

# No such thing as terroir? Objectivities and the Regimes of Existence of Objects

Teil, G., 2012. "No such thing as terroir? Objectivities and the Regimes of Existence of Objects ". *Science technology and Human Values* 37, 478 - 505.

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## Abstract

The sociology of science has shown that the scientific quest for truth, framed by the search for objectivity was granting objects of knowledge the form of independent and autonomous things, 'data' already given and preexisting their observation. But do 'real' objects only fit the form of data or things? If not, to which other form and objectivity do they fit? We consider the question by examining the dispute between scientists and vintners on the issue of *terroir*, a complex combination of viticulture and winemaking practices and agro-climactic factors which gives wines a particular taste, or *terroir typicity*. For scientists who are unable to reduce it to a stable list of determining factors, terroir is an unfounded notion, an imaginary social construction and an economic barrier. Producers, on the other hand, along with the wider distribution network of terroir wines, consider terroir as a real object, although one whose manifestations cannot be evaluated using the same procedures as those of scientists. By analyzing how proof of terroir is implemented the author uncovers a regime of existence of objects different from the scientific regime: a pluralist one governed by critical discussion from which objects emerge as distributed results of a production process.

(additional content of abstract) In conceiving objects not only as *a posteriori* results instead of *a priori* given things, but also as distributed instead of condensed into an 'objective' representation, this regime stands in sharp contrast to the common scientific regime in which the aim of objectivity is to detach objects from their 'observation' and 'context'. This alternative regime of existence is not specific to 'terroir' and may help us think about numerous objects that do not fit easily within the scientific format of 'things', in particular, objects of taste. Because it offers the opportunity to circumvent the divide between true scientific knowledge on the one hand, and more or less flawed 'profane' knowledge on the other, this regime also constitutes an essential resource for restoring the plurality of objects whose presence in society requires debate and arbitration.

**Keywords:** objectivity; thing; product; knowledge; science and society.

# 1. Scientific objectivity and the ‘thinging’ of objects

As a characteristic of ‘true’ knowledge, objectivity has been understood in various different ways within the epistemological “positivist”<sup>1</sup> tradition. Megill (1994) proposed four different meanings for this notion: two logical – *absolute* and *dialectical* objectivities; one practical – *procedural* objectivity; and finally a more sociological sense he called *disciplinary* objectivity. In their book *Objectivity* (2007), Daston and Galison develop a less conceptual and more pragmatic interpretation by putting objectivity back into the history of scientific practices. Beginning with 17<sup>th</sup> century naturalists’ representations of nature, objectivity gradually turned into a debatable ‘interpretation’ of what nature is which led to the emergence of a phase of ‘mechanical objectivity’. This involved the detachment between the observer and what is being observed, partly thanks to mechanical machines and mathematical theories whose lack of ‘preconceived’ ideas about the object under scrutiny made them more reliable than humans. However, this phase soon brought its own problems - the observer cannot be entirely replaced. He or she must therefore strive to become mechanical and objective by attaining an ‘objective self’<sup>i</sup>, or rather, a self ‘as objective as possible’: ‘There is no objectivity without subjectivity to suppress’ (Daston and Galison 2007): 33). Megill’s *dialectical* objectivity appears as a historical practice producing a detached observer who does not exert any ‘influence’ over his or her ‘representations’.

Daston and Galison draw particular attention to the work of detachment and reattachment between the observer and the object of knowledge, including its reflexive practices, its theorization of the issue and the production of new “ways of doing” and success criteria translating into new perspectives. These activities are guided by the quest for *absolute objectivity* and ‘pure’ knowledge. Since one cannot do away with the observer in order to know about the world, pure knowledge remains inaccessible. Nonetheless, it is possible gradually to get closer to it as with an asymptote. The reflexive activity of producing and controlling claims about the world thus tends towards a ‘description’ of the world, that is, an account as independent as possible from the observer.

This already bulky book leaves aside parallel activity focused on the object and the ‘context’, and whose aim is not to produce detachment, but rather a standardization of representation (Beaulieu 2001) and the definition of ‘experimental conditions’. After reducing all objects to their representative and all ‘contexts’ to the laboratory setting, this procedure systematically links the represented objects to their representative and their potential contexts of existence to the laboratory (Latour 1995; Zimmerman 2008) and the network of laboratories (Hessenbruch 2000).

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<sup>1</sup> Although this detail is not always made explicit, the scientists search for objectivity, which has been described by STS namely, is focused on the work performed within so-called “hard sciences” or “objective sciences” acknowledged as the paragon of Science. According to this knowledge framing, the “world” exists and can be “observed” as a preexisting “data” already given. Nor religious knowledge, nor pragmatist sociology as conceptualized by W. James (1996) for instance do resort to such a framing.

Accordingly, objectivity is both the requisite for, and the result of, implementing an instrumentation of the proof confirming that the objects of the world for which science has to account are 'autonomous', i.e. independent from the observer, but also relating to their 'contexts' in ways that are themselves objectivated. Objectivity therefore ascribes a specific regime of existence to objects, that of 'things' consistent with the definition of a dualist rationalist ontology: 'data' that can be 'discovered' and whose existence unfolds independently, including from the people who live around, with or alongside them.

Through this selection, objects which are used by actors but do not conform to its instrumentation of the proof and definition of objectivity are relegated to a kind of non-being or notional, psychic existence without 'objective' referent. Social sciences have endorsed this rejection by showing how forms of knowledge such as sorcery or magic can be considered as purely symbolic (Evans-Prichard 1976 [1937]); (Durkheim 1995 [1912]; Favret-Saada 2009). Other explanations were put forward in the case of UFO sightings or apparitions of the Virgin Mary, respectively in terms of a rupture (Lagrange 2007) or rerouting (Claverie 2003) of the referential link between object and objective 'representation'.

'Terroir', the example upon which this article is based, is a similar notion which seems to lead to similar differences of interpretation by scientists and actors. Actors experience 'terroir' while scientists appear to be incapable of doing so. The different points of view of natural and social science on one side, and actors are contrasted and lead to a rather different point. This article argues that 'terroir' cannot be 'observed objectively' not because there would occur some problems with the referential link, nor because terroir would not 'actually' exist. The reason we suggest for this is that the object does not fit the 'objectivity' (i.e. the way of being an object) expected from an object by objective or positivist sciences but another regime of existence, which is then detailed.

The analyses of terroir presented in this article are based on various fieldwork studies on wine and its marketing, particularly in France and Spain (Teil et al. 2011)<sup>2</sup>. In both studies, a range of actors was interviewed: producers, critics, wine retailers, administration, certifying agencies, restaurant owners, wine-lovers, customers, teachers, etc. The first set of studies was devoted to the quality of the taste of the wine, and fieldwork was carried out both in Spain and France. The second research program focused on the environmental qualification of wines in France. The first study used various field methods ranging from interviews to participation, and the second only to numerous, long, somewhat unstructured interviews (over 230 interviews, each lasting from 1 to 3 hours) conducted by the team of seven researchers involved in the project.

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<sup>2</sup> The first set of studies was backed by INRA and the second one was funded by the Ministry of Infrastructure, Regional Development and Transport (MELATT) [Grant number B05501].

