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FORUM

Representation as intervention: A reply to Unal, Polillo, Caliskan, and MacKenzie

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Abstract

In their article 'The modes of performativity', Unal et al. (2025) argue that the concept of 'representational interventions' provides a basis for a meta-theoretical framework through which to understand the performativity literature. Building on a previously published article of my own, this reply briefly outlines three critiques of their contribution. First, given the already existing paradigm of 'representation as intervention' (Curran, 2018), I raise questions about the novelty of framing performativity as 'representational interventions'. Second, while acknowledging the importance of meta-theoretical work, I raise critical questions about the framing of their approach as a heuristic that can accommodate all existing approaches to performativity, suggesting that it is rather a substantive account of performativity with significant ontological presuppositions. Lastly, my reply focuses on inadequacies in their account of performativity as 'representational interventions'. Specifically, I question their neglect of aboutness, intentionality, and the distinctiveness of agency and reflexivity in conscious animals with ways of experiencing the world. I conclude by arguing for my 'representation as intervention' as an alternative approach that avoids these limitations.

Keywords: economic sociology; looping effects; performativity; realist social science; representation as intervention

Introduction

Unal et al. (2025) argue that the concept of 'representational interventions' provides a novel basis for framing the burgeoning performativity literature in meta-theoretical terms. Specifically, the authors propose the Devices, Actors, Representations, and Networks (DARN) framework in which representational interventions generate performative processes as a useful heuristic or organising framework. They explicitly eschew an ontological understanding of their claims (Unal et al., 2025: 335). There are several critical questions that can be asked of their proposal, which I discuss below.

First, I question the novelty of framing performative processes as 'representational interventions' – that is, when descriptions affect the things they describe (Unal et al., 2025: 320). In contrast, I highlight my previously developed approach of 'representation as intervention', which addresses how representations of social phenomena intervene in social life (Curran, 2018, 2026).

Second, I raise critical questions regarding whether Unal et al.'s meta-theoretical account can integrate all of the existing performative processes identified in the literature.

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I show that, while explicitly eschewing ontology, the authors make definite ontological claims in both the centrality they ascribe to representation in performative processes and in asserting that devices, actors, and networks 'undoubtedly possess agency' (Unal et al., 2025: 336).

Third, I argue that issues in Unal et al.'s account of representation limit the ability of their framing to provide a meta-theoretical approach for performativity. In contrast, my 'representation as intervention' approach directly speaks to the 'aboutness' that is fundamental to representational relations. I proceed to argue that only an account that acknowledges the distinctive agency and way of grasping the world of conscious beings can make intelligible how representations of social life intervene in social life. While Unal et al. are to be lauded for overcoming the rejection of the 'representational idiom' that characterised key figures in the Social Studies of Finance (SSF) (Callon, 2006), their approach still fails to provide an account of representation or intervention adequate to these processes. I conclude by suggesting that representation as intervention, based in realist social science and Hacking's 'looping effects', has the theoretical resources to better elucidate these processes (Hacking, 1995; Sayer, 2000).

Representation as intervention

My proposed approach builds on two key threads in Ian Hacking's work: his early work in *Representing and Intervening* (Hacking, 1983), and his later work on the interaction of social science and social life through his conception of 'looping kinds' (Hacking, 1995). The term 'representation as intervention' is a creative re-appropriation of Hacking (1983), whose book was divided into two parts – science as *representing* and science as *intervening*. This approach is outlined in my article, 'From performativity to representation as intervention: Rethinking the 2008 financial crisis and the recent history of social science' (Curran, 2018). This research programme is still in progress, with a manuscript currently under review and a recently received SSHRC Insight Grant to pursue empirical research on the topic ('Representation as intervention: Economics as representational science and as social action, 2026–2030' [Curran, 2026]).

Given the semantic similarity between the key concepts of 'representation as intervention' (Curran, 2018) and 'representational interventions' (Unal et al., 2025), it is worth clearly differentiating between these two approaches so as to avoid future confusion. Below, I briefly describe my earlier paper's critique of the Callon–MacKenzie account of performativity and its neglect of the representational dimension of performative processes.

