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Abstract: While artists often present their works as communicating to and through them, this idea has rarely been taken seriously, nor empirically studied from a communicational perspective. Building upon the pragmatist tradition, we show how this particular form of communication takes place. Using Peirce's concept of abduction, we argue that a creative process essentially happens when a resonance between two materials leads to the unification of these materials into a new whole. Drawing upon a case study, we show how we can retrace such resonances by paying close attention to the interactions between participants collectively involved in a creative project. This paper makes an important contribution to communication studies by revealing the communicational mechanism of our creative impulses. It also opens new avenues for the study of artistic endeavors as well as other creative activities such as science, politics, or design.

Keywords: creativity, abduction, continuum, fiction, interaction analysis, pragmatism

**The voice of the work to be made:
Abductive communication and creativity**

Artists often present their works as capable of resisting or surprising them, that is, as possessing their own capacity of expression. French novelist François Mauriac, for instance, said the following about his relationship with his characters:

How many times did I discover, when writing a story, that such leading character I had been thinking about for a long time, whose evolution I had set in detail, was complying so well with the program only because it was dead: it obeyed, but like a corpse. On the contrary, such secondary character that had no importance to me would push herself to the foreground, occupying a position to which I did not call her, dragging me into an unexpected direction (Mauriac, 1932, p. 216, our translation)

Similarly, here is what James Joyce said about parts of *Finnegans Wake* he was writing:

These are not fragments but active elements and when they are more and a little older they will begin to fuse of themselves.” (Joyce, 1966, p. 205).

In both quotations the authors present their works as having a voice that not only *exceeds* their intentions (in the sense that the works do and say things these authors did not expect), but also *precedes* them (in the sense that these authors have to take these unexpected expressions into account to continue their works). From this perspective, the creative process would amount to a sort of dialogue with what might be called *the voice of the work to be made*.

While this hypothesis seems quite interesting in terms of interaction (it almost sounds like a challenge to a communication scholar), it has rarely been taken seriously by researchers (apart by Souriau (1943/2015) and Latour (2013)) and never been empirically studied in a systematic way. It is noteworthy that this is not due to a lack of data or interest in the artists' creative process. In particular, since the end of the 1970s specialists of a discipline called genetic criticism (Ferrer & Groden, 2004) have studied the drafts, manuscripts, and correspondences of various writers (incl. Joyce, Woolf, Flaubert, Proust, Heine, Zola, Valéry, among others) in order to retrace the creative process of their works as precisely as possible.

While these studies are rife with examples that might be used to support the idea that the works somehow speak back to the artists, most of them are based on ontological presuppositions that lead them to dismiss this idea. Indeed, many of these studies regard the (human) “readers” of the work (including the author) as the ultimate “arrangers” of the various voices that haunt the materials of the work. For these researchers, if a great many voices of various origins may enter into the composition of a work, the ability to orchestrate them into a unique whole lies in the author(s) and receivers of the work. From this perspective, there is no such thing as the voice of a work to be made.

To circumvent this theoretical obstacle, we propose to adopt a different set of ontological premises. Drawing from a trend of the pragmatist tradition (that of Peirce (1931-1958), James (1912/1996), Latour (2013), Martine et al., 2020), and the representatives of the CCO (communication as constitutive of organization) movement (Caronia and Cooren, 2014; Clifton and De la Broise, 2020; Cooren, 2020, Cooren et al., 2007)), we take as our starting point that the ability to create something is never the property of one entity (either human or other-than-human), but the result of a particular linkage between entities. This linkage, which Peirce (1992) called *abduction*, takes place *when the resonance or likeness between two things leads to their unification into a new whole*. This premise, in turn, allows us to redefine works of art (and, more broadly, beings of fiction) as *abductions that are prolonged and intensified through other abductions*. The added value of this definition is that it allows us to account for how works express/articulate themselves independently from the artists’ intentions (since they partly result from accidental resonances between various materials) and how they are also dependent on them (since they cease to progress if no one seeks to prolong them through new resonances).

In this perspective, to study the creative process of a work involves retracing the series of accidental resonances that led the artist to arrange materials in a certain way. The main

methodological challenge then lies in registering this series of resonances. One way of doing this, we argue, is to study the interactions within *collective* efforts to produce works of art, that is, to concentrate on settings in which the participants continuously have to account for what *makes* them do what they do (or say what they say) (Caronia, 2019; Garfinkel, 1967). In this paper, we examine the interactions of the members of a creative team that developed a fictional relationship between two artworks during an event called “Museomix.” To do so, we retrace the main hypotheses through which the team members gave substance to this relationship. Using the cues left in the participants’ exchanges, we then reconstruct the accidental resonances that inspired these hypotheses. Drawing from these results, we show how the detailed study of interaction can shed light on the creative impulses that are at the heart non only of artistic endeavors, but of many other activities such as science, politics or design.