## 2. Expressing terroir

Terroir is described as a combination of natural local agro-climatic elements and viticulture and winemaking practices skillfully combined by a vintner, giving a wine its distinctive gustative quality and publicly-sanctioned reputation. This quality is protected by labels such as the European ‘Protected Denomination of Origin’ (PDO) or the French ‘*Appellation d’Origine Contrôlée*’ (AOC). AOC regulations regarding the viticultural and winemaking processes (pruning, grape variety, yield requirements, etc.) were gradually developed in the early 20<sup>th</sup> century under the authority of Senator Joseph (Capus 1947), who was careful not to ‘define’ obligations and restrictions excessively so as to leave room for desirable technical innovations which could arise in the future. To obtain their AOC label, wines undergo chemical analysis (for degrees of alcohol and volatile acidity, among other things) as well as a tasting test in which a panel of producers assess the ‘typicity’ of a wine, i.e., its conformity with the taste of the terroir.

Terroir is a complex blend of local agro-climatic characteristics and events, viticulture and winemaking practices and choices which give a wine its distinctive taste, its ‘terroir typicity’. How do vintners manage to identify a wine’s ‘terroir quality’? Like scientists, they strive to express it through their work and technical choices, before assessing its presence by tasting and making others taste their wines, thus acquiring an increasingly stronger grasp of the conditions and techniques that give it its fullest expression.

### *In search of terroir - Vintners nurturing the expression of their terroir*

The task of “terroir vintners” is to craft the expression of their terroir. To put it in musical terms, they perform a score composed by the terroir; for terroir to emerge, the performance must allow it to express itself fully rather than conceal it through overpowering practices. Producers dedicated to the production of wines ‘with a strong terroir expression’ proceed quite simply by rejecting any ‘unnecessary’ practice that might get in the way of its expression. At the vine stage, they attempt to maximize its expression by trying not to disturb or interfere with it, and by collecting as many traces of terroir as possible. In doing this, they seek winegrowing practices which are more ‘respectful of the terroir’ and take an interest in practices considered environmentally friendly. Crucially, these “terroir vintners” refuse altogether the use of synthetic fertilizers which feed the plant with nutriment alien to the terroir and stimulate a yield which would dilute the terroir’s expression. They replant traditional, little-known grape varieties instead of fashionable ones which give wines a ‘commercial’ quality unrelated to the ‘terroir quality’ they seek.

At the cellar stage, terroir vintners must take a backseat and allow the terroir to express itself rather than attempting to stamp the wine with their own particular style or touch. Winemaking techniques to transform the grapes into wine must be as unobtrusive as possible. All methods of rectification or enrichment<sup>ii</sup> – such as adding artificial yeasts and enzymes, new oak barrels for ‘aromatization’, or sulfites for conservation – are banned or limited. Advanced technologies and innovations allegedly manipulate and ‘artificialize’ the taste of wine by distancing it from its terroir expression. These vintners are more attracted to traditional practices, not in a

‘back-to-basics’ way, but because they do not ‘mark’ the wine as much and because it was these traditions which contributed to the emergence of terroirs and their typicity.

As a non-interventionist process, the making of terroir wines relies on what could be called a ‘know-how-not-to’. Vintners remain producers, but not in the sense of artists who create styles according to their whims or those of the critics evaluating their results. They are craftspeople in search of an authentic terroir quality, subject to their raw materials and impervious to the siren songs of ‘demand’, ‘fashion’ or ‘productivity’ which tend to lead terroir quality astray, and they would like to see AOCs better protected against this.

The less terroir vintners do, the more the vines will ‘express their terroir’. Indications of this are found in the behavior of plants. Returning to the vineyards’ self-sufficient biological balance results in more consistent production rates and more resistant vines which are less sensitive to extreme weather conditions. Changes can also be observed in the wines’ taste.

Vintner3: What we get are wines that somehow speak more, if we have more respect for the soil, the grape, then the wines are a little bit more authentic, more mineral, a little sharper (Vintner3, PdL, PF: 2)<sup>iii</sup> 4.

However, technical asceticism does not miraculously reveal terroir. The analysis of its emergence requires lengthy critical discussion about the quality of the resulting wines.

### *The changing taste of wines*

This analysis depends in particular on what vintners interpret as the best way of doing things to elicit terroir expression. This issue gives rise to a number of disagreements, for example between supporters of terroir wine on the one hand, and those of natural, sulfite-free wine on the other. Whereas the latter support the least possible intervention on the part of the vintner so as to let nature, and therefore terroir, do their work and express themselves; the former, on the contrary, believe in a reasoned degree of intervention, particularly when it comes to sulfites. Due to its antioxidant and antibacterial properties, sulfite is a key adjuvant in the winemaking process. Like all other additives, it does not belong to the wine itself, which is why its use is contested, especially among ‘natural’ vintners. ‘Sulfite-free wines’ tasted in cellars are generally thought to be more interesting, complex and natural than others. But they are also more versatile; they evolve rapidly, become sensitive, fragile and prone to refermentation and oxidation. Such ‘accidents’ can be partly kept in check with a qualified distribution network, a flawless mastery of cellar hygiene and the complete transformation of sugar into alcohol, but these wines nevertheless soon tend to take on an oxidized, ‘evolved’ character.

‘Naturalist’ vintners see this as a natural expression of terroir, but their opponents complain about the excessively conventional taste typical of sulfite-free wines:

Vintner5: Some organic people work without sulfite, and you can see the result. The wines don’t last [they get oxidized]. You can tell when a wine is sulfite-

free. And I don't like it, because it lacks identity, you don't know if you're drinking a cabernet, a syrah, a merlot... (Vintner5, PdL, PF: 7)

For them, the absence of sulfite damages the perception of terroir as much as its excess, because the overpowering taste of the ensuing oxidation masks its expressions. The right technique is the one that leaves no trace.

Proponents of 'natural' "ways of doing" defend the oxidation of wines as a particular trait of this authentic terroir quality, which, they argue, used to constitute a classic note of wines and did not prevent drinkers from perceiving terroir. They tend to prefer a 'light oxidized note' to filtration and other alternative techniques which, in their opinion, weakens the expression of the terroir. According to terroir vintners, 'natural wines' are an extreme answer to a pertinent question – a 'know-how-not-to' that goes too far. More generally, they call for a measured, considered use of technology. To let nature express itself does not mean leaving the vats unchecked. Nature cannot express itself on its own; someone has to make it speak, and that requires both great skills and a well-equipped cellar. It is true that practices must be stripped of artifice, but this must be done selectively and skillfully.

Natural vintner14: Under no circumstance do we add yeast, that's the first thing! Then, again, you have to think, there are lots of very complex elements. For example, the fermentation temperature: some yeasts don't work below a certain fermentation temperature. And that can lead to deviations in taste, etc. So you still need to know what you're doing. Although they are natural, some yeasts give very unpleasant tastes to the wine. So you could say "what a great terroir taste!" No, these are yeasts we haven't selected, we didn't want them and they appear and give a taste of stables – dirty stables at that – and these are natural tastes. (Natural vintner14, PdL, FC: 4)

The return to nature promoted by 'naturalist' vintners is suspected of hiding a lack of technical mastery; to this, they retort that a change in taste is the necessary 'price to pay' for regaining an authentic terroir.

### *The rejection of atypical wines by AOC tasting panels*

Vintners involved in devising the most efficient techniques for enhancing the expression of terroir have noticed a change in the taste of their wines, and they are not the only ones – AOC tasting panels have also noticed changes<sup>iv</sup>. However, instead of equating change with a better terroir expression as producers do, the panels criticize these wines for failing to 'conform to the organoleptic standards of their appellation's *typicity*'. Panels sometimes refuse to grant the AOC label to certain wines, despite the fact that they originate from an "appellation" region and fully comply with the specifications.