Central to my critique of the classic account of economic performativity was that its argument for the necessity of shifting from critiquing the representational failures of economics to solely examining how economics makes economic life was based on a false dilemma: that of treating economics as representing *or* intervening (Curran, 2018: 501–2). In particular, they conflated scientific representation with an extremely narrow conception of representation as 'mirroring' or 'exact description' to justify the neglect of the representational dimension of economics (cf. Callon, 1998; MacKenzie, 2006: 26). Yet, this 'mirroring' account of representation is largely irrelevant to social scientific practice. I specifically argued that:

> Once the conception of representation as exact description of a set of phenomena is abandoned, then the dilemma of representation or intervention dissolves. In fact, given the insights of the performativity scholars … we may in fact refer to the situation in the social sciences as *representation as intervention*. (Curran, 2018: 502)

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I argued in the paper, contra Callon and MacKenzie, that the interventional power of economics was specifically dependent on the representational function of economics. As such, the question of representation was fundamental to the analysis of performative processes:

> The question of representation is ultimately the question of 'aboutness'; how can one thing be about another thing (Frigg and Nguyen, 2017)? *While MacKenzie may not have an explicit account of representation, the fact of representation, of 'aboutness', is constitutive to his analysis.* As the example of the practical use of the Black-Scholes theory, which made financial prices more similar to financial theory over a significant period of time (MacKenzie, 2006), shows, only because financial practitioners and regulators understood that the Black-Scholes theory is *about* the type of securities that they construct and trade – rather than about pop music, how to catch fish, or an abstract painting – that this whole process of the practical use by practitioners of highly complex theoretical financial models and associated market devices is intelligible. (Curran, 2018: 502, emphases added)

Even now, a core paper that Unal et al. (2025: 320, 325) cite as a precursor of their approach, Callon (2006), specifically rejects the 'representational idiom'. As such, prior to the publication of Unal et al. (2025), a key point of difference between the Callon–MacKenzie economic performativity approach and my representation as intervention approach was the former's neglect of the representational dimension. The introduction of 'representational interventions' by Unal et al. (2025) is thus a major departure for the SSF performativity theoretical tradition, which is largely based in Actor-Network Theory (ANT) and Science and Technology Studies (STS) more generally.

Below, I argue that while the authors have come some way in accepting the core theses argued for in the 'representation as intervention' approach, they have not yet come far enough. In particular, I argue that they are still missing key ontological and methodological elements necessary to make sense of the dynamics of the relationship between social science representations and their social interventions.

The importance of meta-theory in highlighting performative processes

Before proceeding to develop a critique, I wish to acknowledge two significant contributions of the Unal et al. (2025) paper. First, their continued study of performative processes is very valuable. This process is not denied by most conventional forms of realism (Sayer, 2000), but the paradigm of the independence thesis operative in many realist accounts tends to discourage or neglect the study of how theory and model representations affect their target objects. As such, the continued discussion of performativity helps bring to prominence many of these processes, even if it is the case that the account that they propose misses key elements of the process.

Second, they advocate for the legitimacy of meta-theory and the importance of doing it well. Many STS scholars have viewed meta-theoretical studies without extensive empirical components as illegitimate contributions to the field. This tendency to dismiss meta-theory as irrelevant has increasingly extended to the discipline of sociology more generally. Even many of those who do not explicitly deride meta-theory tend to treat it with a non-benign neglect, as if it could not be in fruitful dialogue with more empirically based work. As such, I think that the authors are to be lauded for taking seriously the importance of meta-theoretical work. Without a larger synoptic vision, the field can become incredibly fragmented and incoherent (Unal et al., 2025: 319). Without meta-theoretical, synthetic work, it is much more likely that incoherence and fragmentation

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between different empirical studies will go unnoticed or remain inadequately addressed. I concur with the authors in terms of the legitimacy and importance of meta-theoretical work and that getting it right is key. This might be the most significant contribution of their paper.

Meta-theory as heuristic or substantive theory with ontological assumptions?

Early in their article, the authors claim their framework is just a heuristic (Unal et al., 2025: 320, 335). They present their work as a useful taxonomy to organise performative approaches in which there are *no ontological claims* being made (Unal et al., 2025: 320, 335). This framing is notable in that they provide no critiques of existing approaches to the study of performativity. They frame their work as if they are neither disagreeing nor agreeing with the theoretical precepts of other performativity approaches, but only providing a means of organising them. This is a significant claim that I will argue is vulnerable to critique on multiple fronts.

