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Abstract

The objective of this article is to open the 'black box' of artistic production in order to describe, in minute detail, culture in the making, that is, the process through which cultural forms grow into being and are materially accomplished. I will do so through the study of the morphogenetic process through which the Spiral Jetty, an earthwork sculpture created by the American artist Robert Smithson, came into being. This study will show that artistic production constitutes an irreducible form of material practice which cannot be adequately understood as an individual activity or as an activity guided or constrained by 'external' social factors. As I shall argue, the attention to the material practice of artistic production reveals a much needed insight into the practices, materials and processes through which culture is actually produced and materially accomplished.

Keywords

artistic production, culture, material practice, morphogenesis, sociology of art

Introduction: The Sociological Neglect of Artistic Production

My aim in this article is to study culture in the making, that is, the process of production through which cultural forms grow into being and are materially accomplished. I will do so by focusing on an aspect of cultural production which has received scant attention until now: the process of artistic production. Although the last decades have indeed witnessed the emergence of an increasing sociological concern with the study of cultural production, exemplified for instance, in Pierre Bourdieu's (1993, 1996) theory of the

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field of cultural production or in the works of the 'production paradigm' (Becker, 1982, Coser and Mack, 1978, Peterson, 1976, 1994, White and White, 1965), the emphasis of these approaches has typically been on the social factors affecting artistic production rather than on artistic production itself. These approaches to the study of production have been undoubtedly beneficial for developing a detailed understanding of different aspects of the art world and, more widely, of culture. Indeed, unlike the philosophical concept of 'art world' developed by authors such as Danto (1964) and Dickie (1974, 1997), the sociological study of the art world has been fleshed out through specific empirical case studies detailing, among other things, the workings of the artistic market (Crane, 1987, DiMaggio, 1977, Moulin, 1967, Peterson, 1997b), the structure of the institutionalized reward system (Crane, 1976), the gatekeeping system and the networks of cooperation amongst artists (Becker, 1982) or the fierce competition between them (Bourdieu, 1996). These studies have been fundamental in transforming the sociological study of art, from a rather speculative enterprise, prone to specious attributions and hazy generalizations¹, into an empirically grounded project (DeNora, 2000: 1–8). What is not addressed in these studies, though, and what I am seeking to explore in this article, is the process of artistic production itself, that is, the material practices which bring specific cultural products into being in their actual, concrete form.

Part of the reason for this neglect of artistic production is that, for the most part, sociologists have deemed the actual process of production as secondary to sociological analysis. Sociologists have customarily argued that there is nothing which makes the production of cultural products any different from other social activities (Hauser, 1959: 275–276; Heinich, 1998: 56–57; Peterson and Anand, 2004: 326–327). Indeed, since its inception at the beginning of the 20th century, one of the foremost concerns of the sociology of art has been to demonstrate that artistic production is not the unaccountable work of solitary geniuses operating beyond established customs and norms, but a practice that, just like any other social practice, evolves within a specific set of social relations, 'social' groups and institutions (see, for example, Inglis and Hughson, 2005; Zolberg, 1990). A good example of this orientation can be found in Pierre Bourdieu's theory of the field of cultural production. According to Bourdieu, the putative exceptionality and uniqueness of artistic production is just an *illusio*, a collective belief, for, in truth, the real 'process that carries works along is the product of the struggle among agents' (Bourdieu, 1993: 183). In other words, for Bourdieu the process of artistic production is the more or less direct outcome of a prior social logic – the logic of the field:

The field exerts an effect of refraction (much like a prism) and it is only when one knows its specific laws of operation (its 'refraction coefficient', i.e. its degree of autonomy) that one can understand what is happening in the struggles between poets, between the partisans of social art and the defenders of art for art's sake. (Bourdieu, 1993: 182)

According to this view, if we are to explain artistic production, the sociological interest should not be placed on the actual process of production, but on the struggle and competition that takes place in the field of cultural production. This neglect of artistic production has been paradoxically more evident in the works of the 'production paradigm', which arguably constitutes the most comprehensive attempt to empirically study cultural

production that emerged in the last decade (see, for an overview, Peterson, 1994; Santoro, 2008). Yet, contrary to what may be expected, the object of study of the production paradigm has not been cultural production itself but the social variables affecting cultural production. Or as they put it, their interest has resided in evincing 'how the production factors shape the culture that is produced' (Peterson, 1994: 184). Following this dictum, the empirical studies operating in this tradition have been typically concerned with discerning how different social factors like law, technology or the market shape 'the nature and content of the elements of culture that are produced' (Peterson, 1994: 163; see also Crane, 1997; DiMaggio and Stenberg, 1985; Peterson, 1997a).