The decisions of AOC tasting panels are not final; they signal 'faults' for the producers to correct and rectify their wine. However, the incriminated producers consider these prescribed changes as the epitome of bad practice denaturing terroir quality. Why should they have to rectify a wine when it is the product of an intense search for terroir? Is this not proof that AOCs have lost their way and that its panels are incompetent at assessing terroir quality? According to terroir defenders, technical innovations in viticulture and winemaking, as well as the market-driven choices that

some have taken for their wines, have caused these panelists to lose their gustatory references, leaving them incapable, or unwilling, to recognize an authentic terroir quality. For defenders of ‘terroir’, it is the judges’ taste that has been distorted by their incompetence rather than the taste of their wines through good practices, and therefore it is the judges’ tastes which need to be revised and not the new terroir wines which uphold the true meaning of AOCs.

Vintners constantly taste their own wines as well as those of their colleagues for inspiration and to fuel their thinking on the best ways of expressing terroir. However, producers are not the only ones to evaluate terroir wines; like any other commodity, wines are sold and therefore subject to the appreciation of retailers, distributors, clients and also – as with other ‘quality’ wines – wine critics and experts...

### **3. The double production of terroir and its evaluation**

Evaluating terroir relies on the comparison between different terroir wines, but they are not easily comparable. To compare them, one must distinguish each wine on the basis of the specificities and potentialities of the vine plots, the “ways of doing”, interpretations and skills deployed by the vintner to capture, condense, contain and highlight terroir. Evaluating the quality of a terroir wine therefore also involves passing judgment on the vintner’s abilities to reveal the terroir as well as judgment on his or her techniques and vineyard.

#### *Instrumenting the proof of terroir*

All wine critics claim that their goal is to produce an ‘objective’ judgment on wines (Paumard and Millet 2000). Wine guides and selection lists all present themselves as compiled tasting notes and rankings, thereby adding ‘objective’ proofs of their reliability (Teil 2010). Most stress the use of blind tasting as promoted by taste neuro-physiologists and sensory evaluation manuals.

But even if they do not always say so, critics also taste ‘sighted’, with the label apparent, on numerous occasions - during fairs, among professionals, at home, or when tasting in cellars in the presence of vintners. Spanish wine critic José (Peñín 1998) even declares in his guides, *La guía Peñín de los vinos* that he prefers and practices sighted tasting. He finds that discussions and exchanges with vintners or vineyard technical supervisors are crucial for learning about what they have tried to achieve, about the properties of their wines, whether desired or not, stimulated or appearing unexpectedly. This knowledge then focuses the taster’s attention on distinctive facets or traits of the wines.

Is this merely a matter of extending the evaluation of a wine to the quality of the winery owner, his or her viticulture or winemaking techniques – as organic wine guides do – or even to the beauty and soul of the estate – as in the *Guide de charme des vins de France* (Couvreur and Gerbelle 1998)? Not only do organic and tourism-related wines have to be good, they also need to be produced according to defined techniques in the case of the former, and in a pleasant location presented by a friendly owner for the latter.

Neither the practices nor the owners’ charm matter *per se* for wine critics interested in terroir. These points only contribute to the analysis of wines insofar as wine is not



just wine, but the individual result of a production process combining grapes from specific vines, practices devoted to highlight them and a certain interpretation of its quality by the vintner. And this information is only available in the context of a sighted tasting with the producer.

Vintners' accounts of their engagement, intentions and technical choices as well as visits to the estates and their facilities can offer tasters precious indications about what they might expect to find in a wine. These are essential in order to separate the winegrower's 'intentions' from the result, or to compare different interpretations of terroir. However, close relations between judges and the object of their assessment can lead to doubts about their impartiality and suspicions of bribery<sup>v</sup> whether or voluntary or not. Critics are often the first to try to dispel this by comparing the results of both sighted and blind tasting<sup>vi</sup>.

M. CV REB: I start by tasting blind, then supplement this with sighted tasting.... The point of blind tasting is a very personal interest. I must say that, for myself, who feels close to the affective side of wine, it's about not suffering the consequences. It allows me to try lots of wines from growers whom I appreciate for their human qualities [in the same way] that I would for my jackass neighbor, an idiot I know and can't stand. But I want to taste them on an equal footing. For me, blind tasting is useful because I know the labels too well in a way (Wine critic REB, GT, p. 13).

Blind tasting often brings its share of surprises - the taster may discover that s/he has not identified a wine, or that it appeared under a different light, 'detached from the *a priori* expectations ascribed to it'. But it does not make the differences in judgment vanish. Critics are also likely to award very different scores to the same wines.<sup>vii</sup>. Those who believe they know the truth of terroir quality or perception blame their colleagues' incompetence. Although some critics pretend to be the sole true judges of the quality of wines, most tend to be more modest. The more experienced they are, the more they will insist on what remains to be learned - an attitude we would be wrong to dismiss as false modesty. For the majority of critics, the discrepancy of scores reflects the 'diversity of individual tastes', yet there is nothing relativistic about the appreciation of terroir.

Tasters usually attribute two causes to these differences in judgment: first, their own particular 'tastes' and 'sensibilities'; second, the manifestations of the product that have escaped them or, on the contrary, have monopolized their attention. The former are reasonably easy to identify, and their knowledge is crucial for tasters to compare their own judgments; the latter are tied to the product or the occasion of its tasting, and offer as many paths for tasting again, trying to perceive what escaped them at first, guarding themselves from their own perception, and furthering their knowledge about the taste of the wine under evaluation.

The peremptory nature of the scores published by wine critics is in contrast with the unrelenting reengaging of their tasting; in the words of a wine critic, 'we're never through with wines' (Lecouty 1987), their quality never ceases to be tasted and explored. They appear never to miss an opportunity for tasting a wine afresh, at a restaurant, in a cellar with the producer, alone at home... Neither is there a single correct technique that would by itself reveal all the qualities of a wine. Each protocol

highlights certain elements (in blind mode, the taster; in sighted mode, the product) at the expense of others (in blind mode, the product; in sighted mode, the taster).

The quality of wines is not something that critics test and recognize; rather, it emerges in the process of being experienced by the whole collective, of which each critic is only a single spokesperson. By multiplying the occasions and techniques for tasting, and by forming a rich and tightly-knit collective, they manage to transcend their inevitably partial knowledge. The judgment of taste produced by wine critics takes the form of a collective, distributed and ongoing production of the taste of terroir wines.

*Extending the judgment to wine lovers, retailers, clients, etc.*

Clarifications, discussions and evaluations are crucial for discerning qualitative differences, and their critical assessment also extends to the whole marketing network.

Wine merchant %QE6: It's not so much that we're distrustful, but now we want to be more deeply involved. (Wine merchant %QE6, PdL, SBa: 1).

Retailers find it essential to meet with producers, to visit their vineyards and appreciate their engagement with regard to the terroir, but also to actually see these terroirs, witness the practices that foster them and appraise with them the achievements, failures or the new particularities that seem to appear in their production. In turn, they will communicate information about the vintner's project to their customers. Very lively, 'specialized' networks are set up within which the usual quality signs – the AOCs – are discussed and challenged, be it on the basis of tastes, practices or reputations.

