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At the Junction Between Subsistence and Reference:

A Pragmatist Take on Interaction Analysis

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Abstract

This paper presents a view of interaction analysis that departs from the intersubjectivist assumptions that underlie its ethnomethodological tradition. Adopting a pragmatist perspective, we propose to treat every phenomenon as being composed of relations, that is, as being constituted by passing through various things and beings. Extending Latour's work on modernity, we argue that interaction analysts aim to capture social phenomena at the junction between two modes of existence or two manners of passing through others. In the mode of subsistence, social phenomena are (re)produced by passing through continuously new elements. In the mode of reference, social phenomena maintain themselves by going back and forth between various inscriptions. Drawing upon an illustrative case study, we show how the movement of subsistence always eludes that of reference, and how analysts can only move along with this movement by limiting their corroboration techniques, both in number and in range. Thus, this paper makes an important contribution to research on language and social interaction, as well as science and technology studies.

Keywords: ethnomethodology, interaction analysis, pragmatism, modes of existence, subsistence, reference, inscription

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A central tenet of ethnomethodology is that researchers are not the only ones who try to make the rational character of their actions “accountable” (i.e., verifiable, reportable, and observable by others): everybody does (see Button 1991; Garfinkel, 1967; Heritage 1984; Sacks, Schegloff, Jefferson, 1974). This *accountability* is one of the fundamental processes by which all social phenomena are reproduced. When people start lining up at a bus stop, for example, their behavior signals the rule that people should enter according to their order of arrival. Thus, their behavior indicates the circumstances that make it a rational behavior (Livingston, 1987). This *indexical connection* between the immediately visible features of social activities and the rules or circumstances that justify them is key to the reproducibility of social phenomena; it allows “members” (those who know how an activity works) to seamlessly join in while allowing non-members to guess the rules, or at least inquire about them.

This indexical relationship also explains the irreducible *eventfulness* of social phenomena. As Garfinkel (1967) notes, no matter how explicitly and precisely people describe the rules they are using to say that one thing means or refers to another, the indexical gap between them can never be entirely bridged or repaired. There are always more elements that could be explicated to complete, explain, or justify the rules people rely on, which is another way of saying that there is an irreducible, implicit dimension in everything people do and say. It follows that the accountable or intelligible character of an activity is always accomplished “for another next first time,” as Garfinkel (2002, p. 272) put it. This intelligibility is therefore inseparable from a creative act that consists in establishing *here and now* the elements that must be made explicit (and those that can

be taken for granted) to carry out the purpose at hand. While *bona fide* members of a group are supposed to be able to do just this, this ability is constantly put to the test and demonstrated.

As shown by various ethnomethodological studies (e.g., see Button, 1991; Heritage, 1984), this continuous effort to produce accountability is at the heart of any social activity, from ordinary ones, such as everyday conversations (Sacks et al., 1974), to technical ones, such as discussing the results of experimental research (see Livingston, 1995; Lynch, 1985). One of the great strengths of ethnomethodology is that it reveals that there is no ontological gap between what researchers do and what the rest of society does. In this view, researchers are just another “tribe,” so to speak.

While ethnomethodology captures the continuity between the work of researchers and that of any other social group, it seems less able to capture certain elements of *discontinuity* between them. To say this is not to question the extremely rich and longstanding tradition of ethnomethodological studies of scientific practices (see Alac, 2011; Garfinkel, 1967; Livingston 1986, 1995; Lynch, 1985; 1993; Mondada, 2009; Speer, 2002; Suchman & Jordan, 1990). These studies contributed to reveal the important role that *inscriptions* (in the broadest sense of the term, namely documents, recordings, or any kinds of “markings” left by someone or something) play in these practices. However, these studies tend to focus on the scientists’ everyday work to produce, arrange, and frame these inscriptions, so they produce certain effects. Thus, whether they unveil particular biases (Suchman & Jordan, 1990) or simply expose the daily intricacies of producing “good” science (Lynch, 1995), these studies emphasize the unavoidable marks of human agency in the production of science. There is, however, another side to this picture.