The overemphasis placed on the social factors of production has meant that these sociological analyses have usually stopped precisely at the moment when artists start to produce, thereby leaving artistic production as a kind of black box for sociological analysis. There are also good pragmatic and methodological reasons that explain this neglect. Qualitative methodologies, especially ethnographic research, are indeed excellent tools to open this black box and to produce accounts of culture in the making. However, these methodologies face several practical problems like, for example, the obvious difficulty of gaining entry to artists' workplaces to study the actual process of artistic production. For the most part, artists tend to consider their workplaces as highly private and personal spaces and are therefore reluctant to open them for ethnographic scrutiny.² Moreover, access to these workplaces does not guarantee that the ethnographer will be able to document the actual process through which an artwork is produced. The production of a painting, a piece of music, a sculpture or a novel, is seldom a linear process evolving according to a well-defined temporal pattern. Indeed, artworks are usually products of erratic and unpredictable processes. Before they reach their final form, they can be made and remade, abandoned *sine die* and taken up again months, or even years, later. Even in those exceptional cases in which it is possible to witness *in situ* the unfolding of a specific work from start to finish, the collection of empirical data remains a complex issue. Participant observation is indeed an excellent tool to provide detailed descriptions of the different practices, actors, materials and networks involved in and generated by the process of artistic production. However, these descriptions do not shed much light on the process of artistic production itself, that is, on the specific cognitive, bodily and material processes which lead artists to shape artworks in one particular way rather than another. As Chandra Mukerji (2007: 66) rightly points out, '[a]nyone doing fieldwork in the arts knows that artists often do not know or cannot say why they have particular ideas, tastes, techniques or impulses. Artists often (and frustratingly) say they paint what looks good to them'.

One obvious route to avoid the pragmatic and methodological difficulties facing participant observation is to study the process of artistic production by actively engaging with it. This is precisely what Erin O'Connor (2005, 2007) has done in her beautiful ethnographic study of glassblowing, in which she narrates how she gradually acquired and embodied the practical knowledge of this craft. This 'experiential' method has the advantage of enabling us to gain insight into the inner-side of artistic production; a side which is otherwise only indirectly accessible through artists' *ex-post facto* recollections or through the analyst's interpretation of this process. However, it also has the obvious disadvantage of limiting the study of artistic production to those practices in which we

have the talent, skills or the possibility to participate actively, which, unfortunately for unskilful social scientists like myself, are not that many.

This does not mean, however, that in those cases in which it is not possible to study *in situ* the process of culture in the making, we need to content ourselves with traditional sociological accounts focusing on the social factors of production. An alternative route to study culture in the making is to undertake a reconstruction of the process of artistic production, that is, to opt for a morphogenetic approach which focuses on reconstructing, step-by-step, the process through which aesthetic forms unfold and come into being. This is the route that the art historian Michael Baxandall (1985) and the cultural sociologist Chandra Mukerji (2009) followed in their respective studies of the construction of Benjamin Baker's Forth Bridge and the Canal du Midi in 17th-century France. Employing a wealth of different historical documents, like personal diaries, construction plans, contracts, etc., both scholars were able to reconstruct step-by-step the process, problems and decisions through which these cultural artefacts gradually came into being in their concrete uniqueness and material specificity. This is precisely what I aim to do in the following sections. More specifically, my aim will be to provide a detailed explanation of the morphogenetic process through which the Spiral Jetty, the splendid earthwork created by the American artist Robert Smithson, came into being as a novel cultural form in the world. In order to do so, I will rely on a variety of documentary sources, including the accounts of the different actors involved in the construction process of this sculpture as well as other relevant materials such as contracts, sketches, drafts or photographs that were produced throughout the production process. As I will show, the advantage of following this route is that it enables us to open the black box of artistic production without having to observe it *in situ* or to engage with it personally, thereby expanding the cases which are susceptible of sociological analysis.

Once I have explored how sociologists may approach the study of artistic production, it is perhaps worth stopping for a moment to discuss why the study of artistic production is at all sociologically significant. As we have seen, the sociological overemphasis on the social factors of production has tended to reduce artistic production to a merely vicarious social practice with a primarily reproductive role. Following this view, sociologists have been mostly concerned with demonstrating how artistic production, whether wittingly or unwittingly, transmits, reproduces or reflects existing social structures (Witkin, 1995), ideologies (Lukács, 1971) or group interests (Bourdieu, 1996). Although this approach has been undoubtedly helpful to understand the dynamics of cultural reproduction, it has not been very helpful to explain how novel and original cultural forms and artefacts come into being, that is, how cultural novelty is brought about. Only recently, the authors enrolled in the so-called 'new sociology of art' (de la Fuente, 2007) have begun to replace the old interest on 'the causes of art' with a new interest on 'what art causes', that is, on the productive role of art (DeNora, 2003). In order to do so, these authors propose us to shift our attention from the contextual factors of art to the artworks themselves (Hennion, 1993; Krzys Acord and DeNora, 2008; Yaneva, 2003). This is precisely what I will do in this article. As I shall claim, besides a detailed study of the social factors which help and/or constrain cultural production, a truly comprehensive sociological understanding of cultural production must also include a study of culture in the making, that is, a study of the practices and materials through which specific cultural forms are contingently