The work to be made in genetic criticism

An omnipresent voice

Born in the field of literary studies at the end of the 1970s, genetic criticism is well poised to account for how artists interact with their works. As already noted, this discipline consists in studying the drafts, manuscripts, and various personal documents left by an author in order to retrace the creative (or genetic) process of his/her works (Ferrer & Groden, 2004). It notably reveals that creative processes are riddled with what might be called *orchestration accidents* (Ferrer, 2011): unexpected events happen between the materials of the work that lead the artist to take the work in a new direction. These accidents may take many forms: the appropriate word to describe something does not sound right because it does not have the right number of feet; the development of a new metaphor pushes to the foreground a word that previously had no particular significance; the emergence of a biographical event (e.g., losing a friend or moving abroad) casts an entirely new light onto the main theme of a story;

ink is spilled onto a page that reveals a new way of connecting certain elements; etc. (Ferrer, 2011).

These unexpected events have two things in common. First, they function as injunctions made to the artists in relation to their work: a word must be replaced, a new meaning must be explored, a certain tone must be found, a new connection must be developed, etc. Second, they indicate the presence of something beyond themselves, a thing still uncertain and unfinished that the artists must learn to decipher and complete (Gifford, 2007). In that respect, the orchestration accidents that geneticists encounter every step of the way in creative processes are the *voice of a work to be made*; and the geneticist's job is, for a large part, to reconstitute this voice by showing how these accidents are connected, that is, how by responding to one accident, the artists create the conditions for the next to happen.

Consider, for instance, the genesis of the ending of Flaubert's *A Simple Heart* analyzed by Debray Genette (1984/2004). As the critic shows, Flaubert, having resolved to end his tale with the death of the main character, Félicité, is torn between two conflicting options: Depicting her death either as a true beatific experience – Félicité has a “mystic vision” in which, as Flaubert notes, “her parrot is the Holy Spirit” – or as a pseudo beatific experience in which, in a state of confusion, Félicité simply mistakes the profane for the sanctified. As Debray Genette shows, Flaubert simultaneously expands both options in a dozen of notes and drafts without being able to reconcile them. In line with the pseudo beatific reading, he describes his character's death throes as a brutal “rupture” or “breaking” using various physiological details: “acceleration of the heart,” “confusion,” “convulsions,” “hiccup,” “nausea.” At the same time, however, he also underlines Félicité's peacefulness through moral and religious clichés, noting that her “heart had never beaten for anything ignoble” or that “she held herself like a statue on a tomb” with a “smiling face.”

Then, Flaubert realizes that his character's heart is at the crossroad between these conflicting semantic systems and therefore can be the link between the expression of her body and that of her soul. He then decides to write the ending so that Félicité's final vision (of "a gigantic parrot hovering over her head") be preceded by a long sentence describing her last heart-beats in a pastoral register ("her heart-beats grew slower and slower, each a little fainter and gentler, like a fountain running dry, an echo fading away"). Thus, as Debray Genette shows, by playing on the word "heart," Flaubert creates an indetermination between the realistic and spiritual readings of Félicité's death, allowing the reader to make both readings at the same time.

It is not difficult, when reading Debray Genette's analysis, to picture the ending of *A Simple Heart* as the result of a dialogue in which Flaubert learns from his work how the latter is supposed to be made. Indeed, both the successive blockages he faces and the solution he finally adopts are born from unexpected resonances between the materials of the work. While Flaubert may have willfully crafted the ambivalence about Félicité's saintliness that runs through the tale, he does not seem to have anticipated the problem this ambivalence would pose at the end, that is, when he would have to deal with the generic constraints of making an ending (i.e., signifying the end without closing the meaning). Similarly, while Flaubert may have willfully explored the semantic system of physiology and that of spirituality when trying to write Félicité's death, he does not seem to have anticipated that her heart would be the key for reconciling these systems.

In each case, something happens at the intersection between the materials of the work *before* the author becomes aware of it; as if the work was always one step ahead of him. Thus, what is fascinating about Debray Genette's analysis is that it lets us hear *the voice of the work to be made* (Souriau, 1956/2015).

A voice without an adequate theory

Yet, Debray Genette (1984/2004) never makes this voice explicit in her analysis. In fact, if one can hear this voice, it is in many ways *despite* the type of analysis that she develops. Indeed, in the tradition of intertextual analysis (Genette, 1982/1997) inspired by Bakhtin (1975/1981), Debray Genette meticulously traces how Flaubert negotiates with various literary and cultural models as he tries to write *Félicité's* death. That is, she shows how he progressively orchestrates elements from pagan, Christian, beatific, romantic, scientific, saintly stories and pictures of death to offer *Félicité* a passing that is irreducible to any of them. In other words, Debray Genette recurses to a form of analysis in which the work-in-the-making is essentially *passive*: it is the result of a dialogue between the author and the various alien voices that haunt the words that are available to him or her. In this perspective, the work does not really participate in its own making.

Thus, by showing that all sorts of orchestration events happen *between* the materials of the work that elude the author's intentions (by bringing unforeseen problems or solutions), Debray Genette's analysis contradicts – or at least seriously complicates – the Bakhtinian model on which it is built. However, while this complication appears in other genetic studies (e.g., Le Calvez, 1997), literary critics have generally avoided revising Bakhtin's model so as to explicitly account for the voices of the work to be made. For instance, Ferrer (2011) proposes to analyze the unexpected events that riddle the creative process as accidents that become part of the work only when the author sees them and decides to make something out of them. In this perspective, the orchestration of the materials of the work is not the result of a dialogue between the work-to-be-made and the author but between multiple instances of the author (i.e., between instances that unwittingly produce orchestration events and instances that see and use those events).