In keeping with (early) Husserl’s (1900/1901/2001) writings and contemporary science studies (e.g., see Caronia, 2015, 2018; Duranti, 2006; Latour 1999), inscriptions (and, through them, the phenomena they document) can be said to actively contribute to the production of

science. Arguably, a key aspect of what researchers do entails producing/collecting more and more inscriptions so that their claims about the world are no longer *solely* theirs, but *also* those of a large number of various things and beings (samples, machines, calculations, recordings, etc.). Therefore, what makes researchers' work unique is not only that they use different ways to make the rational character of their activities accountable, but also that they make it *more* accountable by using carefully-selected inscriptions. While ethnomethodologists acknowledge the accumulative nature of science, they rarely emphasize the agency of inscriptions.

This is largely due to the intersubjectivist presuppositions that ethnomethodology inherited from Schütz's (1962) phenomenological sociology. Indeed, ethnomethodologists' assumption is that *human beings* are the ultimate sources of agency that allow social order to be reproduced. If such things as hierarchy, knowledge, or trade exist, it is first and foremost because *people* reproduce them (see also Heritage, 1984). While ethnomethodologists certainly do not deny that other things, such as texts, tools and so forth, play a role in these accomplishments, they insist that people *make* them play this role. Ethnomethodologists' intersubjectivist posture, then, demands that they remain agnostic about the agency of texts or tools and focus exclusively on *how people attribute agency to them* during their interactions. Yet they cannot maintain this agnosticism with regard to the inscriptions (audio/video recordings, transcripts, etc.) they need to produce for the purpose of their own research. In fact, they strongly (even if implicitly) defend the specific agency of these inscriptions; that is, their specific contribution to the analytical work carried out to study social phenomena. Consider, for instance, how Sacks (1984) explicates his reasons for working with recordings:

I started to work with tape-recorded conversations. Such materials had a single virtue, that I could replay them. I could transcribe them somewhat and study them extendedly—however long it might take. The tape-recorded materials constituted a “good enough” record of what happened. Other things, to be sure, happened, but at least what was on the tape had happened. It was not from any large interest in language or from some theoretical

formulation of what should be studied that I started with tape-recorded conversations, but simply because I could get my hands on it and I could study it again and again, and also, consequentially, because others could look at what I had studied and make of it what they could, if, for example, they wanted to be able to disagree with me. (p. 26)

Although we concede that in this quote, Sacks does not explicitly refer to the agency of these recordings, he implicitly positions them as *making a difference* to the extent that they are portrayed as capable of recreating what has happened in the taped conversation, which allows others to disagree with Sacks' own analyses. The paradox of ethnomethodology-inspired interaction analysis is thus that the intersubjectivist presuppositions it inherited from phenomenology are at odds with the important role that inscriptions such as recordings and transcripts play in its practice. While these presuppositions certainly allowed ethnomethodologists to focus on the creative and eventful nature of social phenomena, they also prevented them from studying the agency of inscriptions *per se* (i.e., as something that goes beyond the particular way people orient to it in a given situation) and therefore to develop new insights into the role of inscriptions in various scientific practices, including their own (see also Caronia, 2015, 2018).

A productive way to deal with this issue, we argue in this paper, is to revise the premises on which ethnomethodology-inspired interaction analysis is based. Adopting a pragmatist perspective (James, 1907/1996; Peirce, 1991), we propose to treat social phenomena *as being composed of relations*, that is, *as being constituted by passing through various things and beings* (Cooren, 2015; 2018a, 2018b; Latour, 2013; Martine, Cooren, & Bartels, in press). Extending Latour's work on modernity, we argue that interaction analysts aim to capture social phenomena at the junction between two modes of existence or two manners of passing through others. In the first mode, which Latour (2013) calls *subsistence* (or *reproduction*), social phenomena are (re)produced by passing through continuously new elements. In this mode, for example,

interaction analysts could observe the dynamic, eventful manner in which a corporate culture is reproduced “for another next first time” (Garfinkel, 2002, p. 272) through employees’ words, gestures, attire, and so on. In the second mode, which Latour (1999, 2013) calls *reference* (or *rectified knowledge*), social phenomena are constituted by passing through inscriptions that corroborate their existence and make them scientifically verifiable. In this mode, interaction analysts could produce texts (audio and video recordings, transcripts, photographs, etc.) that make it possible to verify or corroborate (retrospectively) specific patterns in how a corporate culture is reproduced.