Wine merchant6: Take, for instance, the generic appellation 'Bordeaux Supérieur'. You'll find some extraordinary things and some absolutely... dreadful ones! (Wine merchant6, Paris, AH&SBI: 4)

But they have not been replaced by new quality labels; good practices are as numerous as they are contested, and it is impossible to condense the information into a set of criteria in order to point to the right choices. Everything has to be constantly questioned, debated and verified.

Wine merchant6: I don't think you can trust the label because, either it's insufficiently precise – and in my opinion it's always insufficiently precise, because for it to be sufficient, it would have to mention all of the winegrower's methods...

AH: A book per bottle!

Wine merchant6: A book per bottle, yes! (Wine merchant6: Paris, AH&SBI: 4)

Putting the quality of wines to the test engages a discussion about tastes, about what has been accepted from the terroir as a welcome sign of its presence, or refused as 'bad', but also about the wine's instructions for use, the care necessary to prevent sulfite-free wines from undergoing refermentation in the bottle or quickly becoming

oxidized. The ‘unpretentious little vintages’ that a vintner has refused to ‘dress up’ as good wine are waiting for wine lovers to provide them with ‘ordinary’ occasions for consumption.

Terroir wines matter for all those drinkers who taste, talk about, compare, buy and drink them, but also for the vintners who have made them, the techniques they have used and the new ‘terroirs’ they originate from. Ultimately, the entire commercial collective deployed around the marketing of these wines contributes to the critique of terroir or wine quality through its interest and depending on the competence bestowed upon it.

### *On terroir’s resistance to becoming a ‘thing’*

Terroir expression is not the random outcome of freely devised “ways of doing” - it is framed by vintners’ interpretations, experiences and discussions regarding their own results. Neither is it the outcome of a performative intention or the implementation of new practices alone - terroir vintners encounter failures, are sometimes disconcerted by their experiences, misjudge their expectations and disappoint their clients. The success of a terroir wine depends on its collective evaluation. The presence of terroir is not a given; it is the object of an inquiry.

However, in the same way that taste cannot be separated from the process through which it emerges, terroir is inseparable from the vintner who brings it into being. Considering the large amount of vintners, terroir is thus distributed across a vast range of interpretations and “ways of doing”. Finally, since wines are renewed with each vintage, the terroir expression is produced anew year after year. Terroir is a provisional and distributed production.

In order to evaluate its presence, tasters proceed by means of a critical analysis whose aim is to distinguish, however roughly and provisionally, the vintage, practices, vineyard, the vintner’s intentions, abilities and resources, etc. for each wine. This first breakdown then enables the taster to establish partial comparisons between different wines made using the same practices, from the same winery (‘vertical’ tasting) or from the same vintage (‘horizontal’ tasting). As a result, terroir is no longer the juxtaposition of heterogeneous unique bottles, but a set of partially comparable samples expressing terroir. Within the collective of critics, it is the dissociation between the wine’s tastes and the taster’s taste which makes it possible to compare once again and articulate, locally and *a posteriori*, the different judgments on the quality of wines which are no longer individual assessments and have become part of a whole collective judgment. Once again, the taste of terroir is the result of a provisional and distributed process of judgment.

The critical judgment of terroir expression is thus distributed in two ways: it is the judgment produced by a *collective* of tasters on a *series* of terroir expressions; it is also a double production, a tasting activity whose object is a production of terroir. Each judgment resulting from this critical activity always represents *one* point of view, *one* feature of a terroir taste, in the same way that each wine and its taste is always just *one* expression of terroir. Terroir and its taste are not predefined ‘things’, ‘data’ already there, ready to be perceived by the different tasters’ sensory apparatus. Each wine, as well as its judgment, is nothing but the plural, diverse and relatively unpredictable result of a production process.

#### 4. The alternative mode of existence of the object ‘terroir’

The critical activity focused on terroir does not produce a definition of its object. Does this make it an “unfinished notion”? Is critical activity purely a matter of symbolic or cultural value construction, or is it a genuine verification procedure? In the first case, terroir remains a mere word, vague and whose referent is simply the compilation of a multiplicity of individual interpretations; a ‘construction’ that can be described by drawing up an ongoing list of the individual ‘representations’ of what terroir means. These representations can be socially or culturally ‘determined’ - the list is therefore limited, but its “ideational nature” turns terroir into a completely malleable concept, offering no resistance to the continuously performative definitions assigned to it. In the second case, terroir refers to a ‘resistant’ object that can be experienced but whose shape demands to be made explicit.

##### *Unfinished terroir?*

One could conclude from the provisional character of judgments on terroir taste that wine qualities require a more thorough investigation, more rigorous analytical work from producers and critics to distinguish ‘their’ taste from the wine’s taste and the impact of techniques and contexts. Only then would it be possible to differentiate first between what belongs to the wine’s taste, to the taster, to techniques and contexts; and second, to stabilize and delimit the ‘taste of terroir’, and eventually ‘terroir’ itself. If this more in-depth investigation were to succeed, terroir and its judgment would then appear as a still immature, incomplete, possibly ‘pre-scientific’ notion. This is what scientists who continue to defend this notion argue (Cadot 2006); according to them, terroir has not yet been made sufficiently explicit and requires further inventory and identification work.

For others, more work is unnecessary. Despite repeated efforts (Bohmrich 1996; Morlat 1998; Fischer and Bauer 2006; White et al. 2007; Saxton 2002; Thelier-Huche and Morlat 2000; Bennett 2007), terroir quality does not easily fit with criteria. The variations observed between one vintage and another can be more significant than geographical variations. Conversely, intra-territory variations may be greater than those observed between different territories. Terroirs are a combination of pedological, climatological, agronomical, wine-growing and wine-making factors, which scientists are unable to associate with specific terroir qualities, while the list of “variation factors” grows ever longer (Deloire et al. 2005; Turner and Creasy 2003) with the introduction of cultivars or vine clones (van Leeuwen et al. 2004) or indigenous microbiological fauna (Renouf et al. 2006), for example.

As they are unable to define – in the sense of delimit – terroir quality with simple presence indicators, scientists still regard the notion as highly questionable (Deloire, Prévost, and Kelly 2008). Actors’ activity with regard to terroir quality is analyzed as “construction” work which makes terroir into a “cultural” artifact (Gade 2009), a “human production” (Berard and Marchenay 2000; Demossier 2000; Crenn and Techoueyres 2007; Gade 2004) and not the expression of a “natural external cause” (van Leeuwen and Seguin 2006).

Scientists who have analyzed it thus suspect that this notion, along with the AOC label, is in fact a self-referential construction without any ‘objective’ referent. The

self-limitation which wine-growers impose on themselves concerning wine-growing and wine-making practices is under suspicion, as it is difficult to determine the precise effects it has on the taste of wines. Economic research in particular has looked into the claim that terroir could in fact be analyzed as a “social construct” (Gergaud and Ginsburgh 2008; Josling 2006). From this perspective, terroir is nothing more than the ‘idea’ actors have of it (Josling 2006; Allaire and Sylvander 1997). Some conclude that terroir only serves as a protectionist barrier, and wine critics who evaluate the quality of AOC wines are parasites of this market (Combris, Lecocq, and Visser 1997; Gergaud and Ginsburgh 2008; Ginsburgh 1995; Shapin 2005). Others continue to promote the notion of ‘terroir’ in the name of other, non-gustatory effects resulting from this production method, especially with regard to sustainable development and the “positive side effects” we expect in economic (Bassett, Blanc-Pamard, and Boutrais 2007; Barham 2003) or social (Techoueyres 2007) terms.