While Ferrer's proposal is satisfying in the sense that it accounts for the indispensable role that the artist plays in the making of her work, it has the disadvantage of diminishing the agency of the work itself (in particular of these unforeseen resonances that happen between the materials of the work). Thus, if Flaubert manages to reconcile the realist and spiritual readings of Félicité's death by focusing on her last heartbeats, isn't it because the materials of the work were configured in such a way that Félicité's heart *presented itself* to him in that way? Thus, as Debray Genette's analysis and Ferrer's reflections illustrate, there appears to be something in the tradition of dialogic analysis that resists the idea that a work may *articulate itself* to a certain extent.

This resistance stems from a certain conception of the author's agency. Indeed, in the dialogic tradition, the author's agency lies in the orchestration of the alien voices that haunt the words and materials that are available to him or her. For Bakhtin (1975/1981), the author's voice or agency never manifests itself directly, through a language that would be entirely his or her own, but through various "orchestrating...elements of language" (p. 416). As Bakhtin (1975/1981) explains, "in the final analysis, all these [orchestrating] elements are determined by the author's artistic will – they are totally the author's artistic responsibility" (p. 416).

The hypothesis of the voice of the work to be made (Souriau, 1956/2015) questions or complicates this conception of the author's agency. It suggests that the very *orchestration* of the work happens (at least for a part) *independently* from the author, that is, *before* he or she becomes aware of it. In other words, it asserts that the author's agency consists of *triggering* and *prolonging* this orchestration rather than creating it. Interestingly, Bakhtin's depiction of materials, in particular words, as "living" entities, "true to [themselves]" (Bakhtin, 1975/1981, p. 419) can be viewed as a form of recognition of the materials' ability to self-orchestrate. Bakhtin (1979/1986) even writes that he can "hear voices in *everything* and dialogic relations *among them*" (p. 169, our emphasis).

Bakhtin, however, does not precisely explain or demonstrate how such dialogic relations may happen. Therefore, taking the voice of the work to be made seriously involves not only to rethink the relationship between the work and its (human) author(s), but also to identify how materials may self-orchestrate.

Abduction, continuum, and the work to be made


It is noteworthy that the question of the materials' self-orchestration is also the stumbling block of the few theories that explicitly develop the idea of a "work to be made." Thus, Souriau (1956/2015) defines the work to be made as a being that is for a large part virtual, in the sense that it primarily exists as a possibility, but that is also actual or concrete to the extent that it is *referenced by the materials of a specific draft or situation*. Souriau, however, does not precisely explain how this reference takes place. Similarly, Latour (2013) conceives of the work to be made (which he calls "being of fiction") as a figure that springs into existence when *materials are disturbed by a resonance or vibration*. However, he does not elaborate on how this resonance or vibration happens and grows.

To clarify this point, we propose to turn to two notions that are central in Charles Sanders Peirce's philosophy (Peirce, 1931-1958), namely abduction and the continuum. In what follows, our aim is not to provide a complete picture of these notions (on abduction, see Psillos (2011); on the continuum, see Peirce (1893/1998) and Ketner & Putnam (1992)), but to show that, taken together, they illuminate how materials self-orchestrate and give birth to partly articulated things that people may or may not notice and prolong.

For Peirce, abduction is the form of reasoning by which new ideas or hypotheses are produced (Psillos, 2011). If we simplify his earlier writings on this subject to the extreme, an

abduction is what happens when the resonance or likeness between two entities leads to their unification into a new whole.¹ For instance,

Such cloud has the following shape: 

Some questions are marked with the following shape: 

Therefore, this cloud could be a question

In this case, two entities (the cloud and a certain set of questions) resonate in the sense that they share the same quality (here the same shape), which then leads to their unification into a new whole (the idea that this cloud could be a question).

For sure, this unification of the materials could not be completed without the help of some sort of intelligent entity capable of perceiving the resonance and acting upon it (e.g., a human being). However, it is also true that this unification could not be accomplished either if a connection – the resonance or likeness – did not *already exist* between the materials. In that respect, it makes sense to say that the result of the abduction (the new hypothesis or idea) is *the furtherment or clarification of something that already partly existed*.

Of course, one could retort that there exists an infinity of potential resonances and that the ones that really happen (i.e., become actual) are those that *people* reveal or enact (through a process of abduction). Such criticism, however, would be based on a strict dichotomy between the virtual and the actual that does not accurately reflect how abductions take place. Indeed, people never find themselves directly facing an infinity of potential resonances, each

¹ This definition is actually true for the three forms of reasoning that Peirce studied in his earlier writings, namely deduction, induction, and abduction. However, it is especially true for abduction in the sense that deduction and induction can be defined by *adding* constraints to this general formula. For instance, what differentiates induction from abduction is that it operates a generalization, meaning that the facts stated in the conclusion must be similar to those stated in the premises (as in “These beans are from this bag; these beans are white; therefore all these beans from this bag are white”). While Peirce often presented abduction as the only type of reasoning that explains facts, he at times recognized that deduction and induction could also be regarded as explanations (see Psillos, 2011). In that respect, what characterizes abduction, it appears, is that it is free from the specific constraints of deduction and induction – a “wild” form of reasoning.

equally likely or unlikely as the next, but situations that make specific resonances *more* likely, salient or actual than others.