By showing how interaction analysts operate at the junction between these modes of existence, our aim here is to explicate how useful Latour’s conceptual tools are for tracing the protean path through which social phenomena are reproduced and, simultaneously, for building a stable path through which the patterned aspects of these phenomena can be verified. To illustrate the value of these conceptual tools for conducting empirical research, we draw upon a case study in which we examined how a creative team developed an idea during a three-day creative event called “Museomix” (see also Cooren, 2015; Martine & Cooren, 2016; Martine, 2018). We first describe the different elements through which the idea materialized over the course of two interactional episodes. Then, we show that our ability to follow the idea’s subsistence depended on our use of a relatively small set of verification/corroboration techniques: video recording, transcription, and written analysis. What makes our pragmatist take on interaction analysis unique, we show in turn, is that it reveals how the movement of subsistence always eludes that of reference, and how analysts can only move along with this movement by limiting their corroboration techniques, both in number and in range.

A Pragmatist Take on Interaction Analysis

From Peirce (1991) and James (1907/1996) to Latour (1999, 2013), there is a trend in the pragmatist tradition that has consistently questioned the subject-object dichotomy inherited from Plato to Descartes, Kant, and Husserl. For these pragmatists, there is no separation or gap between the subject and the object because there is no subject or object that exists in and of itself. Subject and object rather emerge simultaneously through/in a specific experience; they are the “byproducts” of the situation that happens to connect them. Therefore, what these pragmatists ask is not how subjects can bridge the gap that separates them from objects (since there is no gap to begin with), but how the connections that exist between these objects and them can be strengthened or rectified.

As the longstanding tradition of research on reflexivity in science has shown (e.g., see Alac, 2011; Brummans, 2015; Caronia, 2015, 2018; Duranti, 2006; Garfinkel, 1967; Livingston, 1986, 1995; Lynch, 1985, 1993; Mondada, 2009; Speer, 2002; Suchman & Jordan, 1990), inscriptions play a central role in this process. Inscriptions, Latour (1990, 1999) explains, simultaneously make phenomena more *mobile* (easier to transport and combine) and more *immutable* (capable of withstanding more and more tests and objections). Because inscriptions have the ability to conserve small fractions of phenomena, they make it possible to show that the same properties of a phenomenon flow through a smaller or larger network of documents, thus making it possible to verify what can be said about this phenomenon (see also Martine & De Maeyer, 2018). The networks through which phenomena flow in two directions (one may *add* new inscriptions as well as *go back* to inscriptions that have already been produced) are what Latour (2013) calls “chains of reference.”

For example, consider someone who wants to verify the claim that “being insulted is part of the job at company X.” One way to do this would be to go to this company, record the daily

interactions between employees, select the moments in which they are insulted as well as the moments in which they seem to normalize those insults, and account for their frequency. This chain of reference increases the mobility and immutability of the culture of insults at company X. It makes this culture more mobile in the sense that the culture becomes a set of elements that are easier to transport and combine: The daily life of employees becomes a series of video recordings, then a series of key moments, and finally a small set of figures. It also makes this culture more immutable in the sense that each element of the chain addresses possible objections. For example, one could object that it is impossible to ascertain the culture of insults at company X without having access to everyday interactions in the company; hence, the importance of the video recordings in the recreation of what is happening in this company. One could also object that the recordings are of little value if they do not show how people are insulted and how they subsequently normalize those insults; hence, the importance of capturing the exact moments when these two things happen. Finally, one could object that the recordings do not show anything more than isolated events; hence, the importance of accounting for their frequency.

