

## **Material Agency: A Theoretical Framework for Ascribing Agency to Material Culture**

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### **Abstract**

This article attempts to articulate a theoretical framework, the target of which is to systematically unearth the conditions validating the ascription of agency to material culture. A wide range of studies, located within the interdisciplinary field known as material culture studies, testify to and aim at (re)uniting the materials of material culture with the notion of agency. In this article the argument is advanced that material entities have agency *only if* two necessary conditions are met: an ontological condition (agency is an *asymmetrical and* relational category) and an epistemological condition (material entities mediate and transform human understanding). Hopefully, this way of approaching matters will help to establish a constructive framework for future debates.

**Keywords:** agency; material culture; relational and asymmetrical ontology; material hermeneutics; affordances.

### **1. Introduction**

The research goal of material culture studies is simple and straightforward: To investigate the relationship between people and things irrespective of space and time. This is a broad definition, allowing for serious inquiry on the intersection (and interdependence) of human beings and material culture.<sup>1</sup> Within the last ten to fifteen years, one aim in these studies has been to understand how landscapes, technologies, artifacts, things, etc., *actively* shape, impact and transform the perception – and consequently understanding – human beings have of the world in which they dwell. It is the aim of including the notion of *agency*, otherwise traditionally understood to denote an epistemic capacity of human subjects, to material-cultural phenomena. This view may be articulated accordingly:

(P) Material entities have, ontologically and epistemologically, the quality of *agency*.

#### **1.1. Two versions of material agency**

The claim embedded in (P), we might call *The Material Agency Thesis*. There exist two versions of this thesis in the contemporary landscape: what I will call the *strong view* of material agency and the *weak view* of material agency. Viewed from above the two versions are quite similar. Both versions take as their point of departure the *organism-in-its-environment*, as opposed to (1) idealism, the view of a self-contained subject confronting an “outside world”, and the *environment-surrounding-its-organism*, and (2) realism, the view of an existing world in-itself independent of any subject inhabiting it. Equally, the reason *par excellence* of attributing agency to material culture is shared by both versions: whenever the newly additional causal factors – kinds of technologies, for instance – reveal themselves to be *at the root of some distinctive target feature* of the phenomenon in question. Because of this, and engrained in both versions, is the

view that things do far more than simply effect what human agents do; things transform and impact the specific way in which reality discloses itself for human beings.

Despite these (important) similarities, however, when viewed from below the two versions are quite distinct and potentially in some degree of tension. Versions of the *strong view* can be found, for instance, in actor-network theory (Latour, 1993, 1999), and in post-processual archaeology (Olsen, 2003). Here the notion of material agency is based on an “argument by parity”: *If (X) – a technology – and (Y) – a human subject – are so coordinated that they together constitute, e.g., some behavioral activity (A), then there is no principled difference between (X) and (Y) in their contribution to (A).* On the strong view, then, the notion of material agency may be understood to express the following claim: *If it is equally credible to assign the same functional role to (X), as we normally or intuitively do to (Y), then (X) is part and parcel of the process constituting (A).* This expresses Latour’s amodern, symmetrical ontology – the roles that humans and nonhumans play in networks are *functionally equivalent* (Latour, 1999: 178-80).

Support for the *weak view* is evident, for example, in some postphenomenological approaches to technology (Ihde, 1991; Verbeek, 2002, 2005), in the work of ecological psychologists (e.g., Gibson, 1979; Kadar & Effken, 1994), in classical phenomenology (Heidegger, 1927), and in anthropology (Gell 1998; Ingold, 1996, 2000, 2005, 2006, 2007ab). I do not propose to claim that the positions, classified as holding the weak view, are similar across the board; they are not. However, they are importantly different from the strong view! Strictly speaking, on the weak view the notion of material agency is rooted in what we can call the “coupling as constitution argument”: *If (X) and (Y) are so coordinated that they together constitute (A), then (X) and (Y) make up a causally coupled system. Because of this, neglecting to take (X) into account when explaining (A) is equivalent to not recognizing (X) as importantly transforming the nature and/or generation of (A), whenever coupled with (Y).*

Within the scope of the weak version lies a view substantially different from the one advocated in the strong version: In contrast to the strong view, in which material agency turns on a position of *no principled difference* between (X) and (Y), the weak view takes into account the specific details of human embodiment; that the lived body of human beings makes a *special* and *ineliminable* contribution to the agentic dimension of material-cultural entities.

## 1.2. General account of conditions for attributing agency to material culture

The Material Agency Thesis constitutes, I believe, an important and challenging development in contemporary philosophy of technology and material culture studies. But it is a development whose genuine value is easily obscured by terminological misunderstandings (the term “material agency” being an especially slippery case) and pre-philosophical reactions (its just animism, or, on the other side, fetishism). The goal of the present paper is to set up, although tentatively only, a theoretical framework: partly to contribute to a constructive future debate; and partly to systematically unearth the conditions warranting a persuasive ascription of agency to material culture. Now, there are numerous ways in which one can embark upon such an endeavour, one seemingly as arbitrary as the next. However, in order to lay out the general structure of discussion, we may gain some headway by using as a heuristic this formally derived argument from Olsen (2003: 88):  $((P \rightarrow R) \wedge (P \rightarrow Q) \vdash P \rightarrow (R \wedge Q))$ :<sup>2</sup>

1. (P) Material entities have, ontologically and epistemologically, the quality of *agency*. *Only if,*