produced in particular sites. This materially grounded and site-specific understanding of culture is precisely one of the key contributions that the sociology of art can offer to the sociological study of culture. More specifically, the study of artistic production can help us to flesh out the abstract image of culture as a semi-autonomous web of meanings inhabiting the collective consciousness by providing a materially grounded understanding of cultural dynamics which links the genealogy of cultural forms to specific practices, materials and sites. This is the reason why, in what follows, my aim will be to produce a detailed account of the specific practices and materials through which the Spiral Jetty grew into being. As the case of the Spiral Jetty will show, artistic production constitutes a specific form of material practice which must be studied in its own terms. In other words, it will show that artistic production is a form of practice that emerges and unfolds from a material engagement within the world and which, as such, cannot be adequately understood in terms of 'external' rules or social factors. Moreover, the study of the Spiral Jetty will reveal that this material engagement entails a genuine process of morphogenesis, that is, a process that is truly generative of form, rather than merely revelatory or expressive of a pre-existing form dwelling in the artist's mind (Ingold, 1994: 56–57). In so doing, the case of the Spiral Jetty will demonstrate that, if we are to understand how novel cultural forms emerge and are materially accomplished, we need to supplement our sociological understanding of the contextual factors surrounding artistic production with a detailed understanding of the specific material engagements through which artistic production takes place.

Bringing the Spiral Jetty into Being: The Material Practice of Artistic Production

Robert Smithson died on 20 July 1973 in a light-aircraft crash while he was taking photographs for a new artwork he had planned to build in Texas. Despite the fact that he was just 35 years old when the tragic accident occurred, Smithson is nowadays acknowledged as one of the most representative American artists of the 20th century.

Smithson was the main ideologue of the Earthwork Movement which emerged in the United States in the late 1960s³. Between 1966 and 1967, Smithson met a number of young artists, like Michael Heizer, Dennis Oppenheim, Richard Long and Walter De Maria. Although different in their trajectories and biographies, they all shared a dissatisfaction with the New York art world of the time and, more specifically, with conceptual and minimalist art which dominated the art scene in the late 1960s. Over these years, these artists developed a network of common friendship in which they exchanged ideas, visited the same cafes, exhibited at the same galleries and travelled together. It was through these activities that the contours of the 'earthwork movement' began to be defined. Although the term 'earthwork' did not designate artists following a specific credo or manifesto, as was the case in many of the 20th-century vanguards, the publication of Smithson's writings in *Art Forum* (1966, 1967a, 1967b, 1968, 1969) was instrumental in fostering a sense of common purpose.⁴ Against conceptual art, Smithson contended that artists must escape from the traditional confines of the gallery and the museum to work outdoors with the earth as the primal artistic material. Following this dictum, earthwork artists placed their works in remote natural locations such as deserts,



Figure 1. The Spiral Jetty. Photograph by Gianfranco Gorgoni. Reprinted with permission: © Estate of Robert Smithson /DACS London, 2007.

volcano rims or derelict suburban spaces. Yet, contrary to the prevailing orthodoxy, when these artists built an earthwork outdoors they did not intend to create an artistic form that existed as a timeless object over and against natural processes. Quite the opposite, they intended to work with these very natural processes to produce an artistic form. For earthwork artists, therefore, nature constituted the very material through which artistic forms unfold and acquire reality. As Smithson put it, the idea was

to take on the persona of a geologic agent [in order to become] part of that process rather than overcoming it – rather than overcoming the natural process of challenging the situation. You just go along with it, and there can be a kind of building that takes place this way. (Smithson, 1972a: 298)

In spite of his truncated career, Smithson left behind a number of important artworks. He is perhaps best known for his Spiral Jetty built in the Great Salt Lake in the state of Utah (USA) (see Figure 1). Smithson started building this work in 1970, and today it is considered Smithson's masterpiece and one of the most iconic sculptures of the 20th century.

In order to build this monumental earthwork, which spreads out 1500 feet and is 15 feet wide, it was necessary to move around 6500 tons of basalt boulders. The Spiral Jetty was completed after 'two weeks of actual construction [and] about two months of negotiation and preparation' between April and May 1970 (Smithson, in Roth, 2004: 86). Although it is difficult to establish a precise date, it is possible to say that it was towards the end of 1969 when Smithson started to look for a site for the then incipient project of building a jetty in a salt-lake. The search was guided by Smithson's fascination with Bolivia's Laguna Colorada, a lake which had been drawn to his attention by James Aarons and Claudio Vita-Finzi's book *The Useless Land* (1960). In this book, the

authors described Laguna Colorada as a lake where: ‘The basalt (at the shores) is black, the volcanoes purple, and their exposed interiors yellow and red. The beach is grey and the lake pink, topped with the icing of iceberg-like masses of salts’ (Smithson, 1972b: 7). Even though Smithson initially thought about the possibility of building an earthwork in the Laguna Colorada, the remoteness of Bolivia led him to explore different locations in the United States in an attempt to find a lake with similar characteristics (Smithson, 1972b: 7).