One of the merits of our pragmatist take on interaction analysis is to account for the role of inscriptions in establishing more or less verified knowledge. It reveals their irreplaceable contribution to the production of *various degrees* of verifiability, falsifiability, or accountability. Another merit of our take is to show that verified knowledge can account for only a small part of the eventful reproduction of social phenomena. Indeed, the benefit of describing the chains of reference/inscriptions through which knowledge is created and is made more certain and accurate is that it becomes obvious that they can only transport a fraction of the phenomena to which they give access. It is clear, for instance, that all the elements that allow a company X's culture of insults to be sustained cannot pass through the narrow chains of reference by which verified knowledge about it is produced. This knowledge only pertains to those aspects of this culture that

remain stable along the chain; it does not capture *all* the conversations, impulses, managerial decisions, personal situations, and frustrations that contribute to its ongoing reproduction. Thus, parts of the eventfulness of a phenomenon always “escape” the chains of reference (see also Cicourel, 1964¹).

Latour (2013) consequently argues that phenomena (whether plants, planets, emotions, or corporate cultures) have their own logic or *mode of existence*, one that is irreducible to that of chains of reference. While chains of reference enable a movement in two directions (“forward” by adding and “backward” by returning), the movement through which social phenomena are reproduced (subsistence) is a movement that only goes in one direction: forward. In terms of reference, a phenomenon is therefore “felicitous” (see also Austin, 1975) as long as it keeps flowing through a chain of inscriptions in both directions; it is infelicitous when the inscriptions stop corroborating one another. In terms of subsistence, a phenomenon is “felicitous” as long as it keeps finding new elements through which it can be materialized or expressed; it is infelicitous when it fails to find such elements.

Thus, our pragmatist take provides a new way of understanding interaction analysis by showing how interaction analysts position themselves at the nexus between subsistence (eventful reproduction) and reference (verifiable or falsifiable knowledge). Like philosophers and poets, our take reveals, interaction analysts aim to reveal the creative, protean ways in which social phenomena are reproduced, and like scientists and reporters, they aim to produce inscriptions that corroborate *some* of the properties of these phenomena.² Our take in turn raises several important questions: How can interaction analysts take both modes of existence into account in their practice of conducting empirical research? That is, how can they follow the movement of subsistence and reference simultaneously? And, in so doing, what kinds of compromises do they have to make? To gain insight into these questions, we draw upon an illustrative case study that

shows the compromises we had to make as interaction analysts when we investigated the birth and transformations of an idea during a creative event called “Museomix.”

At the Junction Between Subsistence and Reference: Analyzing the Birth and Transformations of an Idea in Team Interactions

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 (art historians, graphic designers, software developers, and entrepreneurs) meet in each participating museum to explore new ways of experiencing the museum. During the first half of the first day, participants propose ideas and form teams of about six people. Subsequently, they have two and a half days to turn their ideas into working prototypes.

In this paper, we focus on an idea 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 a prototype that gives the museum’s artworks voices and reveals the relationships the artworks create by just “hanging out together” all day long (see also Cooren 2015; Martine & Cooren, 2016; Martine, 2018). The team members who developed this idea were: Eva, Pierre, Bruno, France, Mai Anh, and Julia. Equipped with cameras, we video-shadowed (Vásquez, Brummans, & Groleau, 2012) the team members 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 prototype. This resulted in 79 video files and a total of approximately 25 hours of video recordings. We also collected documents that were used to organize the event, such as snapshots of Museomix’s website and the participant handbook, as well as pictures taken by the participants to document their own work. Using Transana, a qualitative analysis software,

we then organized these data, selected the moments when the idea seemed to undergo important changes, and transcribed these moments using Jefferson's (2004) transcription guidelines, which are frequently used by interaction analysts.