2. (R) All material entities are *beings* in the world alongside other beings, such as humans, plants, and animals. *And,*
3. (P) Material entities have, ontologically and epistemologically, the quality of *agency*. *Only if,*
4. (Q) All material entities have *de facto* existing qualities that affect and shape the way human beings perceive and understand the world. *Therefore:*
5. (P) only if (R) and (Q).<sup>3</sup>

In this argument, I suggest that (R) and (Q) are each logically necessary conditions for the validity of (P), and that each premise has different implications for the understanding of (P): (R) has the function of a necessary *ontological* condition and (Q) the function of a necessary *epistemological* condition. As it happens, I think they are sufficient too: They are *separately* necessary and *jointly* sufficient conditions for (P). Generally speaking, (R), the claim that all material entities are *beings* in the world alongside other beings, such as humans, plants, and animals, is certainly necessary for the thesis of material agency, because it is the overcoming of the radical dichotomy between subject and object that constitute the ontological base for addressing the issue of material agency in the first place. Nevertheless, (R) is not sufficient for warranting the thesis of material agency – neither in its strong nor in its weak version. This is the reason why (Q), the claim that all material entities have *de facto* existing qualities that affect and shape the way human beings perceive and understand the world, is also necessary. (Q) takes the claim couched in (R) an important step further. It entails that our material lifeworld impacts and shapes the way in which our lived reality discloses itself. Now that we've achieved some initial clarity about what I take to be the fundamental issues concerning the intelligibility of (P), let's take a further step towards conceptual clarity by addressing the specific contents embedded within (R) and (Q). I will deal with each premise in turn.

### 1.3. Conditions explained

As a *modus operandi* it is always insightful to depart by way of concrete examples. Consider the example of a blind man finding his way by means of his cane. It is an example put to use by Ihde (1990: 40).<sup>4</sup> In the blind man's ongoing, here-and-how, use of cane, the cane, we are informed, discloses an *existential* ontological relationship between subject and object – every human being is *always already* invariably situated alongside other material-cultural entities.<sup>5</sup> Note that this is an already-given ontological situation; a situation where material culture must be conceived as co-constitutive of human action, thought and understanding (Verbeek, 2005: 112). Consequently we may state that (R) expresses a commitment in which (P) is justifiable only if (P) is tantamount with an "*ecological and relational ontology*". That is to say, an ontology where nature (object, matter) and culture (subject, social) is viewed in non-dualistic terms, and where material agency turns partly on the embodied nature of human beings and partly on the properties of materials of material culture (for related views see Gibson, 1979; Ingold, 2007a; Wheeler, 1996, 2005). Note that these criteria are in accordance with the *weak view* of material agency.

Verbeek tells us that *all* technological artifacts are *epistemically active* (2005: 9). Artifacts actively generate meaningful (semantically significant) situations by shaping the way human beings perceive and understand their situatedness. In the example of the blind man's cane, the cane is epistemically operative as a *tool for understanding*. It enables the blind man to *expand* his bodily sense of awareness *into the world* by virtue of the cane's material properties and the blind man's embodied way of being-in-the-world (see Ihde, 1990: 74). In order to explore these epistemic merits of material culture, the merits embedded in (Q), this paper will go on to address

what Verbeek terms a “*material hermeneutics*” (see also Ihde, 1990: 124-71; Ingold, 1996: 184; Verbeek, 2005: 121-45; and Wheeler, 1996: 209-36). A material hermeneutics is in concordance with *philosophical* hermeneutics, as the latter position is developed by Heidegger (1927) and Gadamer (1975, 1976), insofar it is understood as entailing the following two commitments: (i) that human understanding is *intrinsically context-sensitive*; and (ii) that the *relationality* between subject and object constitutes an *existential* ontological condition for all understanding.

## 1.4. Two caveats

### 1.4.1. Ontology

First of all, recent attempts to capture material agency by reference to the notion of “*materiality*” are fundamentally *flawed*, and, therefore, unable to conform to the ontological requirement of relationality. Consequently, while agreeing with Olsen (2003) that the notion of materiality has played a significant role in shifting focus *from* the metaphor of material culture as text *to* the hard physicality of social life, I also believe that the notion of materiality is now causing more problems than it actually solves. Here the paper turns against the strong view of Olsen (2003) and the metaphorical view of Tilley (2007). Second of all, relationality and symmetry often go hand in hand in studies attempting to explain the notion of material agency (see e.g., Latour, 1999; Olsen, 2003). I have reservations about this marriage of terms. While agreeing that relationality is necessary as an ontological base for the idea of material agency, I will lay out the argument that the notion of material agency is sound only if based in a relational *plus* asymmetrical ontology; otherwise not. Note that this move transcends the no principled difference approach of the strong view, and incorporates the qualitative difference between (*X*) and (*Y*) of the weak view.

### 1.4.2. Epistemology

Philosophical hermeneutics is not without its own serious problems. So, even though material hermeneutics is firmly rooted in philosophical hermeneutics, a material hermeneutics will deny the assumption of both Heidegger and Gadamer that all understanding is *linguistic* in nature. The major reason for this rejection is that the claim that the pre-structures of understanding are linguistic in character amounts to what Bickhard & Terveen (1995) calls a *linguistic idealism*: (i) it excludes to the periphery what material entities *do* in favour of what they *signify*; and (ii) it underestimates the possibility of a *non-linguistic* and *materially mediated*, but, nevertheless, hermeneutical account of human understanding.