While in New York, Smithson gathered a substantial amount of historical and geological documentation about the Great Salt Lake. He learnt, for example, that the Great Salt Lake is typically between three and four times saltier than the sea and it is the fourth largest terminal lake in the world, measuring about 75 miles long and 28 miles wide and covering a surface of around 1700 square miles. After travelling to Utah and inspecting the area, Smithson finally selected the location for the Spiral Jetty a mile north of Rozel Point, a disused oil seep which had been active since the beginning of the 19th century. The site was located in a vast and wild landscape, reminiscent of the primeval archaeological landscapes Smithson constantly referred to in his writings (see Smithson, 1968). But, more importantly, the waters on the site had the ‘tomato soup colour’ he had been looking for, an effect that results primarily from the bacteria, brine shrimp and algae that thrive there. One of the main reasons why Smithson located the Spiral Jetty in the Great Salt Lake was, in Smithson’s own words:

... to induce salt crystals on the rock and gravel as incrustations that will develop over a period of time. These will contrast with the red color of the water. (Smithson, 1970a: Roll 3833; Frame 90)

As Smithson commented, the work had to be ‘physical enough to be able to withstand all these climate changes, yet it’s intimately involved with those climate changes and natural disturbances’ (Smithson, 1972a: 298). In other words, Smithson did not seek the Spiral Jetty to be a sculpture of the environment, he wanted it to become an active variable in the environment, re-configuring and re-ordering the landscape, and partaking in the natural processes of sedimentation, crystallization and erosion.

After the funding and all the necessary paperwork were ready,⁵ Smithson began the search for a contractor. He found one in the neighbouring city of Logan, Bob Phillips, at the time the foreman of Parson Construction Company. When Smithson first presented the project to Phillips, he was rather reluctant to accept it. Unsurprisingly, Phillips found the project of building an artwork with rocks on a lake rather eccentric. Besides, he thought, quite rightly, that the project involved several risks for his machinery. The site was too remote and far away from the nearest help point, should they need it. This was a highly likely situation since, as Phillips explained to Smithson in their first meeting, the ground pressure on the site was too low to withstand heavy equipment and, consequently, it was quite plausible that the machines would get stuck in the ooze (Phillips, 2005: 188). To avoid this possibility, it was necessary to make design calculations to artificially raise the ground pressure. Besides, Phillips explained to Smithson that building a jetty in waters with a high concentration of salinity implied several technical difficulties. Among other things, the jetty needed to be:

... eight feet wide at the top and needs to be sloped enough to hold rock on the sides to prevent wave damage. We need to know how deep the water will be in order to size the rock large enough to withstand wave action. This is very important, since salt water is much heavier. (Phillips, 2005: 188)

After this initial conversation, Phillips hoped that he had managed to dissuade Smithson from building the jetty. However, Smithson returned the next day to Phillip's office with a large sketch of the Spiral Jetty and a cross-section of the dike detailing its structure. As Phillips recounts, he looked at the cross-section and corrected it, modifying the height of the dike and the position of the rocks which, he said, should be placed over the top of the dike. Smithson agreed with these modifications and Phillips put together a bid of \$6000 (Phillips, 2005: 188). With that budget, Phillips gathered a five-man crew, two dump trucks, a front loader and a little tractor to work on the dike with which they set off to build the jetty.

It is important to note that, when Smithson first arrived in Utah, he did not have a clear idea about the final shape of his project. Initially, he had thought about 'making an island with help of boats and barges' (Smithson, 1972b: 7). However, he discarded this idea since, as he later recounted, he preferred the site to determine the actual shape of the work. As he wrote in the 1972 reconstruction of this encounter, it was precisely in a moment of epiphany on the encounter with the site that the spiral shape suggested itself:

As I looked at the site, it reverberated out to the horizons only to suggest an immobile cyclone while flickering light made the entire landscape appear to quake. A dormant earthquake spread into the fluttering stillness, into a spinning sensation without movement. This site was a rotary that enclosed itself in an immense roundness. From that gyrating space emerged the possibility of the Spiral Jetty. (Smithson, 1972b: 8)