The analysis we present below focuses on two interactional episodes: (1) the moment when the team encounters the two artworks they end up using for their prototype, namely a portrait of Mary Drummond and a bust of Leopoldo de' Medici; and (2) the moment when the team discusses the languages in which the artworks could speak to each other. The first part of our analysis focuses on the subsistence of the team's project idea in these two episodes. By paying close attention to everything the participants do and say, we carefully describe the *process of alteration* through which the idea is produced and reproduced in each episode. Specifically, this part of our analysis shows that the idea subsists through a session of improvisational brainstorming in the first episode and a dispute in the second. The second part of our analysis is a "meta"-analysis (i.e., an analysis of our first analysis). It shows that our ability to follow the idea's subsistence throughout these episodes depended on our use of a relatively small set of corroboration techniques (video recordings, transcripts, written analysis, and occasionally our knowledge of contextual elements). This second part of our analysis illustrates how we had to limit the size of our chains of reference to be able to follow the idea's subsistence.

Part I: tracing the idea's subsistence.

Episode 1: the team meets the bust of de' Medici and the portrait of Mary Drummond.

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 displays 18th

century artworks, and the following interaction transpires (the parts in *italics* occur in French in the original transcript; to watch this video excerpt, see Martine & Cooren, 2019, November 5a):

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))
 902 Julia ((laughs))
 903 Mai Anh He's like uhm ((laughs))
 904 (2.0)
 905 Pierre ((laughs)) Oh look he's c- [he's cruising her ((pointing at the portrait of a woman))
 906 Mai Anh [Oh yeah yeah yeah=
 907 Eva =Ah::: ((expressing surprise))
 908 Pierre He is [totally cruising her
 909 Eva [She's looking ba::ck
 910 Julia ((laughs))
 911 Mai Anh "I want you to be mine↑"
 912 Pierre Yeah
 913 Mai Anh It's happening on
 914 (1.0)
 915 Pierre "just want to:: add her on Facebook"
 916 Mai Anh She kind- like feels like she's like (.) into it too
 917 Eva Oh yeah:: she likes it
 918 Pierre Yeah
 919 François But the- the dog is a symbol of faithfulness, fidelity so ((camera turns to the caption next to the
 920 painting of the young lady)) so she is uh
 921 Mai Anh She is like "Oh I like his hair (.) it kind [of looks like my dog's (1.0) fur"
 922 Pierre [Yeah (1.5) He wants to talk to her but (.) because she has a
 923 dog and he is afraid of dogs and he can't really [approach her
 924 (Julia) [((gasps))
 925 (4.0)
 926 Bruno Well another story of this one (.) the girl to- this morning said that- that was uh (.) for becom(ing) the
 927 fiancee of someone so just because (.) before uh (0.5) actually meeting her (1.0) he gets this portrait
 928 [(.) of your next woman
 929 Mai Anh [Oh yeah
 930 Eva Oh:[:
 931 Bruno [So the guy gets the portrait (.) and it takes like six or eight months to do that kind of thing (.) after
 932 that you need to transport it so anyway [((laughs)) you get it super late
 933 France [It's not speed dating
 934 Bruno No no [it's not speed dating at all
 935 Eva [uh uh (.) yeah ((laughs))
 936 Mai Anh [Oh I I love it!
 937 France [((Laughs))
 938 Eva [((Laughs))
 939 Bruno [And you you get the portrait and "ah OK so this is my wife OK"
 940 (0.5)
 941 Bruno And after that you see the real [wife
 942 Eva [Yeah
 943 France And it
 944 Eva But () (.) it's also interesting because [that's probably it's that person was a bit of mystery may be (.)
 945 around it

946 France [I am sure she didn't have the choice of who (0.5) she was
 947 getting married to
 948 ((camera turns towards the sculpture))
 949 Mai Anh *I like this comment of (.) this is not speed dating because here they are really uh::* ((making a gesture
 950 with her hand back and forth between the sculpture and the painting))=
 951 Pierre =*This is slow dating*=
 952 Bruno =Slow (.) [really slow dating
 953 Mai Anh [*interacting uh* ((laughs))

In this excerpt, the team's project idea subsists through a form of improvisational brainstorming. The team can be regarded as doing improvisation for two reasons. First, as they enter the room, they do not know what they are about to say. As in improvisation games (see Sawyer, 2003), the script of their conversation can be summed up in one simple sentence: "Imagine relationships between artworks that are in the room." Second, their relationship scenarios are *in situ* co-productions. As in improvisation theater (Sawyer, 2003), these scenarios progressively emerge as each participant adds some new elements to those already introduced by others. This improvisation is rather disjointed, however, to the extent that the bits of scenario offered by the participants are loosely connected. The reason, it seems, is that the team does not aim to produce one consistent story at this stage, but rather to generate as many ideas as possible, a practice that is typical of brainstorming (see Osborn, 1957).