For all of them, the diversity of judgments on terroir, along with the repeated failures to list its contributing factors, are signs of a groundless, ‘false’ notion - evaluations of wines do not judge anything as there is no such thing as ‘terroir’ or ‘terroir quality’. Terroir’s failure to be an “objective notion” has certainly contributed to the fact that despite its success, the AOC quality label has always been, and still is, the object of longstanding and heated debate. Terroir raises issues in terms of intellectual property, but also because it is considered unfounded and incapable of differentiating between wine qualities (Addor and Grazioli 2002; Charlier and Ngo 2007; Handler 2006 ; Josling 2006; Moschini, Menapace, and Pick 2008).

In the last few years, however, some AOC producers themselves have joined the detractors’ camp, not because they find the notion to be empty or subjective, but because its regulation is, on the contrary, deemed lax and incapable of sufficiently discriminating the wines’ authentic terroir quality. One could interpret this as further ‘proof’ of the vacuity of the notion of terroir, a ‘mere’ economic barrier or distinctive social construction. However, these producers do not dismiss the notion of terroir; on the contrary, they call for a return to terroir. In doing so they have also allowed social scientists to question and understand how to grasp this notion and evaluate its presence in order to point out what makes it incompatible with the scientific ‘thinging’ of terroir.

If terroir quality does not fit any definition, this may also be due to the fact that both producers and tasters refuse to define it – or claim to be incapable of defining it – according to stricter gustatory or production criteria. For them, each wine and each way of making it brings its own set of revelations about terroir quality, but they cannot be selected in advance. Also, the imposition of gustatory criteria or strict practices would limit the search for terroir and thus risk ‘red herrings’. ‘Terroir is a quest’, as they say. It can only be the *a posteriori* result of a production process. Producers have so far refused to contain terroir within a pre-existing definition, but this refusal is less the sign of a groundless notion without referent than that of an object ‘in the making’, a production.

Can there be an end to this quest? Is there a chance that, one day, they will *find* terroir and circumscribe its definition? This would also mean the end of their work of interpretation and innovation. The truth of terroir is probably as unattainable as the truth of scientists.

## *The impossible condensation of a production*

‘Things’ exist independently in the way of Kant’s things-in-themselves. This *absolute* objectivity – beyond human reach but approached as closely as possible through ‘descriptions’ from which the observer is able to detach and subtract his or herself – is also historically decontextualized, devoid of any process of emergence, and, if need be, already contains its own principles of evolution and transformation.

The critical instrumentation of the proof of terroir presents a very different modality of objects’ existence, not based on the *a priori* existence of terroir, or on the *a priori* separation between the object’s taste and the taste of the subject who perceives it. Terroir and its taste are not considered as autonomous and independent ‘things’. They have no autonomous existence and cannot be divorced from their production process. They are also particular in the sense of not being discrete, but distributed products. A bottle of terroir wine is an individual product, but only represents a specific facet, or actualization, of terroir; terroir is a collectively articulated production distributed across the range of wines whose pretension to express it has been acknowledged. Similarly, each tasting is a particular production, whereas the collective of those judging terroir taste produce its collective and distributed taste. Even if unique, the object produced is irreducible to a ‘thing’ since the work of discerning all the elements entering into its composition is always done *a posteriori*, relying on a wine instead of an *a priori* definition later ‘applied’ to all the results.

As the plural results of a double production distributed across numerous bottles and as many tastings, terroir and its taste cannot be reduced to any ‘representatives’. The critical separation between vintage, characteristics of the vineyard, engagement of the vintner and the quality of implemented practices for each wine is always tied to the product or the judgment of taste which it analyzes, or to the producers or tasters who produce it. What makes it possible to compose an ‘expanded’ judgment is the multiplication and articulation of these small, local *a posteriori* analyses, not the search for general assessment principles applicable *a priori* to all judgments and all tasters.

Both terroir and its taste escape scientists’ objectivation because they do not bend to its requirements of an *a priori* differentiation between product, producer and production techniques. But should we agree with scientists when they conclude that terroir is merely a social construction? We do not think so, because this fails to take into consideration the tests to which every taster puts the wine, or rather, it dismisses them out of hand as so many ‘false’ tests in which the wine itself plays no part.

We propose to refer to the format of object emerging from this plural existence as ‘product-object’ – not unlike Latour’s quasi-objects (Latour 2005), or, in a different context, Verran’s territories (Verran 1998) and even Gell’s ‘distributed objects’ (Gell 2010) – in order to emphasize their irreducible character, as contained in the notion of a ‘product’ inseparable from its process of emerging, and as opposed to the kind of ‘object-things’ which science notably seeks to further define and isolate. A ‘product-object’ can be either a singularity or collectively distributed. The work of an artist often constitutes a single production, more rarely a thing. Works of art are also evaluated by a collective of critics whose judgment is a distributed, collective production. The case of terroir as a distributed production is closer to the notion of art in the sense of the artistic production as a whole, but this difference does not change

the essential point that judgment, and thus taste, exist as distributed productions, not things.

Nevertheless, hasty parallels should not be drawn between ‘product-objects’ and (Star and Griesemer 1989) ‘boundary objects’. These form quite a different notion. They do not point out objects but particular tools allowing the articulation process between all different actualizations of the distributed object.

### *The ‘extensional’ autonomy of product-objects*

The existence of a thing admits as limit value the absolutely objective knowledge through which it can be described in an absolutely autonomous way. The regime of existence of product-objects also accepts a limit value in which the object can be said to be not autonomous, but ‘non-dependent’ from a specific production process. This non-dependence is a ‘generality’ achieved not through a distancing of the observer and a standardization of contexts and empirical actualizations of the object, but through the endless multiplication of the variety of observers, means and contexts of observation. The detachment and isolation from the mediations of scientific objectivity are replaced with their saturation. But just as the objectivity of the thing can always improve without ever being attained, the exhaustion of the variety of elements contributing to the production of an object is also asymptotic. The autonomous object-thing and the independent product-object are both limit conditions.

Both interpretations of objectivity are rendered quite well by the two mathematical ways of describing sets. ‘Intensional’ description translates an unspecified, boundless set into an *a priori* ‘property’; this is the kind of description that enables us to evaluate the presence of the color blue in all past and future experiences of this color. Conversely, ‘extensional’ description involves critically listing all elements within a set. The terroir expression is thus represented by the set of all terroir wines, but it leaves the composition of terroir quality *a priori* undefined. Therefore a distinction can be made between, on the one hand, an ‘intensional’ objectivity aiming – without ever achieving – to reduce phenomena to autonomous things independent from their conditions of production; and, on the other, an ‘extensional’ objectivity attempting to exhaust its variety – again, without ever succeeding. The critical debate surrounding the production and marketing of terroir wines or accompanying those of quality wines can be related to the quest for an extensional objectivity.

### *The impossible ‘escape’ from criticism*

Product-objects do not condense into pre-existing things; each new tasting occasion or new vintage remains pregnant with the impressions and new wines that may emerge. However, the body of terroir wines and judgments produced by the collective of critics do not amount to an incommensurable and contradictory juxtaposition of bottles and comments. Neither are they the random and unedited compilation of everything that can be said about, or made into, wine. However diverse and debated judgments about terroir wines may be, individuals who are interested in these wines manage to find a path amidst this ordered variety, linking each wine and each judgment to the way it was produced before proceeding to confront them with their own experience. But such objectifications remain partial and identifiable only *a posteriori*. Nonetheless, *a priori* intermediate characterizations as

well as elements of description or definition can sometimes emerge. This is the case, for example, with Robert Parker, whose ‘tastes’ have been objectified and named, or for certain features of wines or terroirs becoming collectively shared. Occasionally, wine criticism is then capable of generating objects with clearer outlines – a ‘taste of yellow<sup>viii</sup>’, the ‘Parker taste’ or a ‘schist terroir’ – which begin to resemble ‘things’. However, this condensation always remains local and never achieves the very aim of critical evaluation, for example, by providing a definition of terroir or a general characterization of wine qualities<sup>ix</sup>.