This 1972 description is, however, a slightly disingenuous and romanticized reconstruction of the way the final spiral shape came into being. Like most earthwork artists, Smithson had to devise different ways to publicize these artworks which, due to their unconventional and inhospitable locations in deserts, abandoned quarries or volcanoes, went largely unseen. In order to make the jetty visible beyond the shores of the Great Salt Lake, Smithson developed an intricate representational system which included a 16mm film, which was later exhibited in New York's Dwan Gallery, hiring a professional photographer who documented the construction of the jetty and made the official portfolio of the work, and writing the 1972 essay from which the above quotation is taken. In the essay, which confirmed Smithson's reputation as a gifted essayist as well as the main ideologue of the earthwork movement, Smithson carefully crafted the image of the Spiral Jetty as a spontaneous product emerging from his artistic imagination. However, if we follow step-by-step the morphogenesis of the Spiral Jetty, it is possible to see that, against Smithson's claims, the spiral shape did not emerge upon the artist's revelatory encounter with the site, but, as we shall see, much later. In fact, as Bob Phillips recounts, when Smithson first came to his office, the original plan drawn in the sketch was to build a clockwise J-shaped jetty, not a spiral (Dogu, 1996: 25–26; Phillips, 2005: 187). The photographs that Smithson commissioned to document the construction process of the jetty offer a good entry point to allow us to begin to unravel the specific morphogenetic process through which this artwork came into being (see Figure 2).



Figure 2. Constructing the Spiral Jetty, 1970. Photographs by Gianfranco Gorgoni. Reprinted with permission: © Estate of Robert Smithson, New York / DACS London, 2007.

This sequence of photographs reveals how the Spiral Jetty's form gradually emerged through the complex interaction between different actors and materials. In other words, they reveal that the construction of the jetty was not a simple and direct mechanical instantiation of an abstract idea dwelling in the artist's mind, but a complex material practice unfolding through the attention to a developing set of practical problems. At this stage, these problems were mainly related to the idiosyncrasies of the difficult terrain upon which the sculpture was being erected. In fact, Phillip's fears about the ground pressure were confirmed on the very first day of work. A front-loader got trapped in the ooze along with the truck which tried to pull it out. 'We were hours away from getting help', Phillips recounts, 'and it looked like the project would literally sink into the mud. Fortunately, Boozie [one of the operators] and the other loader operator, Roger, are very good. They managed to work their way out of the mess and stabilize the access with rock fill' (Phillips, 2005: 191). However, the rock fill was just a temporary solution. The deeper underlying problem was the interaction between the different materials and

instruments involved in the construction of the jetty. The basalt rocks used to build the foundation of the jetty are heavy and angular, which makes them especially dangerous for the equipment. 'If you just drop it in the truck beds', Phillips writes, 'it will ruin the truck beds. And an angular rock that isn't covered can cut a tire' (Phillips, 2005: 192). The crew solved this problem by putting earth on the bottom of the truck beds. However, this solution was a source of constant tension between Smithson and the crew. The crew, thinking chiefly about the safety of the equipment, wanted to use more earth than rocks, so that the truck beds were better protected. However, the excess of earth, as Phillips recounts, 'was making the Jetty look like a highway with the rocks buried in it' (Phillips, 2005: 192).

In view of this, Smithson wanted more rocks than earth, since his intention was to build a more abrupt surface, with the basalt rocks protruding irregularly on the surface of the jetty. This conflict between safety and aesthetics prompted Phillips to think about a possible solution. He thought the problem could be solved by keeping the amount of earth the crew was employing while achieving the aesthetic impact Smithson wanted by spraying the jetty with a high-pressure water hose once the construction of the jetty was finished. In so doing, he thought, the dirt could be washed from the rocks without damaging the truck beds. He tried to persuade Smithson about the benefits of this solution, but Smithson dismissed it in favour of his own solution. As Phillips recounts, he later realised that his solution would have been certainly useful to clean the rocks 'but I would have clouded the water, changing it from red to grey, and covered the white salt base with dark mud' (Phillips, 2005: 192). In other words, the solution would have altered the Jetty's dramatic interplay of colours Smithson was looking for. And it was probably due to this that Smithson preferred to try his own solution. This solution consisted in maintaining the method the crew had been employing to safeguard the machinery, that is, to use more earth than rocks. However, once the rocks and the earth were in place, he asked one of the operators to turn the tractor around and rip the jetty backwards. In this way, the tractors' rippers unearthed the rocks without muddying the water. The 'highway appearance' was thus replaced by the rockier and primeval appearance Smithson was looking for.

I have described at length these episodes in order to show that the process of artistic production cannot be adequately described as a practice that originates from outside the world, that is, as an act of conceptualization through which a new mental form – a plan, an idea or a design – is disclosed in the mind of the artist and is willingly imposed upon inert matter. As the previous description shows, artistic production is a material form of practice that emerges and unfolds through a material engagement within the world. As we have seen, Smithson – and his crew – did not 'impose' a form on the Great Salt Lake; instead, they worked with boulders, water and crystals to bring forth or elicit the form of the jetty. As the jetty was forming, they had to solve different problems which determined the way in which the spiral finally acquired its actual form. Nonetheless, it may be possible to argue that, despite the detours of this material process, the Spiral Jetty emerged as a purposeful object, conforming almost perfectly to Smithson's original intentions. Indeed, as Phillips recounts, Smithson's solution enabled the sculpture to be 'completed as per drawing' (Phillips, 2005: 192) (see Figure 3). However, this identity between intentions and form should not deceive us into thinking that the Jetty's physical form was just a mechanical and direct instantiation of Smithson's original intentions. As the previous