## 2. The ontological condition

Landscapes, mountains, caves, walls, global warming, streets, speed bumps, the ozonhole, etc., are *not* “things”. It is a mistake to ontologically categorize a landscape, a cave, or the ozonhole as a *thing* – i.e., as an observable, spatiotemporal entity, qualitatively demarcated from its spatial environment (Quinton, 1973: 44). Far more promising is Latour’s concept of *hybrid actor*: hybrids are collections of both human and nonhuman actors (1999: 180). Equally is it a mistake to derive the material agency of landscapes, washing machines, cars, chairs, watches and computers from their *thingly character* (Olsen, 2003) or *materiality* (Tilley, 2007).

### 2.1. No nature (matter, object) and culture (subject, social) opposition

Here we encounter the first fundamental flaw in the recent discussion on agency and material culture – namely, the idea proposed by Tilley that material entities may “act back” upon human beings in virtue of their *materiality*. The reason why such a proposal is flawed reveals itself most

clearly when we consider why an ecological and relationally based ontology is incompatible – and renders obsolete – an ontological separation between nature (matter, object) and culture (subject, social). The example of choice is the *ozonhole*. Scientific results verify that there is a causal link between increasing levels of UV radiation and a rise in patients with skin cancer. In fact, being embedded within a causal nexus, having direct implication for human life, enables an ontological categorization of the “ozonhole” as a member of a shared world alongside other beings such as humans, plants and animals (the premise (*R*)). Additionally, it is possible to say of the ozonhole that its existence both *factually* – UV radiation increases chances of skin cancer – and *normatively* – one *ought* not spend too much time in the sun – *disciplines* which use-patterns and opportunities for action take shape. But there is something that we cannot attribute as a dispositional characteristic of the ozonhole. That is, we cannot attribute the quality of “agency” to the ozonhole as a disposition of its *materiality*. To help us understand why this is the case, we may consider Tilley’s (2007) stipulative definition of the concept of “materiality”; here formulated in a study of the materiality of the *stone*:

“(...) there is on the one hand a processual world of stones which takes place *oblivious* to the actions, thoughts and social and political relations of humans. *Here* we are dealing with ‘brute’ materials and their properties. On the other hand there is the processual significance stones have in relation to persons and sociopolitical relations. The concept of *materiality* is required because it tries to consider and embrace subject-object relations *going beyond* the brute materiality of the stones (...).” (2007: 17: notes omitted; italics added).

The ozonhole may be understood in analogy with the example of the stone. It is one thing to consider stone as *material*; quite another to consider the *materiality* of stone. In addressing the stone by way of its materiality, the stone is no longer considered as an entity with material properties, but rather as an *abstracted representation* – i.e., as a meaningful sign in a sociopolitical context. The stone *from* its “brute” materials is substituted *for* its materiality, which Tilley takes to mean something “*other than*” the stone’s material properties. The sheer materiality of stone is, it would seem, just shorthand for dealing with the sociopolitical significance of stones in subject-object relations. Problems, though, lurk just around the corner. The ozonhole – and *all* other material-cultural entities – simply cannot be explained in abstraction from their material properties; nor may they be accounted for in the dualistic vocabulary of nature (brute matter) and culture (materiality). As noted by Latour, *if* we employ a subject and object ontology, *then* the two – and *only two* – ontological categories cannot share history equally (1999: 149). That is, they cannot “*at the same time*” be at *root* of the “*same phenomenon*”. Grounding (*P*) in a relational and context-sensitive ontology will enable us to avoid such dilemmas. Let me explain:

The ozonhole – and the stone accordingly – may be said to have the ontological status of an *affordance*. The concept of an affordance is the central theoretical construct of ecological psychology. It was developed by James Gibson (1979) in order to specify the ways in which the environment *lends* or *offers* itself for perception and action – that is, how the environment creates and shapes opportunities for action in relation to an organism (Scarantino, 2003: 950). Especially important for our purpose is Gibson’s ontological definition of the concept of an affordance:

“An important fact about the affordances of the environment is that they are in a sense objective, real, and physical, unlike values and meanings, which are often supposed to be subjective, phenomenal, and mental. But, actually, *an affordance is neither an objective property nor a subjective property; or it is both if you like*. An affordance cuts across the dichotomy of subjective-objective and helps us to

understand its inadequacy. (...) *An affordance points both ways, to the environment and to the observer.*" (1979: 129; note omitted; italics added).

So it is in the case of the ozone hole. It is objective, since it consists of a number of primary qualities; however, as an affordance its *affectivity* does not reside in its "nature" – in comparison to "nature" as an ontological category – since it is partly constituted by the activity of human beings. Likewise is it a social phenomenon. The ozone hole is socially significant for human beings. But it *is* not in the world as an abstract representation *per se*. Affordances should not be taken as the opposite of nature. So, it is not characterizable as a strictly cultural phenomenon either – in comparison to "culture" as an ontological category. In contrast, the ontological status of the ozone hole as an affordance entails a status as *quasi-objective*. By this I mean that its ontological status as an affordance implies that it is logically true to say of the ozone hole that it is a "something", and, furthermore, that a number of human and nonhuman actors are involved in its *constitution*. It follows, therefore, that the ozone hole – and *all* other material-cultural entities – are both (i) objective and subjective at *the same time*, and (ii) a *composition* whose ontology is constituted in an involvement whole of multiple reciprocal relations amongst human and nonhuman actors.<sup>6</sup> Hence, it is a mistake to derive agency from materiality if one means by materiality something dissociate from the material properties of a given entity.