First, it is not clear that this account successfully accommodates all performative processes. My proposal for representation as intervention specifically targeted processes in which social science theories, models, and devices impact economic and social life (Curran, 2018). That is, 'representation as intervention' views the representations of economics (and other social sciences) as one key causal force that tends to generate social outcomes and changes. I did not view it as an all-things-considered framework to explain all performativity.

Prima facie, Butler's (1988) account of 'constituting acts' does not appear to generate performativity through representations. Rather, for Butler, the repetition of certain types of acts tends to generate or constitute a certain identity, such as gender (Butler, 1988: 521). While social taboo and sanctions are representational and play a key role in enforcing certain identities (Butler, 1988: 520), the gendered body is rather the result of 'sedimented acts', which are repeated again and again. The acts come before the representations. It is not fully clear how these identities are produced through representational interventions (Butler, 1988: 523). The authors declare that 'embodied engagements' are examples of representational interventions (Unal et al., 2025: 319), though how these are representations is not clarified. The risk here is that either Butler's account does not fit this definition of performativity or that by attempting to extend their account as a 'catch-all' in which anything that produces what is currently called 'performative' is treated as 'representational', we lose the analytical specificity of 'representation'.

Second, it is not clear that their account is truly ontologically neutral. Unal et al. (2025) propose their meta-theoretical approach of representational interventions in four modes (DARNs) as a *heuristic*. They explicitly eschew ontological claims (Unal et al., 2025: 320, 335). Yet, there appear to be clear ontological claims being made in the article, or at the very least, claims being made that have clear ontological presuppositions. What is missing is a *justification* for these ontological claims. I briefly indicate below several examples of this contradictory condition of both eschewing and relying on ontological claims.

First, they clearly indicate that non-human, non-living things without consciousness, such as devices and networks, 'undoubtedly possess agency' (Unal et al., 2025: 336). It is possible to provide some argument for or justification of what is meant by agency here and how these things possess it, but this would still unquestionably imply an ontology. Second, they declare that while devices, representations, and networks have agency, 'only representations can be performative' (Unal et al., 2025: 336). In this vein, the authors declare that 'performativity is intrinsically tied to the effects of representations, not the actions of agents' (Unal et al., 2025: 336). Again, they do not provide a justification of this claim. Nevertheless, ascribing such a fundamental place to representation in performative

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processes is an ontological claim. In this way, they are both attempting to present their meta-theoretical approach as a non-ontological heuristic while also making very substantive claims based on controversial ontological presuppositions. The portrayal of this as just a *heuristic* obscures the lack of justification for these ontological presuppositions.

In addition to the above, there is also the question of whether ontological presuppositions are absent from their taxonomy of devices, actors, representations, and networks. As highlighted above, it is not devices, actors, and networks that are performative; it is rather that *representations* of these things are performative (Unal et al., 2025: 336). Yet, if it is representations of things that are performative, then why are only these four selected, instead of the millions of other things that are represented? Beyond the potential arbitrariness of these four types of things represented, there is also the spectre again of operative but hidden ontology. That 'networks' would be included and 'structures' would not is clearly based on substantive ontological assumptions that are used, but neither acknowledged nor defended.

An inadequate account of representation

While representation as intervention is an approach that is still emerging, it grounds itself in a definite ontological and methodological framework. Building on realist social science (Sayer, 2000) and recent developments in the philosophy of science and representation (Frigg and Nguyen, 2017), this account foregrounds representation as a relation of 'aboutness'. That is, for *x* to be a representation of *y* is for *x* to be *about y*. Whether this is a *child's picture* of *their family*, or an *economic model* of *the economy*. This 'aboutness' is fundamental to *representation as intervention* for two reasons. First, it avoids attempts to reject representation as simply 'mirroring', which was common in the Callon–MacKenzie performativity literature (Callon, 1998; MacKenzie, 2006). Second, 'aboutness', and its relation to human intentionality, makes intelligible the sharing of representations between social science practitioners and social actors. That the representations of social science practitioners are about the objects that social actors interact with is key to the dynamics of *representation as intervention*. Likewise, practices of representation can only be made intelligible if they are tied to standards of adequacy. Not all representations will be made true or adequate to their object in the same way, but the practice of representing things is not intelligible without these standards (see Curran, 2018).