Figure 3. The J-shaped jetty. Photograph by Gianfranco Gorgoni. Reprinted with permission: © Estate of Robert Smithson, New York / DACS London, 2007.

paragraphs have illustrated, the relationship between intentions and form is not abstract and necessary, but concrete and practical. In other words, it is a relationship that has to be established and accomplished within the material practice of production, through the specific solutions given to developing practical problems. The site was not a simple inert recipient of Smithson's mental image of the jetty. As we have seen, the site and its materials actively configured the problems through which the production of form unfolded. In this sense, it is possible to say that the site and the materials acted as affordances in Gibson's sense (1979), that is, as elements of the environment that enabled specific courses of thought and action. The earth vs. rocks problem, for example, was open to different solutions, each one affording a different process of formation. Had they, for example, opted for Phillips' solution, the jetty form would have emerged differently, even if Smithson's intentions had remained unaltered. Finally, it was the choice of Smithson's solution that afforded in practice that the jetty could be completed 'as per drawing'.⁶ These choices, did not spring from the artist's unfettered imagination. Instead, they gradually emerged through a specific material practice of production, at the interface between human activity and the material environment.⁷

The above picture does not represent the Spiral Jetty's final form. Scarcely a week after the job was completed, Phillips received a phone call from Smithson. Phillips recounts the conversation as follows:

I got an anxious call from Smithson. 'It's not right, It's just not right.' – 'What?' – 'Well, the jetty, we've got to fix it. It's all wrong. We need to fix it.' I replied, 'We looked at it, you said it was fine.' – 'Well it's fine, but it's not right.' (Phillips, 2005: 194)



Figure 4. Sketches of the Spiral Jetty, circa 1970. Reprinted with permission: © Estate of Robert Smithson, New York / DACS London, 2007.

It is difficult to ascertain what caused this sudden change of mind, since there are no written records documenting it. In fact, as we have already seen, Smithson strived in later essays to suppress this episode in order to reconstruct a coherent and romanticized narrative in which the Spiral Jetty form disclosed itself immediately on a revelatory encounter with the site. It is nonetheless possible to venture the hypothesis that Smithson had initially thought about both possibilities, the arc and the full spiral, and finally chose one which he later regretted. Some of his 1970 sketches could be used to support this hypothesis. In these sketches, Smithson drew the jetty first as an arc, and then extended the coil to complete the full spiral (see Figure 4).

The uncertain date of these sketches may well mean that they were drawn precisely after he had completed the arc in Utah and began to think about prolonging the coil to complete a spiral. Be that as it may, the important thing is that Smithson managed again to convince again the reluctant Bob Phillips, who budgeted an extra US\$3000 for the new work. The idea was to use the existing rocks of the islet to extend the coil until it produced a spiral. However, the work to be done was not easy due to technical difficulties. Once again, the crew had to face the material reality of artistic production.

As the coil of the Jetty closed, the machine could almost span across the last loop. Smithson directed the placement of the rocks and Boozie [the operator] was able to align them into the last loop. It was difficult with the machine balancing on the rocks. He had to put large rocks in the loader bucket to balance the machine. By raising and lowering the bucket, he could swing the rocks into position. (Phillips, 2005: 196)

The work was finished within three days. This time Smithson was entirely satisfied with the sculpture.

The final Spiral Jetty was significantly bigger than what Smithson had initially predicted. The crew had moved around 6500 tons of boulders to produce a majestic spiral about 1500 feet long and 15 feet wide. Thus, as we see, the Spiral Jetty emerges as a specific material accomplishment which was contingently achieved through different material elements and through the specific solutions given to developing problems within the process of production itself. It is for this reason that I have described this process as genuinely morphogenetic, that is, as a process which truly produces form, and not as a process that merely reveals or objectifies a form that pre-exists in the artist's mind. I have opted for the notion of 'production' instead of the traditional notion of 'creation' precisely to underline the fact that cultural forms are not created *ex nihilo* by means of the creative powers of the artist, but gradually grow into form through a variety of material elements and practices. In this sense, and to paraphrase Chandra Mukerji (1997: 327), it is possible to say that the Spiral Jetty does not emerge as 'a tribute to art history or creative genius, where the mind imprints its vision on the world'. Instead, it emerges as an example of how human action and thought emerge from action within the material world. The example of the Spiral Jetty thus shows that artistic production takes place at the interface between human activity and the material world. And that it is from this interface, from this in-between, that cultural products grow into being and are materially accomplished.