## 2.2. Agency is not a substantial quality

This section discusses Olsen's (2003) contribution to the issue of material agency – that is, it is a discussion of the strong view of material agency. Of particular interest is that Olsen distances himself from Tilley's understanding of the concept of materiality – as abstracted representation – and stipulates his employment of the term as denoting a material entity's "*physical and 'thingly' component*" (2003: 87: italics added). It's important to emphasize that I agree with Olsen on a number of issues. However, if we continue to describe material agency as a property of materiality, then we will continue to sidestep any sensible analysis of the relationship of agency and material culture. In contrast to Olsen, whose position implicitly rests on the assumption that agency is a *substantial* quality of the entities *in and of themselves*, this paper favours the weak version of material agency: that (*X*) – a technology, for instance – and (*Y*) – a human subject – constitute a causally coupled system, and that human embodiment makes a *special* contribution to the agentive dimension of (*X*) (see, e.g., Gibson, 1979; Ingold 2005, 2006, 2007ab).

Importantly, with respect to (*P*), the material agency thesis, it is paradoxical to note that Olsen for the most part agrees with the argument put forth here. The paradox consists in the fact that Olsen on the one hand focuses on what things *do* in virtue of their "*thingliness*" and wishes to do so within a relational framework on the other. To begin with I will consider the issues on which Olsen and I agree. This statement pays evidence to Olsen's relational point of view:

All we need to do is to think about moving around a house, a university campus or a city, to realize how they prescribe *programmes of action* that schedule and monitor our day-to-day activities (...). (2003: 97: italics added; note omitted).

The important assumption here is that houses, cities and other segments of material culture are considered as prescribing *programmes of action*. The phrase "programmes of action" is due to Latour (1999: 178). It is an ontological notion, and it designates that actions arise in *relations*. The fundamental claim is that *reality* has its foundation in a relational ontology. The phrase "programmes of action", therefore, refers as much to the intentions of human beings as it does to the functions of artifacts, without invoking an a priori dichotomy between humans and

nonhumans on the level at which the terms are applied (see e.g., Verbeek, 2005: 156). In particular, if one accepts a relational ontology, then one will also accept an additional claim: Human behavior cannot be fully explained without reference to a “*second agent*” – e.g., the house, the city, or the university. Suppose, for example, having to drive from Copenhagen to Berlin. One way to succeed would be to consult a cognitive map of the route, that is, to access a stored inner representation of how to get from the former to the latter. An alternative, and far more realistic, method might be to select the correct road in Copenhagen from, e.g., a roadmap, and then follow the signs until successfully arriving in Berlin. If one accepts the second story as the more persuasive of the two, several important aspects comes to light with respect to the notion of *material agency*. That is, *in the wild* it is not only human beings using artifacts; it is human beings *plus* artifacts co-shaping and co-constituting which use-patterns take prominent shape.<sup>7</sup> In fact, human beings are no longer to be considered as the sole actors of an activity: (*X*) – the roadmap, the road, the signs and the car – *causally co-shape*, alongside (*Y*) – the human subject – co-shape the navigational success of the conducted activity, (*A*). The idea is that the driver’s psychological innards and the road collaborate as “*equal partners*” in a successful completion of the activity. Awareness of this mutual partner’s condition allows (*P*) to be stipulated accordingly:

(*P*) is tantamount to the claim that material entities have causal agency, since material entities co-constitute real-time activities of human beings.

An implicit assumption of the relational view, at least as it is put forth by Latour (1999) and Olsen (2003), ties relationality together with a claim about ontological *symmetry*: Neither humans nor nonhumans have agency as a pre-established essence; rather, agency arises – for humans and nonhumans – only in relations. Hence, in a symmetrical and relational ontology the concept of “agency” applies *equally* to humans and nonhumans, with no qualitative difference between the two. Each is functionally equivalent with one another. The no principled difference view we have already categorized as the strong view of the material agency thesis. On the weak view, Gell (1998) has put forth the position that it is *non-contradictory* to assign agency to things, and that this move is sound *only if* the idea of material agency is based in a relational and *asymmetrical* ontology. Recall that the weak view is critical of any full-blown eliminativism, in the sense that an irreducible part of human activity is the first-person embodied perspective. This is the phenomenological heritage of the weak view (see Merleau-Ponty, 1945/2002: 77-83); and it’s restated by Verbeek in his reluctance to accept a thoroughgoing symmetry (2005: 216).<sup>8</sup> This paper favours the weak view. It does so, because the strong view, based as it is on *functional equivalence*, fails to take into consideration the difference of embodiment between human and material agents. From this (*P*) may be defined as:

(*P*) is tantamount to the claim that material agency is a relational and asymmetrical quality.

Let us turn now to the second interesting aspect of the joint collaboration between (*Y*) – the driver – and (*X*) – the signs, roadmap, car, etc. – in relation to (*A*). The involved agents *transform* one another reciprocally. This insight is due to Latour, who designates this kind of reciprocal transformation as “translation” (1999: 179). What it means is that the driver and, say, the signs *change* each other. The driver is *different* if in relation to the signs, that is, the driver-with-signs is now a competent driver, one capable of successful finding his or her way from Copenhagen to Berlin. The signs are *different* if in relation to the driver, since the signs-with-driver are no longer merely passive objects sitting by the wayside, but emerge as actors mediating the activity in virtue of the joint collaboration of “way finding”. Note that something else is happening in this

example. There are two kinds of agents – humans and nonhumans – qualitatively different from one another. However, arising from the *mutual transformation* of human and nonhuman agents is a “*hybrid agent*”: In the relation between the driver (actor 1), the road (actor 2), the car (actor 3) and the signs (actor 4) arises a new qualitatively different “hybrid actor” (actor 1 + actor 2 + actor 3 + actor 4). Because of this, within the causal nexus of human and nonhuman agents, (*P*) may take the following form:

(*P*) is tantamount to the claim that hybrid agents may emerge from a joint collaboration of, and transformation between, human and nonhuman agents.