Continuing with the same example, a person – let’s call her Rose – is more likely to see the resonance between the cloud and the question mark if she has the habit of looking at the sky to clear her head, she has just written an email containing many question marks, and there is only one cloud in the sky. All these elements (the habit, the email and the sky) are part of a specific situation in which *this* resonance markedly detaches itself from other possible resonances (say between the blueness of the sky and that of her jeans), that is, becomes *less* virtual than others – and this, *before* Rose actually notices it.

We touch here on a key feature of Peirce’s philosophy, namely the continuum (which he called “synechism” (Peirce, 1893/1998)). For Peirce, there is no clear-cut distinction between the virtual and the actual, but a continuum of infinite gradients between them (see also Souriau (1956/2015) and Latour (2013)). The voice of the work to be made may be understood as a particular stage in this continuum. It is what happens when something materializes itself as a *noticeable* or *abductive* resonance, that is, when the features of a situation have singularized it from other possible resonances, but no one has yet transformed it into a distinct idea (by completing an abductive process).

From this perspective, a key aspect of people’s creativity is indeed to notice and *prolong* these fuzzy or partly articulated things (Latour, 2013). In other words, it is to provide them with a fuller existence (Souriau, 1956/2015). Besides completing abductions, the specific way artists do this is by exploring and manipulating all sorts of materials in order to trigger new noticeable resonances, and by continuing to do this until these resonances connect, thereby creating bigger wholes or harmonies (Dewey, 1934/1980). As shown by genetic studies (Ferrer, 2011), this is a risky process, as the resonances the artists encounter

along the way often lead to unrelated or incompatible ideas (that is, ideas that fail to resonate together in a noticeable way).

However, some resonances may sometimes have the effect of revealing a path between (some of) these apparently incompatible ideas. This is what happened, for instance, when Flaubert realized that Félicité's heart was at the crossroad between the conflicting semantic systems he was exploring and could therefore be the key for unifying the realist and spiritual readings of her death. What remains to be seen is how we can empirically study how such greater harmonies are produced one abduction at a time.

Method

The main difficulty in empirically studying abductions is that they leave few traces. Genetic studies (Ferrer & Groden, 2004) offer a good illustration of this difficulty. Indeed, while drafts and manuscripts are precious documents in that they reveal the various changes artists make to their works during their creative process, they usually tell us very little about the precise circumstances – in particular, the unexpected resonances – that inspired these changes. In other words, they tend to register only the consequences of the abductive processes the artists experience, and not the abductive processes themselves.

One way to circumvent these problems, we argue, is to work with *video recordings of group efforts to produce a work of art*. While this method drastically limits the type of artistic processes that can be empirically studied, it also provides two important benefits: 1) In contrast with more solitary works, participants of collective efforts have to account for *how* they make their hypotheses so that the other participants can discuss, change, or expand them. In other words, collective efforts allow us to access aspects of the abduction processes that would otherwise remain concealed in the artists' heads. 2) Video recordings capture the various material re-configurations that happen during the creative process. That is, they capture not only the precise organization of the participants' utterances, but also how these

utterances connect with bodies, documents, artifacts, gestures, tones, among other things.

They thus make it possible to retrospectively identify the various resonances that participants allude to when making hypotheses.

The video recordings we used for this paper were made during an event called “Museomix.” Museomix is an annual creative event that happens simultaneously in several museums around the world. For three days, 60 to 80 participants with various backgrounds meet in each participating museum to explore new ways of experiencing the museum. In this paper, we focus on an artistic project that was developed during Museomix at Montreal’s Fine Arts Museum in November 2014. Entitled “The Secret Social Life of Artworks,” the idea was to build an installation that gives the museum’s artworks voices and reveals the relationships they create by just “hanging out together” all day long. The team members who developed this project were: Eva, Pierre, Bruno, France, Mai Anh, and Julia. Equipped with cameras, we video-shadowed these persons during this event, thus recording their discussions of how their idea could be developed and which potential artworks to include; their writing of dialogues between specific artworks; and their use of iPads, speakers, wood panels, and so on to create the installation. This resulted in 79 video files and a total of approximately 25 hours of video recordings.

The challenge, in terms of analysis, was then to reconstruct the abductions that drove the team’s creative process. To this end, we proceeded as follows: 1) We retraced the main hypotheses thanks to which the participants transformed and expanded their initial idea (i.e., revealing the artworks’ secret relationships). 2) We examined how the participants accounted for these hypotheses during their exchanges, in particular how they implicitly positioned them as inspired by specific resonances (or likenesses) between the materials they were exploring. 3) When it was possible, we then made these resonances explicit and reconstructed the participants’ abductive reasoning.