Needless to say, this does not mean that the artist's agency and intentionality are inconsequential or irrelevant to understanding the process of morphogenesis that takes place through the process of artistic production. It is undeniably true that the Spiral Jetty's form is indebted to Smithson's intentionality. However, although Smithson's intentionality was an undoubtedly important element in the way the jetty was produced, the description of Smithson's intentionality would fail to provide us with a complete account of the actual process of morphogenesis. As Henri Focillon (1943: 3) once wrote, '*L'intention de l'œuvre d'art n'est pas l'œuvre d'art*'.⁸ In other words, a genealogy of intentionality is not a genealogy of form. Smithson's intentionality worked within the material and aesthetic possibilities afforded by the specific materials with which he was working. Indeed, as we have seen, Smithson's intentionality also underwent a process of transformation in this process. Intentionality, therefore, is not a fixed element organizing the practice of production from afar but a dynamic element which exists and unfolds in and through the very material practice of production (Baxandall, 1985: 41–42). Intentionality, it follows, can be seen as necessary but not sufficient to account for the process of morphogenesis that takes place in the practice of artistic production.

Yet, the insufficiency of intentionality does not mean that we are entitled to resort, as sociologists have customarily done, to 'social' factors in order to account for the process of artistic production. Even the most scrupulous sociological inventory, encompassing all the social agents, institutions and processes that acted as social conditions for the emergence of the Spiral Jetty, will never suffice to account for the morphogenetic process through which it acquired its actual form. Indeed, we could produce the most meticulously detailed sociological monograph mapping out New York's artistic field of the time, itemizing all of its institutions, positions and agonistic struggles. We could analyze

the changes, if any, in law and in technology, even if earthworks were mainly constructed with rocks, earth and bulldozers. We could analyze the structure of the artistic market and also, if needed, that of the public. We could also describe all the vicissitudes and tribulations of the people involved in the production of the jetty as well as the patterns of irenic cooperation or struggle between them. But after the fastidious task of inventorying all social factors had been completed, we would be despairingly impotent to account for how the jetty actually came to exist. This is not to say, however, that these sociological explanations of artistic production are incorrect, but only that they are incomplete and need to be supplemented with an exhaustive description of the material practice of artistic production itself. For even after we add all these 'social' conditions and agents, we still need boulders, salt, water, trucks and time to understand the actual material practice through which the jetty comes into form as a distinct cultural product. As we have seen, the decisions and problems that shaped the morphogenesis of the Spiral Jetty did not emerge from a 'complicated social context' (Becker, 2006: 26), but rather from within the very practice of production. It follows that, if we are to account for how specific cultural forms like the Spiral Jetty are produced, that is, if we are to study culture in the making, we cannot be content with focusing our attention on the social factors surrounding artistic production alone. We also need to study the material practice of production itself, that is, the actual morphogenetic process through which cultural forms come into being as novel historical events in the world.

Conclusion: Artistic Production as Culture in the Making

In the previous section, my objective has been to open the black box of artistic production to study culture in the making, that is, the process through which cultural forms come into being as novel events in space and time. In order to do so, I have reconstructed, through different documentary sources, the morphogenetic process through which the Spiral Jetty came into form. This approach has enabled us to reveal that, against Smithson's own romanticized reconstruction of the jetty's production process, the jetty did not emerge on an epiphanic encounter with the Salt Lake, but through a rather laborious process which involved different unexpected detours. This description has shown that artistic production constitutes a distinct form of material practice, that is, a type of practice that emerges and evolves from a material engagement within the world, and which, consequently, is not reducible to individual intentions, or to socio-historical factors or constraints acting upon that intentionality. Hence, against those approaches which deem the artistic process of production as unimportant, or secondary, to a proper sociological understanding of culture, this article has shown that the attention to the material practice of artistic production offers us an indispensable insight into the practices, materials and processes through which new cultural forms are actually produced and materially accomplished. In other words, it has shown that the attention to the material practice of artistic production offers a privileged avenue to provide empirically grounded accounts of the dynamics of cultural production. As this article has evinced, culture is a much more contingent and site-specific phenomenon than sociologists have tended to concede. Cultural products like the Spiral Jetty do not emerge propelled by an underlying social logic or by a prior set of social causes. The logic which accounts for the emergence of

cultural products is concrete, internal and actual, rather than general, external and abstract; that is, this logic is gradually disclosed through the very material practice of production, at the interface between human activity and the world. In this sense, the case of the Spiral Jetty can be seen as a powerful reminder of the fact that, as the anthropologist Tim Ingold writes, 'we work from within the material world, not upon it' (Ingold, 1994: 68).