Now, why do these three formulations of (*P*) not concord with Olsen’s additional claim that material entities have agency by virtue of their physical, thingly character? Consider, for example, an axe. If we follow the relational and asymmetrical definition of (*P*), as a programmatic assumption, it follows that the notion of material agency is incompatible with the view that material agency is an intrinsic quality of the axe *in and of itself*. On the other hand, however, if we ontologically define material agency as a product of the axe’s physical, thingly character, it follows that the axe has agency qua its physicality or materiality – the power of agency lies with its materiality itself. This is the paradox plaguing the account developed by Olsen (2003). The notion of “environmental affordances” far better captures the ontological commitments of (*P*) than does Olsen’s reference to a things thingly or physical character. This is so, because an affordance – e.g., the axe’s ability to chop wood – is created (or arises) in a relational network consisting of the embodiment of the user and the material properties of the entity being used (see Gibson, 1979: 127). Allow me to explain in further detail.

We have already seen how Latour’s notion of “programmes of action” is based in a relational ontology. Likewise for Gibson’s concept of an “affordance”. It refers to the complementarity between an organism and its environment (see e.g., Sanders, 1993). Because of this, the ontological status of an affordance is co-dependent on the circular causality between the subject and the material culture surrounding the subject (Gibson, 1979: 127). In order to keep things as simple as possible, let’s return to the example of the blind man’s cane (Ihde, 1990). The cane is an environmental affordance for the blind man. It *offers* distinct ways for the blind man to gestalt (or embody) his environment, while at the same time reducing the availability of others. Additionally, its material properties – i.e., its roughness, structural form, etc. – are capable of *transcending* the cane’s significance as a social object. This aspect is essential if the cane, in virtue of its material properties, is to co-shape or form the way in which the blind man comes to know his world. However, it is essential to note that such an agentive capacity is possible only if taken in relation to the blind man’s species-specific corporeality – that is, in relation to body posture, gripping abilities, and so on (for related insights on embodiment see e.g., Gibson, 1979; Johnson, 1987; Lakoff & Johnson, 1999; Sheets-Johnstone, 1999). On Ingold’s weak view of material agency, the cane does not actively co-shape the coming forth of meaningful worlds by virtue of something *inside* it. Agency does not reside *in* matter – i.e., as an immaterial substance somehow controlling the cane. Nor does the cane act back upon us due to the power of its materiality, because agency, so Ingold claims, is not *of matter per se* (2007a: 12). Bringing things to life, then, is *neither* the work of an immaterial soul controlling matter *nor* is it a quality of the matter itself. Instead, the cane affords what it does by virtue of its position in a relational whole constituted by the material properties of the cane and the blind man’s embodied nature of being-in-the-world. Hence is it possible to say persuasively of (*P*):

- (i) Material entities have “agency” as an ontological quality.



- (ii) Material entities have “agency” as an ontological quality *only if* the concept of “material agency” is a relational and asymmetrical quality – that is, agency is an attribute of material entities *only if* it is qualitative different than human agency and emerges in “symbiotic interplay” between human embodiment and material properties of material culture. *Therefore:*
- (iii) Material entities have agency qua their position in a relational and asymmetric network of human and nonhuman agents. *Hence* (it follows from the conclusion):
- (iv) Material entities do not possess agency as an intrinsic quality by virtue of their materiality (the argument posed by Olsen, 2003).
- (v) Material entities do not consist of nature and culture as two oppositional ontological categories, where the brute matter of material entities may be substituted for their significance in sociopolitical matters (the argument posed by Tilley, 2007).

### 3. The epistemological condition

Before we begin the present analysis of the *epistemic* influence of material culture, we need to remind ourselves of the claim embedded in the necessary epistemological condition, (*Q*), for (*P*):

(*Q*) All material entities have *de facto* existing qualities that affect and shape the way human beings perceive and understand the world.

We are already in a position to appreciate the statement that things *act back* – that is, that things *do* something in the world. But remember, this view is sound *only if* material entities are positioned in an asymmetrical and relational ontology; otherwise not. Therefore, on the basis of the previous discussion in the paper, (*Q*) may be given the following definition:

(*Q*) is tantamount to the claim that all material entities have *de facto* existing qualities that affect and shape the way human beings perceive and understand the world *only if* these material entities are based on an asymmetrical and relational ontology.

This implies that material culture, as a result of its necessary relation to other human and nonhuman agents, possesses the capability of transforming (ordering, evoking, directing) how the world is perceived by human beings. Before moving on it needs to be mentioned that material culture not only mediates perception and understanding. Given the engrained position of technologies and other material-cultural entities, their transformation capacity whenever embedded in human relations, such things may disclose new ethical dimensions.<sup>9</sup> Prominent advocates of this moral dimensions view of artifacts include Latour (1992) and Verbeek (2005), among others.<sup>10</sup> Other cases include human creativity, everyday cognition, and socially distributed cognition (see e.g., Brooks, 1999; Clark, 2003; Hutchins, 1995; Norman, 1988, 2005).<sup>11</sup> In the philosophy of technology, a subfield within material culture studies, Ihde (1990) and Verbeek (2005) have developed an epistemology of material culture known as *material hermeneutics*. It is a position highly valuable for the present aim of this paper. In fact, it presents us with important tools in order to unlock the myriad ways in which material culture may *epistemically* influence and co-constitute human perception and understanding.