The three episodes we analyze below center on some of the hypotheses the team developed about the two artworks they ended up working on, namely a bust of Leopoldo de' Medici and a portrait of Mary Drummond that happened to be positioned in front of each other in one of the rooms of the museum (see Figure 1). We chose to focus on these episodes for two reasons: first, because we were able to reconstruct the abductive processes by which specific hypotheses presented themselves to the participants; second, because we were able to retrace how, thanks to the participants' continuous exploration of the project's materials, these hypotheses gradually connected to form a somewhat harmonious whole. These episodes thus illustrate how the voice of a work-to-be-made not only articulated itself, but also intensified during the participants' creative process.

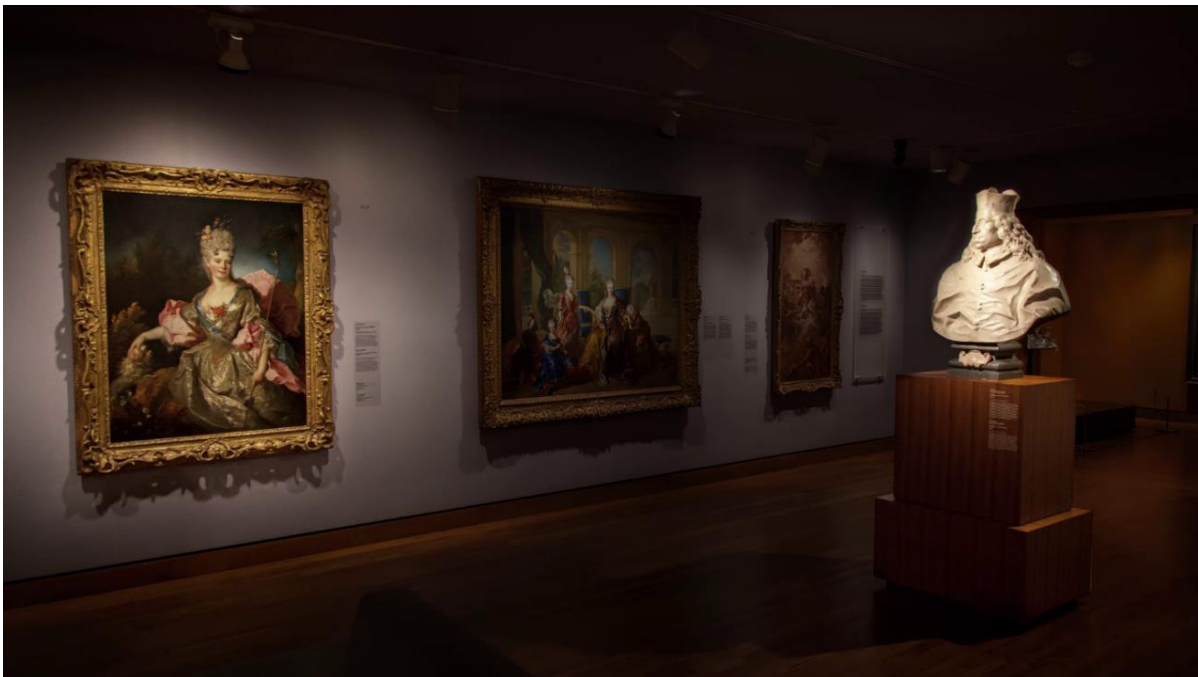


Figure 1. Portrait of Mary Drummond and bust of Leopoldo de' Medici.

Episode 1: “look! He’s cruising her!”

It is 4:06 PM during the first day of Museomix. For the past 30 minutes, the team has been roaming through the museum in search for artworks that have established secret social

relationships. At this precise moment, they have entered one of the rooms that display 18th century artworks, and the following interaction transpires:

896 Eva That's a Medici ((pointing at a bust in the middle of the room))
 897 (1.0)
 898 Eva That would be kind of funny (.) because he is like the art lover right↑
 899 (1.0)
 900 Melanie Yeah
 901 (7.0) ((Everybody gets closer to the bust of de' Medici and starts looking at the other
 902 artworks))
 903 Julia ((laughs))
 904 Mai Anh He's like uhm ((laughs))
 905 (2.0)
 906 Pierre ((laughs)) Oh look he's c- [he's cruising her ((pointing at the portrait of a woman))
 907 Mai Anh [Oh yeah yeah yeah=
 908 Eva =Ah::: ((expressing surprise))
 909 Pierre He is [totally cruising her
 910 Eva [She's looking ba::ck
 911 Julia ((laughs))

A way to start analyzing what happens at the beginning of this excerpt is to say that Eva indicates the possibility of creating a scenario of *mise en abyme* with de' Medici in the sense that the latter is at once an artwork (a bust) and an "art lover" (898), which, she remarks, "would be kind of funny" (898). In this perspective, Eva would be connecting a series of materials – the team's project of revealing the artworks' secret relationships, the bust of de' Medici, and the fact that de' Medici was an art lover – in such a way that they acquire an entirely new meaning (they become the embryo of a scenario featuring an artwork who is an art lover).