Nonetheless, one may argue that I have arrived at this conclusion by taking advantage of the jetty's idiosyncrasy. After all, the jetty is a rather exceptional artwork, whose being and existence are defined by its enormous size and outdoor location. However, the argument could continue, more 'traditional' artworks like the paintings and sculptures located in galleries and museums do not face the kind of practical and material problems that affect the production of earthworks like the jetty. Indeed, when painters and sculptors produce these works they do not have to deal with ground pressures, trucks or angular basalt boulders. It follows that, at least in these cases, the attention to the material practice of artistic production is not as relevant or revealing as it may be in the case of the jetty. Yet, neither painting nor sculpting are metaphysical activities, that is, activities taking place beyond the physical. Painters and sculptors, like earthwork artists, do not merely work with ideas; they work with and through materials. Like earthworks, paintings and sculptures spring from the specific relations woven in the material practice of production. Admittedly, had I chosen a traditional painting or sculpture, it is indeed quite probable that I would not have talked much about salty waters, boulders and processes of crystallization; however, I would have talked to great lengths about oils, pastels, acrylics and the different relations they entertain with linen or cotton canvases or about how marble, wood and bronze afford different textures and forms. As Delacroix rightly reminded us, it would be a delusion to see a painting – or a sculpture – as a materialized thought.⁹ When we look at a painting or a sculpture we are not seeing the objectified reflection of the artist's mind or of society. What we are seeing is a specific material accomplishment, a fragile equilibrium of material relations brought about through a specific practice of production. Unfortunately, the attention to the specific material practices through which cultural forms spring has been overridden by our preoccupation with producing linear and general narratives for describing culture. The jetty's exceptionality, therefore, does not reside in the fact that, unlike more traditional art forms, it comes to exist through a rather unusual material configuration. Instead, its exceptionality resides in the fact that it makes evident what our traditional sociological conception of culture makes us forget – that culture does not merely exist as a semi-autonomous web of meaning inhabiting the collective consciousness, it also exists as a contingent material accomplishment that emerges from specific sites and material practices of production.

Notes

1. These hazy generalizations were especially evident in 'reflection theories', which in their crudest versions postulated an isomorphic relation between aesthetic forms and social forms. For the advocates of these theories, artistic production was seen as the process by which an artist unknowingly replicates in artistic form the social structure of his time (see, for example, Adorno, 1997; Francastel, 1965; Hauser, 1951; Panofsky, 1995; Witkin, 1995).

2. There are nonetheless exceptions to this rule. As Rothenberg and Fine (2008) point out, some artists, especially relatively unknown artists, often see the ethnographer's work as an opportunity to promote their own interests and publicize their work, and this provides ethnographers with a good degree of access to their workplaces.
3. Although the label 'earthwork movement' mainly designates those American artists who began around the late 1960s to work with the earth as their primary material in outdoor locations, the group also included some non-American artists, such as Richard Long, who participated in 1968 in the collective exhibition *Earthworks*, an exhibition which had a tremendous impact and marked the official birth of 'earthworks' as a new artistic movement. The label 'Land Art', to which earthworks artists are customarily associated, designates a much broader international development which includes earthwork artists as well as non-earthwork artists, such as Christo and Jeanne-Claude, or environmental artists, such as John Davis or Andy Goldsworthy (for further discussion, see Boettger, 2002: 190–191).
4. I have decided to keep the original publication date to follow the chronological development of Smithson's thought and art. Most of Smithson's quotes are taken from Flam's 1996 edition of Smithson's *Collected Writings* and from Cooke and Kelly's 2005 *Spiral Jetty*. The source of each specific text is specified in the reference list.
5. On 9 April 1970, Smithson was issued a 'Special Use Lease Agreement' by which the Utah Department of Natural Resources leased the requested 10 acres of land for \$100 per year to be paid in advance at the beginning of each year (Smithson, 1970b: Roll 3835; Frame 804–805). Initially, New York's Dwan Gallery paid for the lease, although Smithson later repaid them (Boettger, 2002: 201). Besides the lease, Smithson also needed to obtain a special permit to be able to remove the rocks. This permit was granted by the US Department of Interior's Bureau of Reclamation. Finally, Smithson also insured the work, although not with an art insurance company, but with a local company specialized in construction, Hillam Abstracting and Insurance Agency (Phillips, 2005: 187).
6. Gibson's concept of 'affordance' has also been taken up by different authors in cultural sociology, especially in the sociology of music where this concept has been employed to describe music's powers, that is, how music makes possible, or affords, different courses of social action, identities and practices (Born, 2005; DeNora, 2003; Hennion, 2008)
7. This understanding of artistic production as a material practice resonates with the ideas developed by the proponents of the 'distributed cognition paradigm' (Clark, 1997, 2003; Hutchins, 1995). Against the traditional Cartesian notion of the mind as a disembodied device operating through abstract puzzles, the proponents of this paradigm postulate the idea of the mind as an embedded device that is able to operate precisely through its embeddedness in the world. Similarly, we have seen that the process of artistic production is not a process that takes place through the inner workings of the artist's mind but through the artist's engagement with the material world.
8. The English translation surprisingly reads: 'Art is made up, not of the artist's intentions, but of works of art' (Focillon, 1992: 33).
9. Delacroix writes: '*Quand j'ai fait un beau tableau, je n'ai pas écrit une pensée. C'est ce qu'ils disent. Qu'ils sont simples!*' (in Baxandall, 1985: 74).

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