#### 3.1. Material Hermeneutics

Hermeneutics is usually defined as the theory and practice of interpretation. Historically it involves a long and complex history, starting with concerns about the interpretation of legal and sacred texts. In the twentieth century, hermeneutics broadens to encompass questions about the conditions of possibility for human understanding. The difference is between *classical*

hermeneutics and *philosophical* hermeneutics. The present discussion of (*Q*) is interested in hermeneutics as *philosophical* hermeneutics insofar it is, as formulated by Heidegger (1927) and Gadamer (1975, 1976), concerned to raise questions about the conditions of possibility for understanding and interpretation. Importantly, this is not a question of how we *should* interpret or understand something, but rather what interpretation and understanding *is* and how they *work* (see, e.g., Gallagher, 2004; Wheeler, 1996).<sup>12</sup> Central for a “*material* hermeneutics” is Heidegger’s (and Gadamer’s) assumption that human understanding is *intrinsically context-sensitive*, and that the *relationality* between subject and object constitutes an *existential* ontological foundation for all understanding. Assumptions elegantly captured by Heidegger in his ontological stipulation of human beings as a priori “*In-der-Welt-sein*” (1927/2001: 53: italics in original).<sup>13</sup> Heidegger’s paradigmatic example is the *hammer* example. Let me clarify.

First of all, if we focus on the hammer as a piece of equipment, then it becomes apparent, so Heidegger informs us, that each piece of equipment is related to a context. In itself it is nothing; as a piece of equipment it necessarily presupposes being part of a meaningful whole. This is essential for a material hermeneutics: (i) it underscores that technologies do not have significance *in and of themselves*; and (ii) because technologies are always interwoven in a cultural praxis, they are always in a position to transform culture and how it is experienced (Ihde, 1990: 164-77; Verbeek, 2005: 138). Second of all, the field within which a piece of equipment is what it is, Heidegger denotes as an *involvement-whole*: A context filled with complex cross-relations between different pieces of equipment. In this sense, a tool is always “something in order to” and this “in order to” always refer to a tools utility; that *for which* it is usable (Mulhall, 1996: 48). One might say that the hammer’s usability does not refer back to the hammer itself, but rather is directed at a certain context of involvement. This is important for a material hermeneutics, because it points to the *non-neutrality* of artifacts. That is, it refers to the presupposition that artifacts are more than merely instruments; that artifacts actively influence how they are to be used. In fact, *if* technologies are considered only as neutral instruments, *then* this would imply that technologies are *nothing over and above* their cultural interpretation and ways of use. However, *if* technologies are so understood, *then* the technologies are reduced to interpretation – to a symbolic sphere ignoring the epistemic *operativity* of the technologies themselves. Therefore, technologies are more than mere symbolic interpretation, because they actively co-constitute the way reality comes into being for human beings (Ihde, 1990: 141). Third of all, the usability of tools discloses the tools as being manifest in their *readiness-to-hand*. It is characteristic of something ready-to-hand that it *withdraws*, phenomenologically speaking, from the attention of the user *in order to be used*. Essentially, a withdrawing tool becomes a *means* through which human beings experience the world rather than an *object* of experience. For a material hermeneutics this is an important insight, since it reveals a sense in which technologies impact the epistemic encounter human beings have with the world.

### 3.1.1. The problem of viewing language as the medium of understanding

Philosophical hermeneutics and a material hermeneutics share a common goal. Both attempt to extend the boundaries of classical hermeneutics to include humans and world in the interpretative loops of human understanding. But though this agreement is apt, they depart on one very important issue. A material hermeneutics denies the commitment of philosophical hermeneutics to confine all understanding to language. That is, it is a denial of the commitment to view all understanding as ontologically a matter of interpretation, and interpretation as ontologically constituted in terms of an historically situated language.<sup>14</sup> *If* understanding is ontologically a matter of interpretation, *and* interpretation is ontologically constituted in language, *then* it follows that language provides and circumscribes the epistemology of human beings and their access to

the world. The problem with such a commitment is that it constructs a “*linguistic idealism*” (see e.g., Bickhard & Terveen, 1995; Hacking, 2001; Olsen, 2006). It is an idealism that (i) *overlooks* that “things” (broadly defined) cannot adequately be defined in terms of interpretation, for this reduces them to the domain of the symbolic (Verbeek, 2005: 9). (ii) It *ignores* that material culture *is* in the world and plays a fundamentally different constitutive role for the way human beings are in-the-world than text and language (Olsen, 2003: 90). (iii) It *excludes* to the periphery what material entities *do* in favor of what they *signify*. And (iv) it *underestimates* the possibility of a genuinely non-linguistic and materially mediated, but, nevertheless, distinctly hermeneutical form of understanding. With these conceptual issues out in the open, it is now time to move on and elaborate the position of material hermeneutics as put forth by Ihde and Verbeek.