A way to slightly decenter this analysis from what Eva is doing would be to say that Eva is in fact having a sort of remote dialogue with other (human) meaning makers: the team (who formulated the project), the sculptor (who produced the bust), the museum curator (who had it installed in a certain way), and various historians (who wrote the life of de' Medici). In this view, Eva would acquire her own voice by making all these voices speak in a new way. While this dialogic or intertextual perspective has the merit of decentering the analysis from Eva's voice by drawing our attention to the other voices (or sources of agency) to which she

responds, we argue that it still attributes Eva too much agency by making her the *unique source* of the connection between these alien voices. The problem, more precisely, is that this analysis does not tell us how she acquired the ability of making *this* specific connection.

A way to further decenter the analysis is to take seriously the idea that materials can resonate, thus giving birth to fuzzy things that people may or may not notice and prolong by completing abductions. In this case, the team's project, the purpose of which is to reveal *relationships between artworks*, resonates with de' Medici to the extent that, in this situation, he is at once a bust and an art lover, that is, *an artwork that has relationships with other artworks*. It is this resonance or fuzzy thing that Eva notices and prolongs when she abductively formulates the idea that the project could be about de' Medici as a bust and an art lover, (an idea she implicitly references by saying "it would be kind of funny because he is the art lover" (898)).

In this perspective, Eva is no longer the source of the connection between the materials, but rather *the receiver and interpreter of this connection*. To say this is not to deprive her of her agency. Indeed, by purposefully looking at the museum's artworks through the team's project, Eva certainly creates the conditions for certain resonances to stand out (in this case, the resonance between the project and the bust of de' Medici), but she does not create the resonances themselves, which are the materials' doing. In other words, there is a fleeting point in Eva's creative process where the materials take over and *respond* to her search for abductive resonances. Thus, if Eva indeed becomes capable of connecting specific materials in a new way, she partly owes it to the materials' ability to connect and to the fuzzy form or idea that flows through them as a result. In short, *they* significantly contribute to making her capable of creating these connections.

In keeping with this type of analysis, we can say that when the team members gather around the bust of Medici and start looking for the artworks de' Medici may be having a

relationship with (901), they involuntarily create a situation in which other materials resonate. Indeed, as can be seen in Figure 1, the bust of de' Medici and the portrait of Mary Drummond are positioned in such a way that they appear to *stare* at each other². This resonates (initially for Pierre, then for Mai Anh and Eva) with a rather common experience/material, which is that flirting often involves a certain amount of *staring* at the person one is flirting with. It is this resonance (or fuzzy thing) that the team members notice and prolong when they abductively formulate the idea that (the bust of) de' Medici and (the portrait of) Mary Drummond are flirting (an idea Eva and Pierre reference when they exclaim: "Look he's cruising her" (Pierre, 906; 909) and "she is looking back" (Eva, 910)). Here again, if the team members become capable of connecting certain materials (in this case, the artworks' position in the room and the experience of flirting), they owe it to the materials' ability to resonate and to the fuzzy thing that articulates itself as a result (in this case, the possibility of a flirt scenario).

It is noteworthy that this flirt scenario does not clearly fit with the *mise en abyme* scenario suggested by Eva at the beginning of the excerpt. While it certainly features de' Medici as a "lover" (in the sense of seducer), it is no longer clear, in this new scenario, if de' Medici is considering Mary Drummond as an *artwork*, that is, if he is still speaking as an "art lover." It seems, in other words, that the work-to-be-made that animates the team is about to split in two competing versions of itself (the *mise en abyme* scenario vs. the flirt scenario). This situation at once complicates the participants' creative process (to the extent that they are torn between two different directions to expand their work), but also simplifies it to the extent

² Of course the *impression* that the artworks are staring at each other is not mechanically produced by their positions in the room in the sense that it involves the active contribution of the human participants. The latter must notably focus their attention on specific parts of the artworks, namely the characters that are represented in them. So, again it is impossible to deny the key role that human participants play in making certain resonances stand out. This, however, does not change the fact that it is the materials themselves that resonate and, therefore, that these resonances for a large part escape or, more precisely, respond to the human participants' agency.

that it invites them to look for ways of making these two directions converge, which, as we shall see later, is precisely what happens in the third episode.

Episode 2: “maybe she is cruising him”

It is about 11:35am on the second day of Museomix. For the past 15 minutes, France has been presenting what Julia and her have learned about the lives of Leopoldo de Medici and Mary Drummond as well as about love relationship in the 17th and 18th centuries, when

Eva asks a question:

1882	Eva	((Addressing France)) Was he married? ((speaking about de’ Medici))
1883	France	Uh <i>no</i> he is a cardinal (.)
1884	Eva	Oh ((surprised))
1885	France	One of his brothers uh uh <i>renounced the robe, the church, to get married but <u>he</u> uh</i>
1886	Eva	Ok he is- ok
1887		(1.0)
1888	Pierre	So maybe <u>she</u> is cruising him and he is like “no:: a man of church” ((in high pitch voice faking alarm))
1889		

In this excerpt, the flirt scenario encountered in episode 1 is taken up and expanded through a new idea, which is that Drummond could be “cruising [de’ Medici]” (1889). While this idea is clearly the result of the participants’ efforts to explore and bring together various materials (in particular historical materials), it is also the result of a series of unexpected resonances that happen between the materials.