Some customers who do not wish to enter this ‘jungle’ of the multiple aspects of terroir wines’ production and evaluation still want to know ‘which are the good terroir wines’. For this, they rely on strategies for reducing the diversity of judgments and scores, by working out the average of the evaluations published in the various guides or by selecting from the wines that combine the highest number of good scores regardless of the judges. Whatever the technique of calculation, the resulting judgment will not become the ‘true judgment’; it remains a *point of view*, a ‘taste without taste’, as food critic Fernando Point says of the Zagat guide<sup>x</sup>. Whatever the techniques used or efforts made by tasters to describe themselves as neutral, objective and impartial, their judgments are always integrated within criticism as a particular feature of the object. There is no perspective ‘outside’ critique; one cannot get rid of the process – here, the taster – through which the judgment is produced. There is, therefore, no possible ‘observation’ of critique, no way of abstracting oneself from the conditions of observation to produce a ‘representation’ of terroir.

### *Two incompatible instrumentations of proof*

Product-objectivity is a ‘black hole’; it offers no escape from the critical collective from which to contemplate and describe it. Since it never ceases to make itself more explicit, the product-object, whose existence is distributed across a multiplicity of different producers, remains unverifiable and unfalsifiable, to use Popper’s (1959) terms<sup>xi</sup>. Indeed, in order to *test* the quality of a wine or its terroir quality, one would have to reduce its evaluation to a trial involving only a limited number of neutral testers in a ‘representative’ time and place. The kind of test that the government asks of terroir producers is, therefore impossible, since it demands representativeness from a distributed collective in which it is fatally lacking, and refuses to recognize the object of terroir unless it takes the shape of a thing.

Both thing- and product-objectivities include their own procedures of proof and test. Substituting one for the other (e.g. using a test for a product-object) only seems to lead to a paradox, such as the non-existence of terroir, just when it appears to interest even more wine lovers. In addition, the objects that submit to either of these modalities of objectivation must sustain these procedures in very different ways: for product-objects, it requires their constant renewal so as to fuel the ongoing work of critique; and for thing-objects, their reduction must end up at a ‘hard core’ without destroying the object itself through excessive reduction.

## **5. Conclusion: an alternative objectivity**

The ‘objective’ sciences that reject the usefulness of the notion of terroir make an important hypothesis about the world: they assume that the objects populating it are



pre-existing things, 'data' fully and readily, though always imperfectly, available for observation by an individual. However, some objects, such as the notion of terroir and terroir taste, do not meet this hypothesis.

Terroir has a regime of existence (or "objectivity" in the literal sense of the term) that we have called "product" to emphasize its character as the *a posteriori* result of a production process as opposed to the autonomous and *a priori* existence of scientific 'things' detached from their process of emergence. Furthermore, the production process of terroir is a collective one. It can therefore be described as an object distributed across a collective of objects, and whose appreciation itself is a product distributed across a collective of judges.

These collectives are also defined *a posteriori* and adopt the shape of the provisional 'interessement' of individuals in terroir or wine<sup>xii</sup>. But not all contributors have equal weight in this collective. Each judgment of the terroir expression or taste is always also the production of a judgment from the vintner or the taster. The collective that frames the existence of these product-objects is not democratic (one producer, one vote); instead, it is a weighted collective composed of more or less competent and renowned contributors<sup>xiii</sup>.

Product-objectivity resembles the modality of existence of objects that James (1907; 1996) put forward in his study of radical empiricism, whereas thing-objectivity is very close to the positivist objectivity to which he was trying to find an alternative<sup>xiv</sup>. Nevertheless, this modality of existence is not a matter of methodological choice left to the researchers - it also depends on how actors grasp their objects. And so, in order to avoid the kind of aporias currently obstructing reforms on the certification label of terroir quality, researchers must pay attention to the hypothesis they formulate about the modalities of existence of their objects of study.

### *Mutually translatable objectivities?*

This alternative objectivity deprives positivist science of its often-claimed monopoly on knowledge. The way actors grasp objects does not necessarily, and by default, constitute an incomplete knowledge at best, and an incorrect one at worst. The collective, extensional 'product'-objectivation might bring some consistency back to forms of knowledge declared 'non-scientific' or 'pre-scientific'.

Despite the incompatibility of their respective instrumentations of proof, these two forms of objects are not mutually exclusive. There are ways of translating one into the other. By reinterpreting objects as processes, pragmatic sociology carries out the translation of thing-objects into a 'product' format. Symmetrically, the endless multiplication of variables in terroir, or their *ad hoc* selection to account for each case of terroir constitute other, arguably extreme, ways of translating products into things.

These possibilities of mutual translation are limited since it is the very forgetting<sup>xv</sup> that the thing might ever have been a 'product' which grants it its power of 'immutable mobile' (Latour 1987) and allows it to become a testable object. However, translation is a key resource in order to equip debates on the presence of objects in society, because it dissolves the clash between 'scientific' and 'profane' knowledge, in other words, between scientific ways of 'thinging' and other forms of objects' existence. Interpreting objects as distributed products - understood according

to various protocols, by different users, and in different and endlessly renewed circumstances - enables one to restore the plurality of objects and look for local agreements between the different points of views or facets that compose them.

### *An anecdotal objectivity?*

Is terroir an exotic, rare and interesting object on the basis of its unusual mode of existence? What other objects resist their 'thinging' or are always redeployed according to their process of emergence?

The character of product-object, distributed across a collective<sup>xvi</sup>, is not limited to terroir; we find it in the notion of taste or quality of a wine<sup>xvii</sup>, but also within 'science in the making', subjected to the scrutiny of scientific critique and in which the objects of knowledge are constantly deployed according to the scientific procedures that brought them into being. To this, we should add the thing-objects which science itself produces and regularly reinterprets as products, because science produces 'things'. But, like Penelope, it never ceases to undo what it has done in order to reconstruct it<sup>xviii</sup>. Also, we could certainly add to that a large part of the artistic production, which never seems to exhaust the inventory of 'meanings' in art objects, always accompanied by its author, his or her techniques, school of thought or 'epoch'. Following art, all objects 'of taste', collection and amateurs also deserve a place in the list.

Product-objectivity seems quite appropriate for all objects that are difficult to grasp outside of their use, in other words, outside of the key contribution of users that brings them into being and gives them 'meaning'. Hence, product-objectivity can help us think about objects or common goods such as water, the Earth, etc. –a legacy for future generations which does not matter in itself as much as through the uses that are, or will be, made of it, and which cannot be listed yet.

Lastly, historical objects are probably good examples of objects that fit within both thing- and product-objectivity, depending whether one considers history as a past independent from the memories retracing it, or conversely, as the ongoing reinterpretation of the past by historians and actors alike. Product-objects are therefore not rare. But surely there must be other ways of objectivating the world, aside from things and products. For example, one could make the hypothesis of a radical idiosyncrasy and incommunicability between the different ways of grasping objects. This is supported by various theories on perception and psychology, but also by culture and history, all of which claim the radical impossibility of adopting someone else's perspective, and thus of communicating. However, the resulting distinctive existence – as thing or as product – of the world's objects does not prevent them from being objectivated, with the help of appropriate procedures of explicitation and devices of proof.