### 3.1.2. The epistemic character of material culture

How may the technological life-world change and affect how human beings interpret meaningful situations in the world? According to both Ihde and Verbeek, technologies may do so in two different ways. On the one hand, via “direct mediated perception”: when technologies are directly involved in the mediation of sensory perception by shaping the way in which humans perceive reality (Verbeek, 2005: 128). On the other hand, via “indirect mediated perception”: when technologies form the cultural framework available for interpreting a situation in the world (Verbeek, 2005: 128). Mediation implies *transformation* of perception in both direct and indirect modes of technologically mediated understanding. Importantly, mediation does not concern the *function* of a given technological artifact, but arises on the *basis of* its functionality in virtue of influencing (shaping, directing) understanding of events from an absorbed and incorporated position (Verbeek, 2005: 208). Hence, when speaking of material entities having *de facto* existing qualities affecting and shaping human understanding, it is the notion of *mediation* this paper has in mind. Ihde also characterizes this mediating role of technology as “*technological intentionality*” (Ihde, 1990: 141). By this he means that technologies are not neutral – mere instruments to achieve certain goals – but have a specific *directionality* which promote or evoke which use-patterns take prominent shape and, moreover, how reality comes to be meaningful for human beings. Nothing of this amounts to the claim that technologies have *determinative force*; they do not determine action in a strict sense. The point is merely that technologies – to a certain degree – evoke a specific usability and thus co-determine the way they are to be used. To get a feel for this way of speaking of technology, let’s consider a couple of concrete examples.

### 3.1.3. Direct mediated perception

Suppose that you are travelling through a landscape by train. First of all, you are not travelling across, but *through* a landscape. Moreover, you are *in* a landscape. That is, you are not *in* a landscape as, e.g., water is *in* a glass, or as clothes are *in* a closet (Heidegger, 1927/2001: 54), since a landscape is a landscape only for those engaged with it: travelling alongside its many surfaces; dwelling in it; etc (Ingold, 2000: 193). Therefore, being *in* a landscape means to be confidential with it, since it is tantamount to always already being in *meaningful* situations. Second of all, travelling by train is a journey undergone from a certain point of view (an embodied perspective): through a window; in a sitting body position; and at high speeds. Consequently, this way of being in a landscape implies that your experience of the landscape is mediated *through* the train in which you are sitting. If we concentrate on the view from the window, then your point of view is *enframed* by the window. It is impossible to see the entire landscape, not even if you were to turn around. Only an enframed segment of the landscape affords visibility. In direct mediated perception, so Ihde and Verbeek inform us, an inherent structure of “magnification and reduction” is present. This means that when looking out the

window your perception of the landscape is *magnified* and *reduced at the same time*. The window magnifies the perceptual presence of that which is enframed; whereas it reduces from your field of experience the rest of the landscape. In this sense, a journey taken by train through a landscape is *co-shaped* by the train itself. This is a case of the *weak view* of material agency. In contrast to the strong view motivated by parity of contribution, this case illustrates that specific features of the human body make a *persistent, non-trivial* contribution to (*A*), all the while (*X*) itself, whenever causally coupled to (*Y*), importantly *transforms* the qualitative character of (*A*).

#### 3.1.4. Indirect mediated perception

From bodily-perceptual mediated perception, it is now time to analyze how meaning arises when the cultural frameworks of interpretation are mediated by technologies. To this purpose I will make use of Latour's example of a speed bump, which *forces* the drivers to adapt their behavior qua its material presence (1999: 185-90). First of all, and in line with Heidegger, speed bumps do not have use-value *in and of themselves*. Instead, speed bumps presuppose, as a necessary (transcendental) condition, a cultural praxis wherein they can be what they are. What do I mean by this? Gibson's concept of an "environmental affordance" makes the notion of "use-value" intelligible – whereby I mean how speed bumps *offer* certain patterns of use in relation to the users. Recall, an affordance is a given entity's qualitative properties in relation to a user; it is not a qualitative property of the users' *experience*. Therefore, the use-value of a speed bump – qua its ontological status as an environmental affordance – is neither a property of the speed bump *in itself* nor the result of subjective values projected onto the world by a subject. In contrast, the use-value of a speed bump emerges in the active and relational partnership of "*human-technology*" (see Ingold, 2000: 194; Verbeek, 2005: 117). Second, because technologies are always interwoven in a cultural praxis, they are always already in a position to transform culture and the way it is experienced (Ihde, 1990: 164-77; Verbeek, 2005: 138). *Qua* their manner of implementation, a speed bump co-shapes a coming into being of a cultural space mediated by technology. That is, a cultural space in which the speed bump is implemented is co-constitutive of indirect forms of cultural interpretations of situation in the world. As noted by Latour, whenever a speed bump mediates programmes of action, a possible *translation* occurs *from* occasional hazardous driving and breaking of the rules *to* a more disciplined style of driving in virtue of its technologically mediated *intentionality*. So, inscribing a program of action into a lump of concrete delegates the task of a policeman (or traffic sign) to the speed bump. It demands a decrease in speed and, therefore, evokes a cultural space for acting a certain way.<sup>15</sup>

As we saw earlier, for Gadamer language is the medium through which understanding is constituted. But, *if* technologically mediated intentionality gives rise to indirect forms of cultural interpretation, *and* such understanding is co-constituted by non-linguistic entities – e.g., a lump of matter in the road – *then* it follows that cultural significance (meaning) cannot be constituted in language *per se*. Therefore, *if* human understanding is not primarily linguistic and a distinctly hermeneutical account of understanding still makes sense, *then* technologically mediated perception may be able to affect us in fundamental ways which constitute non-linguistic, but, nevertheless, hermeneutic forms of understanding. All this considered we may define (*P*'s) epistemological capacity in the following way:

- (i) Material entities have "agency" as an epistemological quality.
- (ii) Material entities have "agency" as an epistemological quality *only if* the concept of "epistemic agency" is tantamount with "technological intentionality" and co-constitutive of non-linguistic, materially mediated forms of understanding. *Therefore*:

(iii) Material entities are “epistemic agents” in virtue of technological intentionality and being co-constitutive of non-linguistic, materially mediated forms of understanding.