Let’s start by examining the exchange between Eva and France at the beginning of the excerpt. In response to Eva’s question (“was [de’ Medici] married?”, 1882), France brings two historical facts to the team’s attention: de’ Medici was “a cardinal” (1883) and, contrary to one of his brothers, he did not “renounce the robe, the church, to get married” (1885). This second piece of information is important as it has the effect of reminding the team that clergymen could not get married and, more broadly, were a priori forbidden from having any romantic relationship. Thus, through her response, France involuntarily brings forward the premises of a deduction (i.e., *clergymen* were not supposed to have any romantic relationship; de’ Medici was a *clergyman*), the conclusion of which is that de’ Medici (as a historical

character) was not supposed to *have any romantic relationship*. In the context of the project, this conclusion resonates with the idea that de' Medici (as a fictional character this time) is flirting with Drummond, that is, *has a romantic relationship* with her, which abductively leads to the following hypothesis: de' Medici is perhaps *not* supposed to be flirting with her.

This hypothesis is important to understand how Pierre arrives at the idea that Drummond “is cruising [de' Medici]” (1889) to the extent that it functions as an invitation to revise the flirt scenario as it was initially conceived. This hypothesis, however, is not sufficient to understand why Pierre chooses *this* particular way of revising the flirt scenario. Interestingly, Pierre simply presents it as an obvious conclusion (“*so* maybe she is cruising him,” 1889, our emphasis), that is, as something that is supposed to derive from the team members' shared experience. And indeed, if we examine the abduction that led the team to the initial flirt scenario, we see that it virtually contains an alternative abduction leading to a different scenario:

De' Medici appears to initiate a flirt with Mary Drummond because he is *staring* at her, but, as the team observed, she also appears to be *staring* at him (“she's looking back” 910), so she could also be viewed as the one initiating the flirt.

This, we argue, is what Pierre references when he says: “so maybe she is cruising him” (1889; note the emphasis on “she”, which indicates the possibility of a role reversal between him and her).

As shown in this analysis, the participants' ability to produce a new and unexpected idea is, once again, for a part the result of the materials' own ability to connect or resonate and to the fuzzy things that flow through them as a result – things that participants notice, prolong, and clarify every time they complete an abduction (or deduction) process.

Episode 3: “she should try to make him collect her”

It is now about 11:50am (i.e., some 15 minutes after episode 2). The team members appear to be attached to the idea that Drummond is flirting with de' Medici to the extent that they keep coming back to it in their exchanges. However, they are still to find a way to further develop this idea. A question, in particular, seems to preoccupy them: how could Drummond seduce de' Medici? That is, what could be the “soft spot” in him that she could use? Then the following exchange transpires:

2191 Pierre ((speaking of Mary Drummond)) Maybe she can try to impress him because she
 2192 knows=
 2193 Eva =she knows some Spanish
 2194 Pierre Yeah exactly like she travels a lot so she knows a few languages and he only knows
 2195 uh Latin
 2196 Eva [That would be kind of cool to know what he-
 2197 France [Maybe they can talk about art a little bit I don't know
 2198 Eva I think yeah- I think she should try to make him collect her. Like she presents herself
 2199 like she is an artwork and we- [you know
 2200 Pierre [Ah yeah
 2201 (1.0)
 2202 Eva And he is a collector, he is an esthetic person right? collecting beautiful things
 2203 France He would like her portrait maybe I don't know
 2204 Eva No but she being the beautiful thing not the portrait
 2205 Pierre like collect her as a mistress? ((smiling))
 2206 Eva Yeah
 2207 France hm ((touching her lips while thinking of something))
 2208 Eva like just appeal to his sense of beauty and all that=
 2209 Melanie =Nice, really nice

To seduce de' Medici, Eva proposes, Drummond “should try to make him collect her; like she presents herself like she is an artwork” (2216-17) because, she adds, “he is a collector...an esthetic person...collecting beautiful things” (2220). In other words, to give Drummond a chance to seduce de' Medici, Eva offers to develop a scenario that blurs the line between art and seduction. Indeed, in this scenario, Drummond's attitude is that of a seducer in the sense that she “tr[ies] to make him” do something by “presenting herself” in a certain way, except that her goal in doing this is to arouse a purely “esthetic” form of desire. In that respect, she is a person and an artwork at the same time.

This is this ontological ambivalence that Eva then tries to explain to France and Pierre. When France suggests that “[de' Medici] might like her portrait” (2221), Eva corrects her by

saying: “no, she being the beautiful thing not the portrait” (2222), which is a way of saying that Drummond should not be reduced to an artwork. Conversely, when Pierre suggests that Drummond’s goal is to have de’ Medici “collect her as a mistress” (2223), she also corrects him by saying that her goal is “just [to] appeal to his sense of beauty and all that” (2226), which amounts to saying that Drummond’s attitude should not be reduced to that of a seducer (it is also that of an artwork). Now, where does this intriguing scenario come from? How did Eva become capable of expressing it?