Second, this approach also grounds itself in Hacking's account of 'looping effects' (Hacking, 1995). The key idea here is that of a distinctively human type of 'agency' and 'reflexivity'. The ability to take ourselves and our society as an object of reflection and to change our actions based on these reflections is fundamental to how social representations intervene in society. As such, this theory identifies a powerful causal pathway in which social science practices of representation can reshape the beliefs and actions of social actors (Curran, 2018).

Unal et al. (2025), on the other hand, do not appear to provide a substantive account of representation in their paper. They do use the term 'representational intervention' many times to explain performativity; however, they do not really explain what is meant by 'representation'. Invoking the term 'representation' is not the same as engaging in sufficient conceptual work to clarify its meaning. This undertheorising of representation potentially follows naturally though from them continuing to draw on the theoretical tradition of ANT that tended to reject representation. One of the core papers they cite as a precursor of their representational interventions approach, Callon (2006), explicitly rejects the 'representational idiom'. Yet, rather than acknowledging the previous thinness of thinking about representation in ANT, they render this opaque with an attempt to

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create a longer genealogy for thinking about *representational* intervention than exists in their predecessors.

Likewise, no substantive account of what is meant by 'interventions' as separate from representation is provided. As such, not only is *aboutness* and *intentionality* neglected, but so is *agency* and *reflexivity*. Again, there may be an account of these that can be provided in the future. However, an account that ascribes a similar agency to actors, devices, and networks is likely to struggle with developing an adequate ontology of a feature of the world (representation) that is distinctively connected to beings that have a distinctive way of seeing and acting on the world based on that way of seeing. That the Callon–MacKenzie approach to performativity has now acknowledged the centrality of representation to performative processes is a development that should be welcomed. This, however, does change the fact that it is an *ad hoc* acknowledgement for this approach. Moreover, it does not mean it is the right approach to carry this research forward. Representation as intervention provides an account of representation beyond mirroring that is open to the distinctiveness of consciousness and intentionality, and an account of situated agency and reflexivity that can make intelligible the ways that social actors creatively respond to social science representations. As such, it is much more likely to be a better basis on which to further examine and make intelligible the diverse relationships between representation and intervention that emerge from social science representations of social life.

Conclusion: Why meta-theory debates matter for empirical researchers

In this short reply, the plane of engagement has been meta-theoretical. Undoubtedly, a more detailed response would also involve empirical work. Yet the question may still be posed: do meta-theoretical debates and errors have relevance for empirical researchers? Admittedly, when social scientists make analytical mistakes, there are not the same clear consequences as there might be in the natural sciences or in engineering. However, the fundamental methodological issues of inferring from the correlation between a few surface financial variables that finance was getting more like its models during the early 2000s helped to make opaque the huge build up in financial risk that the use of these financial models was generating (see Curran, 2018).

That the Callon–MacKenzie performativity literature is now recognising the centrality of representation to processes of performativity is important. But neglecting the distinctive *aboutness* of representation and *reflexivity* of conscious beings when they act on these representations limits the ability of this account to explain how social science representations intervene in social life. Their account may be able to *describe* these performative processes. Yet, without attention to core factors that *explain* the performative response of social actors – such as human intentionality and situated reflexivity in the context of social and material practices – then there is a real risk of relying on surface-level variables, rather than grasping the underlying factors producing performative processes. The performativity literature in finance studies is right to bring attention to the fact that economics contributes towards making economic and social practices. However, better grasping the core explanatory factors involved in this (partial) production will provide sociologists of finance with an improved 'toolbox' to analyse how these processes work. Likewise, it will aid them in developing critiques of the socially dysfunctional ways in which economics' power to contribute towards producing economic reality has manifested itself, such as we saw in the lead-up to the 2008 financial crisis.

Grasping the distinctive ways that social representations intervene in social life can help us better understand the relationship between social science representations and social practices more generally. There are many existing areas of possible research that can be investigated in this way. As suggested above, the representation as intervention

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framework, while still early in its development, offers a fruitful approach for examining these interactions.

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