*Translated by J. Hansen and Lucy Lyall Grant*

## References

- Addor, Felix, and Alexandra Grazioli. 2002. Geographical Indications beyond Wines and Spirits. A Roadmap for a Better Protection for Geographical Indications in the Wto/Trips Agreement. *The Journal of World Intellectual Property* 5 (6):865-897.
- Allaire, Gilles, and Bertyl Sylvander. 1997. Qualite spécifique et systemes d'innovation territoriale. *Cahiers d'Economie et Sociologie Rurales* 44:29-59.
- Barham, E. 2003. Translating terroir: the global challenge of French AOC labeling. *Journal of Rural Studies* 19 (1):127-138.
- Bassett, T. J., C. Blanc-Pamard, and J. Boutrais. 2007. Constructing locality: The terroir approach in West Africa. *Africa* 77 (1):104-129.
- Beaulieu, Anne. 2001. Voxels in the Brain: Neuroscience, Informatics and Changing Notions of Objectivity. *Social Studies of Science* 31 (5):635-680.
- Bennett, Tony. 2007. The Work of Culture. *Cultural Sociology* 1 (1):31-47.
- Berard, L., and P. Marchenay. 2000. Market culture: Produits de terroir or the selling of heritage. *Recollections of France* 4:154-167.
- Bohmrich, Roger. 1996. Terroir: Competing perspectives on the roles of soil, climate and people. *Journal of Wine Research* 7 (1):33-46.
- Cadot, Y. 2006. Le lien du vin au terroir : complexité du concept de typicité. *Revue des Oenologues et des Techniques Vitivinicoles et Oenologiques* (118):9-11.
- Capus, J. 1947. *L'Evolution de la législation sur les appellations d'origine ; Genèse des appellations contrôlées*. Paris: INAO– Editions Louis LARMAT.
- Charlier, Christophe, and Mai-Anh Ngo. 2007. An analysis of the European Communities: Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs Dispute. *The Journal of World Intellectual Property* 10 (3-4, July 2007):171-186.
- Claverie, Elisabeth. 2003. *Les guerres de la vierge. Une anthropologie des apparitions, NRF Essais*. Paris: Gallimard.
- Combris, P., S. Lecocq, and M. Visser. 1997. Estimation of a hedonic price equation for Bordeaux wine: does quality matter? *Economic Journal* 107:390-402.
- Couvreur, Dominique, and Antoine Gerbelle. 1998. *Guide charme des Vins et Vignobles de France 1999*. Paris: Payot & Rivages.
- Crenn, C., and I. Techoueyres. 2007. Local heritage to singularize a wine terroir: the example of pays Foyen (Gironde, France). *Anthropology of food [Online]* (S2 | March 2007).
- Daston, Lorraine, and Peter Galison. 2007. *Objectivity*. New York: Zone Books.

- Deloire, A., P. Prévost, and M. Kelly. 2008. Unravelling the terroir mystique – an agro-socio-economic perspective. *Perspectives in Agriculture, Veterinary Science, Nutrition and Natural Resources* 3 (32):1-9.
- Deloire, A., E. Vaudour, V. Carey, V. Bonnardot, and C. Van Leeuwen. 2005. Grapevine responses to terroir: A global approach. *Journal International Des Sciences De La Vigne Et Du Vin* 39 (4):149-162.
- Demossier, M. 2000. Culinary heritage and produits de terroir in France: Food for thought. *Recollections of France* 4:141-153.
- Durkheim, Emile. 1995 [1912]. *The Elementary Forms of Religious Life*. New York: Free Press.
- Evans-Prichard, Edward Evan. 1976 [1937]. *Witchcraft, Oracles and Magic Among the Azande*. Oxford: Clarendon.
- Favret-Saada, Jeanne. 2009. *Désorceler*. Paris: Editions de l'Olivier.
- Fischer, U., and A. Bauer. 2006. Sensory properties of Riesling wines from various districts of the Pfalz region. Making the terroir tastable. *Deutsche Weinmagazin* (2):No. 2, 24-31.
- Gade, D. W. 2009. The Taste of Place: A Cultural Journey into Terroir. *Geographical Review* 99 (2):283-285.
- Gade, Daniel W. 2004. Tradition, Territory, and Terroir in French Viniculture: Cassis, France, and Appellation Contrôlée. *Annals of the Association of American Geographers* 94 (4):848-867.
- Gell, Alfred. 2010. *L'art et ses agents – Une théorie anthropologique, domaine Fabula*. Bruxelles: Les presses du réel.
- Gergaud, Olivier , and Victor Ginsburgh. 2008. Natural Endowments, Production Technologies and the Quality of Wines in Bordeaux. Does Terroir Matter? *The Economic Journal* 118 (529):F142-F157.
- Ginsburgh, V. 1995. Techniques de production, réputation et qualité des vins - Essais économétriques sur les vins rouges du Haut Médoc. In *Les arts du vin*, edited by P. Beusen and H. Vandeuven. Bruxelles: Le Crédit Communal.
- Handler, Michael. 2006. The WTO Geographical Indications Dispute. *Modern Law Review* 69 (1):70-80.
- Hessenbruch, Arne. 2000. Calibration and Work in the X-Ray Economy, 1896-1928. *Social Studies of Science* 30 (3):397-420.
- James, William. 1996. *Essays in radical empiricism*. 1<sup>o</sup> édition (1912) ed. new York: University of Nebraska Press & Longmans Greens and Co.

- James, William (1842-1910). 1907. *Pragmatism : A new name for some old ways of thinking*. New-York, London, Bombay and Calcutta: Longmans Green and Co.
- Josling, T. 2006. The war on Terroir: Geographical indications as a transatlantic trade conflict. *Journal of Agricultural Economics* 57 (3):337-363.
- Josling, Tim. 2006. The Institutional Framework for Food Regulation and Trade. *Paper prepared for the IATRC Summer Symposium held Bonne, May 29-30, 2006*:18.
- Lagrange, Pierre. 2007. *Ce qu'ils ne veulent pas que vous sachiez*. Paris: Presses du Châtelet.
- Latour, Bruno. 1987. *Science in Action, How to Follow Scientists and Engineers through Society*: Open University Press (G.B.), Harvard University Press (U.S.).
- . 1995. The 'Pedofil' of Boa Vista: a photo-philosophical montage. *Common Knowledge* 4:144-187.
- . 2005. *Reassembling the Social: An Introduction to Actor-network Theory*: Oxford University Press.
- Lecouty, Chantal. 1987. *Madame et les vins*. Paris: MA éditions.
- Megill, Alan, ed. 1994. *Rethinking objectivity*: Duke University press.
- Morlat, R. 1998. The relationships between "terroir", vines and wines. *Comptes Rendus de l'Academie d'Agriculture de France* 84 (2):19-32.
- Moschini, GianCarlo, Luisa Menapace, and Daniel Pick. 2008. Geographical Indications and the Competitive Provision of Quality in Agricultural Markets. *American Journal of Agricultural Economics* 90 (3):794-812.
- Paumard, Bruno, and Jean-Guy Millet. 2000. *Guide pratique de la dégustation du vin*. paris: Eyrolles.
- Peñín, José. 1998. *Guía Peñín de los vinos de España 1999 [1987-88, 1993,1994,1995-96, 1997, 1998, 1999]*. Madrid: Pi&Erre ediciones.
- Popper, Karl. 1959. *The Logic of Scientific Discovery*: Hutchinson & Co. Original edition, original title : *Logik der Forschung* [1934].
- Renouf, V., C. Miot-Sertier, P. Strehaiano, and A. Lonvaud-Funel. 2006. The wine microbial consortium: A real terroir characteristic. *Journal International Des Sciences De La Vigne Et Du Vin* 40 (4):209-216.
- Saxton, V. 2002. Calcium in viticulture - unravelling the mystique of French terroir. *Australian & New Zealand Wine Industry Journal* 17 (3):28-33.