Let's have a closer look at how this hybrid process unfolds. Though very short, Eva's initial observation is quite rich. By pointing out the bust of de' Medici (see Figure 1) before adding "it would be kind of funny because he is the art lover" (line 898), she is doing two things. First, by using the conditional ("it would be"), she is inviting the team to consider the possibility of using the bust of de' Medici for their project; that is, to produce a scenario in which it would come to life and start interacting with other artworks. Second, by noting "that would be kind of *funny*," she seems to suggest that in this scenario—being an art lover—could have a double meaning: that of being interested in art and that of being romantically involved with artworks.

Thus, the subtlety of Eva's suggestion is that it connects some elements of the historical context of the bust of de' Medici with the fictional scenario in which it would come to life.

The other team members quickly find a way to give substance to the scenario of the romantic relationship suggested by Eva. They observe that de' Medici appears to be "cruising" the woman in the painting in front of him (line 905 and 908) and that she appears to be "looking back" (line 909), which leads the team to start imagining lines of dialogue between them ("I want you to be mine", line 911; "just want to add her on Facebook," line 915). This scenario seems convincing because it appears to be suggested *by the artworks themselves*. The team members are positioning themselves as merely observing what is going on ("Oh *look* he is cruising her," line 905) or reacting to what they see ("Oh yeah yeah yeah," line 906; "ah:::", line 907). Even the lines of dialogue they propose (line 911 and 915) are expressed through a form of direct speech that blurs the source of the enunciation as if the artworks were directly expressing themselves.

There is one aspect of Eva's initial suggestion that nevertheless seems to be left out of this scenario: de' Medici is not only supposed to be a lover, but also an *art* lover (in the sense of art collector). Indeed, nothing in what the team says would substantiate this aspect of de' Medici's character, an aspect that is definitely abandoned when François (the cameraman/researcher and this paper's third author) offers a new suggestion. Referring to the dog in the woman's portrait, François says: "but the dog is a symbol of faithfulness, fidelity so" (line 919). By starting his sentence with "but," he suggests that faithfulness could be an obstacle to the artworks' romance. In other words, François seems to want to complicate the scenario by adding an element of impossible love.

This is not exactly what Mai-Anh and Pierre retain from his comment, though. Both offer scenarios that involve the dog: Mai-Anh suggests that the woman likes de' Medici's hair because "it kind of looks like [her] dog's fur" (line 921), while Pierre proposes that "he wants to talk to

her but because...he is afraid of dogs...he can't really approach her" (lines 922-923). While Pierre's proposal seems closer to François' than Mai-Anh's to the extent that it features a form of impossible love, neither Pierre nor Mai-Anh takes up the idea that faithfulness, as symbolized by the dog, might be an obstacle to the artworks' romance.

Then Bruno offers an entirely different idea, one that appears to break away from the cruising scenario. Recalling what he learned in the morning during the tour through the museum, he explains that the woman's portrait was made in preparation for a marriage and was intended to present the future wife to the future husband before meeting in person (lines 926-932). While providing this explanation, he mimics the future husband's possible puzzlement when he encounters his future wife's portrait ("you get the portrait and 'ah OK so this is my wife OK,'" line 939). This can be regarded as an invitation to develop a scenario that focuses on the future husband's efforts to make sense of his future wife's portrait, an idea Eva seems to take up when she says, "it's also interesting because...that person [in the portrait] was a bit of a mystery may be [for the future husband]" (line 944).