#### 4. Conclusion

This article has attempted to articulate a theoretical framework, the target of which has been to systematically unearth the conditions validating (*P*), *The Material Agency Thesis*: Material entities have, ontologically and epistemologically, the quality of *agency*. I have advanced the argument that (*P*) is true *only if* an ontological condition and an epistemological condition are true. With respect to the discussion of (*R*), the ontological condition, this paper has argued that the claim that material-cultural entities have “agency” as an ontological quality is persuasive *only if* the notion of “material agency” is based in a relational and asymmetrical ontology; otherwise not. In considering (*Q*), the epistemological condition, this paper has put forth the view that the claim that material-cultural entities act as “epistemic agents” is justifiable *only if* they are considered as being co-constitutive of non-linguistic and materially mediated forms of human understanding; otherwise not. Hopefully this way of dealing with the issue of material agency, getting clear about underlying conditions, as well as separating the strong and weak views from each other, has been of some help in raising a constructive framework for future analysis.

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## Endnotes

- 1 This way of putting things suggests that the things pertaining to material culture are things already transformed by human activity, into artifacts. According to Ingold, we should bracket this metaphysical view, since it unjustifiably carves the material world into two opposite categories: one cultural; one natural (Ingold 2007a: 3-4). In setting up this framework, this paper will follow Ingold in advocating the view that the adjective “material culture” covers both cultural artifacts and natural kinds. Generally speaking, material culture is taken to include both things encountered *in situ*, within the landscape, and things already transformed by human activity. More specifically, since there does not seem to exist a demarcation line clearly distinguishing surface (land) from the medium (air) surrounding it, such naturally encountered phenomena as sunlight, air and rain are included as constitutive parts of our material cultural world.
- 2 This argument is derived from Olsen (2003). However, it is not provided by Olsen! Instead, the argument has been derived from several key passages in Olsen (2003). These passages are as follows: (P) “[We] have to relearn to ascribe action, goals and power – or to use that old mantra, *agency* – to many more agents than the human subject, as well as to ballast epistemology – and ontology – with a new and unknown actor; the silent thing.” (2003: 89; italic in original); (R) “(...) all those physical entities we refer to as material culture, are beings in the world alongside other beings, such as humans, plants and animals. All these beings are kindred, sharing substance (‘flesh’) and membership in a dwelt-in world.” (2003: 88; note omitted); and (Q) “Things, objects, landscapes, possess ‘*real*’ qualities that affect and shape both our perception of them and our cohabitation with them.” (2003: 88; italic added).
- 3 One might wonder why I infer two criteria for material agency suggested by Olsen. I do so, because both criteria point to important aspects underlying the initial plausibility of material agency, and because both criteria are able to encompass both the weak view and the strong view of material agency suggested in section (1.1).
- 4 This example was originally introduced by Merleau-Ponty (1945/2001: 165). Recently the example has been employed by Ingold (2000: 18) and Verbeek (2005: 124). See also the work of Heidegger (1927) for related insights.
- 5 The influence of both Heidegger (1927) and Merleau-Ponty (1962) is evident here.
- 6 The term “composition” is a technical term introduced by Latour (1999: 180-83). It serves the purpose of emphasizing that the ontological structure of every action is nested in a series of many actors – human as well as nonhuman.
- 7 I use the phrase “in the wild” with a nod to Hutchins “Cognition in the Wild” (1995).
- 8 According to Verbeek, there is a genuine phenomenological difference between humans who act and a world of things in which action takes place (2005: 216).
- 9 For an ingenious example of how *light* may enter into moral dimensions see Bille & Sørensen (2007).
- 10 It would be a mistake simply to conflate the views of Latour with those of Verbeek on this matter. The former holds a symmetrical view of human-technology relations, whereas the latter does not. One argument, given by Verbeek, for the necessity to take the moral dimension of things seriously, turns on *mediation*. Everyday things – surgical equipment, bridges, speed bumps, etc. – transform our practical lives; they have an impact on our behavioral choices. Sometimes we perform certain types of behavior in need of moral assessment – e.g., when having to decide whether or not to have an abortion. In the case of obstetric ultrasound, technologies not only causally influence the situation. On Verbeek’s view, such a technology transforms the situation of expecting a child into a situation of having to make a substantive moral choice – deciding whether the fetus is entitled to life or not.
- 11 For an argument on how *atmosphere* is co-constituted by material-cultural entities see Böhme (1995).
- 12 Given the complexity of the work of both Heidegger (1927) and Gadamer (1975), and taken the restricted length of this article into consideration, it is not possible to provide deep insight into the work of these two scholars. What is to follow is therefore substantially comprised and oriented towards to current thematic, and several theoretical nuances will be left unsaid.
- 13 The claim that the relationality between the human experiencer and the field of experience constitute an existential ontological foundation for all understanding means the following: a necessary structural condition for human understanding is that it always needs be understood in relation to the context in which the human experiencer is situated, and, accordingly, is experiencing (and understanding).
- 14 Just consider this quote from Gadamer: “All thinking is confined to language, as a limit as well as possibility.” (1976/2004: 127).
- 15 To quote Verbeek: “When a cultural relation with an artifact is initiated, there arises a ‘*cultural intentionality*’ within that relation (...).” (2005: 138: italics added; note omitted).