- Shapin, Steven. 2005. Hedonistic Fruit Bombs. *London Review of Books* 27 (3):30-32.
- Star, S. L., and James R. Griesemer. 1989. Institutional Ecology, 'Translations' and 'Boundary Objects' : Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology 1907-1939. *Social Studies of Science* 19:387-420.
- Techoueyres, I. 2007. Development, terroir and welfare: a case study of farm-produced foie gras, in south west France. *Anthropology of Food* (S2):510.
- Teil, Geneviève. 2001. "La Production Du Jugement Esthétique Sur Les Vins Par La Critique Vinicole." *Revue de Sociologie du Travail* 43, no. N° 1: 67-89.
- . 2004. *De la coupe aux lèvres - pratiques de la perception et mise en marché de vins de qualité*. Toulouse: Octarès.
- . 2010. The French Wine “Appellations d’Origine Contrôlée” and the Virtues of Suspicion. *The Journal of World Intellectual Property* 13 (2):253-274.
- Thelier-Huche, Lydie, and R. Morlat. 2000. Anjou wine growers perception and valorization of the terroir. *Journal International des Sciences de la Vigne et du Vin* 34 (1):1-13.
- Turner, P., and G. L. Creasy. 2003. Terroir. Competing definitions and applications. *Australian & New Zealand Wine Industry Journal* 18 (6):18 (6) 48-56.
- van Leeuwen, C., P. Friant, X. Chone, O. Tregoat, S. Koundouras, and D. Dubourdieu. 2004. Influence of climate, soil, and cultivar on terroir. *American Journal of Enology and Viticulture* 55 (3):55 (3) 207-217.
- van Leeuwen, C., and G. Seguin. 2006. The concept of terroir in viticulture. *Journal of Wine Research* 17 (1):17 (1) 1-10.
- Verran, Helen. 1998. Re-imagining land ownership in Australia. *Postcolonial Studies* 1 (2):237-254.
- White, R., L. Balachandra, R. Edis, and D. L. Chen. 2007. The soil component of terroir. *Journal International Des Sciences De La Vigne Et Du Vin* 41 (1):9-18.
- Teil, Geneviève, Barrey, S., Floux, P. and Hennion, A., 2011, *Le vin et l'environnement : faire compter la différence*. Paris: Presses de l'Ecole des Mines.
- Zimmerman, Ann S. 2008. New Knowledge from Old Data: The Role of Standards in the Sharing and Reuse of Ecological Data. *Science Technology Human Values* 33 (5):631-652.

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<sup>i</sup> The ‘objective self’ refers to the guarantee of procedures brought about by the scientific method itself reviewed by peers in the course of professional practice. Recent work on ‘regulatory objectivity’ (Cambrosio et al. 2009) describes an evolution towards the guarantee of result and the production of criteria of objectivity (Hogle 2009; Keating and Cambrosio 2009).

<sup>2</sup> Particularly with added tartaric acid or chaptalization.

<sup>iii</sup> These citations come from the body of interviews conducted as part of the above-mentioned study. All interview citations use the same referencing system. Here, ‘Vintner3’ indicates the interviewee’s professional activity and his/her number in this category. ‘PdL’ stands for the region where the interviewee exerts his/her profession. The initials ‘PF’ stand for Pierre Floux who conducted this particular interview, and ‘2’ indicates the page number in the interview transcript. “%QE” a little further on indicates that the wine merchant in question offers a selection of vines including wines made from techniques which respect the environment.

<sup>iv</sup> The AOC regulation comprises a tasting test of samples of all wines claiming an AOC. In each AOC, the tasting panel is composed of producers of the AOC who are seen as the best experts of the typicity of the AOC wines.

<sup>v</sup> This is suggested, among others, by J. Nossiter’s documentary *Mondovino* (2004).

<sup>vi</sup> Just as it is for scientists, judging is caught up in a quest for *dialectical* objectivity, to use the words of Megill, in which the judge and the wines s/he evaluates alternatively move closer to and apart from each other.

<sup>vii</sup> According to Teil (2001, 2004), comparisons between scores attributed to the same wines by different critics did not show any correlation.

<sup>viii</sup> Expression characterizing the oxidation of ‘yellow wines’ from the Jura under a ‘veil’ of yeast, and may be attributed to the sotolon molecule.

<sup>ix</sup> In the case of scientific criticism, it is the notion of truth itself which remains a production and never condenses into a definition.

<sup>x</sup> Guide drawn up ‘by and for consumers’ and whose ratings are based on the average scores attributed by 250,000 consumers.

<sup>xi</sup> The notion of falsifiability developed by Popper has been widely criticized on the basis that there can never be a crucial experience that makes it possible to test the truth of scientific theories ‘in the making’. However, the test remains most useful for all the objects to which science has managed to give the form of things.

<sup>xii</sup> Within actor-network theory literature, ‘interessement’ is synonymous with enrolment (see Akrich et al. 2002).

<sup>xiii</sup> Like the judgment of quality, the evaluation of the judges, and thus their relative weight, is plural.

<sup>xiv</sup> Of course, James was not the only one working in this direction. We should also mention Peirce, the ‘inventor’ of the word pragmatism, as well as many ‘pragmaticians’ (Dewey 1963) and others authors engaged in opposition to a world exclusively oriented towards the production of Reason, such as Feyerabend (1987) or, more recently, Latour (1987).

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Nevertheless, it was James who first, and most clearly, exposed this particular regime of existence of things as processes of their production.

<sup>xv</sup> This is the term often used by Latour, although it may be more accurate to speak of the ordering of distributed existences of the object and its delegation to metrological networks.

<sup>xvi</sup> The production process of thought can be considered a single product, a singularity. This objectivity contradicts the interpretation of thought proposed, for example, by experimental psychology, which turns it into a thing.

<sup>xvii</sup> The quality of a wine does not allow for any *a priori* definition. Thus, Émile Peynaud, the internationally renowned vintner and founder of the revival of Bordeaux wines, is remarkably hesitant when it comes to clarifying what makes the quality of wines. Every attempt at drawing a list of properties quickly reverts to tautology:

Much has been written about quality, and primarily to try to define it. One finds the same idea expressed by different authors: 'quality is noticed rather than defined' (Pisani); 'the quality of a wine is experienced rather than proved' (Poupon); Americans and Italians describe it in the same way.... A very simple and very clear, obvious, definition is the following: 'the quality of a wine is all its qualities, that is, its properties that make it acceptable or desirable.'.... Quality is not a thing; it has no existence *per se*... It is a mental conception which attempts to establish a classification and a hierarchy' (Peynaud and Blouin 1996: 229-230.).

<sup>xviii</sup> This work of deconstruction/reconstruction is not a mere repetition; these loops never return to the same starting point.