been largely abandoned, while holism, characterized by a combination of features I and II, persists in some sectors of sociology and philosophy (see Zake, 2023), albeit with reduced popularity compared with the past.

In analyzing the relationship between MI, ABM, and holism, Di Iorio and Chen (2019: 358–366) emphasized the importance of correctly understanding the meaning attributed by methodological individualists to the term ‘holism’. However, Kincaid and Zahle overlooked this aspect of their analysis and provided a problematic account of this relationship. Their definition of holism suits their attempt to demonstrate the non-neces- sary link between MI and ABM, but it differs notably from the one used by individualist scholars in their writings.

As pointed out above, according to such scholars, the individualism-holism debate is about taking a stand in favor or against holism in the sense of a deterministic theory of action and social dynamics, linked to a realist ontology of social wholes. In their opinion, the explanations that do not descend to the individual level, but are not committed to this deterministic theory, may still deemed acceptable. As Di Iorio and Chen (2019) pointed out, MI, or at least its non-reductionist variant, does not exclude that under certain condi- tions, a collective entity might be legitimately treated as an agent (see also Boudon, 2007; Bouvier, 2023; Bulle and Phan, 2017). According to MI advocates, while micro- foundation is, in principle, always available (because the action necessarily presupposes the interpretative skills of the individual and is never deterministic), it is sometimes unnecessary (see Boudon, 2010: 173; Coleman, 1990: 5). What makes the study of micro-dynamics desirable is the existence of a mystery about their nature as well as the fact that their understanding is relevant to explaining the phenomenon under investiga- tion (see Boudon, 2010). However, the scientific problem at hand may be that the micro- foundational analysis is pointless.

According to Kincaid and Zahle (2022), an example of holistic explanation is ‘illus- trated by Cederman’s ABM of the way in which the behavior of democratic states gives rise to the development of zones of peacefully co-existing democracies’ (p. 16 see Cederman, 2001). Besides the fact that this explanation is not committed to any holistic assumption in the proper sense of the term ‘holistic’ (Cederman presupposes neither that democracies are sui generis entities that exist over and above the individuals nor that human action and social dynamics are deterministic), this model is precisely an illustra- tion of the fact that sometimes descending at the micro-level can be futile. Nothing in such an explanation is at odds with MI and its claim that social phenomena are ultimately caused by interacting human agents, their situated rationality, and either intentional or unintentional consequences of their behavior. In Cederman’s model, the problem is investigating a particular macro effect caused by specific stable interaction systems, whose micro-presuppositions are intuitively unproblematic. The typical micro-dynamics of a democratic state are not mysterious but well-known because of widespread com- monsense knowledge and abundant scientific literature. Moreover, following Kant, some of the micro-presuppositions of Cederman’s (2001: 472–473) model are explicitly eluci- dated at the beginning of his article.

Historically, while methodological individualists strongly insisted on the importance of micro-level mechanisms, they never conceived of micro-foundation as a dogmatic principle. Their stress on the relevance of these mechanisms does not stem from the unquestioning belief that any non-micro foundational or self-standing explanation is necessarily wrong but from the rebuttal of holism properly understood because this approach explicitly denies any causal relevance to the individual level on the ground that there is only a deterministic top-down causality. As clarified by Boudon (2010: 172– 173), MI claims that macro-to-macro causal relations ‘can exist and be useful’ (pp. 172– 173). However, it assumes that they must be interpreted as the intentional or unintentional product of human actions. This is even if there is a lack of empirical information about the micro-level presuppositions of these causal relations that, if possible, must be filled to develop an explanation ‘without black boxes’ (p. 173).

The works of individualist social scientists provide examples of explanations that refer to the interaction between high-level macro-entities without micro-foundation. Consider, in particular, Hayek’s (1988) theory of cultural evolution, according to which this evolution ‘operates . . . through group selection’, where group means a whole society (p. 25). In his opinion, to understand a relevant aspect of the long-run historical dynam- ics, it is necessary to consider that some groups have an adaptive advantage over other groups because of their macro-properties, namely, their better economic organization. In this reading, group selection depends on complex emergent effects affecting the whole social system that are irreducible to individual properties and responsible for the group’s survival (see Hayek, 1967, 1988). Hayek does not provide any detailed explanation of the micro-level dynamics underlying the whole of human history partly because of the lack of empirical information, partly because, given the task of his analysis, this explana- tion is irrelevant. His account of the evolutionary history of mankind is not committed to holism as understood by himself and the other methodological individualists. According to Hayek, groups must not be interpreted as *sui generis* entities but as systems of interact- ing individuals whose actions produce global properties. While these global properties do not create a macro-entity that exists over and above individuals in the sense of Durkheim’s ontological realism, they are semantically irreducible. By this, I mean here that they cannot be accounted for in terms of the vocabulary and predicates referring to individual properties (see Hayek, 1967: 70; see also Di Iorio, 2023; Di Iorio and Chen, 2019).

Moreover, Hayek’s theory does not assume that action is a mechanical effect of cul- tural determinism. He recognizes that individuals need to have reasons, in Boudon’s sense, to abide by the rules of interaction that produce the group macro-properties (see Di Iorio, 2015: 121–147). Finally, Hayek’s evolutionary account does not presuppose any determinism underlying the historical development and social change. For a more detailed analysis of the relationship between Hayek’s theory of group selection and his non-reductionist MI, see Di Iorio (2015: 111–113), Di Nuoscio (2018), Nadeau (2016), Petitot (2016, 2023), and Whitman (1998, 2005).

**Conclusion**

The above study analyzed the relationship between ABM and MI and reviewed Kincaid and Zahle’s view that the former is not a necessary implementation of the latter – a view that they developed in opposition to the standpoint of several philosophers and social scientists, including Di Iorio and Chen (2019). The study argued that Kincaid and Zahle’s line of reasoning is untenable because it is based on two invalid arguments. The first is that traditional MI is committed to a naive and impossible reductionism at odds with ABM, which is contradicted by the textual analysis of the works written by the two origi- nators of non-atomistic MI (Menger, 1985 (1883); Weber, 2001 (1904–1905)). The sec- ond is that ABM is compatible with holist assumptions. This argument is untenable because methodological individualists never attached to the term ‘holism’, the meaning that Kincaid and Zahle assume they did. While Kincaid and Zahle are commendable in arguing that MI is often analyzed and criticized without considering its complexity as an intellectual tradition and its different historical implementations, their article is an unsatisfactory attempt to overcome this problem.

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