This scenario, we argue, is the result of two successive abductions. First, the idea of Drummond’s ontological ambivalence (i.e., she is a person and an artwork at the same time) comes from the resonance that exists between the idea that de’ Medici “is an art collector [that is,] an esthetic person collecting *beautiful things*” (2202) and the idea that Drummond herself is a “*beautiful thing*” (2204), (an idea that Eva already expressed about 10 minutes earlier when she suggested that “everyone tells [Drummond] that she’s pretty [so] she thinks she’s pretty”). By suggesting a connection between these two ideas, this resonance abductively leads to a new hypothesis, which is that de’ Medici, as an art collector, could be interested in Drummond (because she looks like an artwork). This hypothesis, in turn, leads to the following abduction:

Drummond tries to seduce de’ Medici, that is, to *be of interest to him*

Drummond, because she looks like an artwork, *is of interest to de’ Medici*

So, she could try to seduce him by looking like an artwork, that is, as Eva puts it, by “present[ing] herself like she is an artwork” (2198-99).

As we see, Eva’s ability to connect the project’s materials to produce this scenario is largely due to the materials’ *own* ability to connect or resonate and to the fuzzy forms/ideas that flow through them as result. In other words, Eva’s creativity lies – at least for a part – in her ability to *listen* to the voice produced by the materials’ self-orchestration; a voice that comes to her

because she happens to carry (as memories or preoccupations) some of the materials through which it articulates itself.

Discussion

While Souriau (1956/2015) and Latour (2013) recognized the irreducible passive dimension of every creative impulsion, in particular by pointing at the materials' ability to connect, vibrate or resonate, they did not empirically investigate *how* these connections, vibrations or resonances take place over the course of a creative process. By borrowing from Peirce the concept of abduction to analyze the interactions within a collective effort to produce an artwork, our analysis does just this.

By retracing some of the abductions through which the fictional relationship between Mary Drummond and Leopoldo de' Medici took shape in the participants' conversations, we concretely show how materials as diverse as a team project, artifacts, historical facts, gazes, or flirt experiences contribute to the articulation of new ideas. They do so because they happen to share certain qualities (they look alike or resonate), thus suggesting other, perhaps deeper, connections between them. In other words, they contribute to the articulation of new things to the extent that by resonating, they form proto-articulations of these things: articulations that lack the distinctness of complete abductions, but that already possess the momentum of their premises. It is noteworthy, however, that these resonances (or proto-articulations) are rarely (perhaps never) entirely independent from human actions. As shown in our case study, if materials resonate in a noticeable way, it is often because people bring them together in certain situations. In fact, if many of them happen to be in these situations, it is only because people carry them in their bodies (as past experiences or preoccupations). It remains that there is a point where the materials' agency escapes the humans': this is when they resonate and surprise us; when *they* offer us a new way to extend our agency; which is when the voice of a work to be made articulates itself.

Our work also contributes to empirically verifying another claim made by Souriau and Latour, which is that art or, more broadly, beings of fiction, have their own definition of truth. Something is esthetically or fictionally true, they argue, if, articulation after articulation, a certain unity or harmony emerges from the work. While this harmony certainly requires our active contribution to take place (if only by keeping the memory of the work's successive articulations), it is *also*, they insist, something that dawns on us, that is, something that we passively experience. Our case study, we believe, sheds light on how a work's harmony may *impose itself* to the participants of a creative process. Indeed, what is special about Eva's idea in episode 3 (that Drummond should make de' Medici collect her) is that, by building up on previous ideas (in particular the mise en abyme scenario of episode 1 and the she-is-cruising-him scenario of episode 2), it also prolongs the resonances that gave birth to them. In other words, what is special about this idea is that it creates a path between some of the resonances that animated the team during their creative process. (In this case, the resonances notably involve: the project of revealing secret *relationship between artworks*, the fact that de' Medici is *a bust and an art lover*, that Drummond appears to be *staring* at him, that flirting people tend to *stare*, that de' Medici collects *beautiful things*, and that Drummond is a *beautiful thing*). Thus, if a certain harmony emanates from Eva's idea and indeed imposes itself (at least to her), it is precisely because it is not only Eva's idea, but the channel through which some of the project's resonances come together.

To conclude, it is noteworthy that this harmony appears to be the amplification of a property that is already in every abduction. Indeed, what is the experience of being carried away by the unexpected likeness between two things (which is the core of what an abduction is), if not an experience of harmony? That which characterizes art and beings of fiction, therefore, is not the experience of harmony *per se* but a sort of squared harmony: the intensification of this experience through other experiences of the same kind (i.e., other

abductions). This, however, is likely only *one* way of interacting with the world's unexpected resonances. Indeed, abductions do not only concern artists, but also the scientist who comes up with a new way of explaining experimental results, the politician who suddenly redefines at once the issues and the public she is addressing, or the manager who thinks of a new way of distributing the tasks within her team. Abductions, in other words, are at the heart of all sorts of creative activities, each having its own special way of prolonging abductive resonances. Our analyses, we believe, show that the close study of people's interactions offers us a privileged access not only to how abductions come to us, but also to what we do with them. Communication scholars, therefore, might be especially well poised to study the many ways the world makes us creative.

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