However, this aspect of the portrait's story does not seem to draw most of the team's attention. As France states, "it's not speed dating" (line 933), something that Bruno immediately acknowledges ("it's is not speed dating at all," line 934) and that triggers laughter (lines 935-938) as well as Mai-Anh's reaction of enthusiasm ("I love it," line 936). France's remark ("it's not speed dating") is interesting, because it is a way to underline how removed the portrait's story is from the cruising or "dating" scenario the team was exploring before. Yet it is also a way to connect them (in the sense that the dating scenario is used to characterize the portrait's story). In other words, it simultaneously is a way to acknowledge that the team's process of idea generation has gone in different directions and to give it consistency—a consistency that Pierre then tries to

strengthen by expressing France's idea through a new concept (which is also a new scenario): "slow dating" (line 951).

As our analysis shows, the team's project idea subsists through a particular alteration process, one that borrows from both improvisation and brainstorming. As in improvisation, a unifying thread progressively emerges through the participants' successive turns of talk, namely that the bust of de' Medici and the woman's portrait are involved in a romantic relationship. As is typical in brainstorming sessions, this unifying thread serves as a basis for generating various bits of scenarios that are at times hardly compatible with one another: two artworks cruising each other through glancing eyes; a romance complicated by the issue of faithfulness or by the fear of dogs; a long-distance relationship full of mystery (or patience).

While these processes of alteration (improvisation and brainstorming) are different, they both contribute to the reproduction and trajectory of the team's idea by continuously adding (or ignoring) new features to the idea and thus *transforming* it: What was only a vague instruction at the beginning of the episode (finding artworks that seem to have secret relationships) has turned into a specific relationship between two artworks, materialized in several detailed, albeit not fully consistent scenarios. Note that the idea does not change beyond recognition during this transformation in that it retains its core properties (revealing secret relationships between artworks). In this respect, every alteration the idea undergoes during this episode can be viewed as *integral to its subsistence*.

Obviously, there remains plenty to be said about how this movement of subsistence crosses (and to some extent aligns with) the movement of reference *in the analysis* we have offered here. However, before we reflect on this, we must first trace the subsistence of the idea one step further, through a second interactional episode.

Episode 2: multilingual vs. unilingual dialogue. It is 11:49 AM on the second day of Museomix. Thanks to the research France, Mai-Anh, and Julia have done, the team has learned a few things about de' Medici and the woman in the portrait (Mary Drummond). In particular, they have learned that both traveled in various countries. De' Medici, as a patron of the arts and sciences, traveled all around Europe, while Drummond grew up in Scotland and France before marrying a Spanish aristocrat. This leads the team to wonder about the languages in which the artworks could be speaking to each other (to watch this video excerpt, see Martine & Cooren, 2019, November 5b):

2148 France So what should we do? Should we (.) translate them all in English or? ((swaying her hands from
 2149 left to right to suggest that things could go either way))
 2150 Eva No
 2151 Pierre [No no no
 2152 Eva [The idea is to mix the languages in some parts
 2153 Julia Yeah=
 2154 Eva =If they talk about traveling for example that would be easy to choose to- ((swaying her hands
 2155 from left to right to suggest they have several options)). You know they talk about where she came
 2156 from and then they switch to English
 2157 France Yeah:: Ok "In English- in Scotland we say bla bla bla" uh I don't know
 2158 Eva Yeah
 2159 France Depends on what we can find as references
 2160 (1.0)
 2161 Pierre [May-be it's just an accent or
 (...)
 2169 France But it should be just a hint because for the public at the museum you know (.) if you give a version
 2170 in French you expect people to understand mostly French and vice versa you would give an English
 2171 version of the::
 2172 Eva Yeah but this- [it's kind of sad no? It's kind of nice for this city [to
 2173 France [Well depends who is your public I
 2174 mean [if
 2175 Eva [Montreal is bilingual and it's [more (inaudible)
 2176 France [Are you? ((showing Eva with her hand))
 2177 Eva I speak German, French, and [English
 2178 France [Ok well I don't know, we are not talking to you in French, we are
 2179 talking in English I thought you did not understand the language
 2180 Eva *Yes I (understand) a little*
 2181 France Ok but uh for my mother, for example, she loves to go to the museum, she doesn't speak a word of-
 2182 you have plenty of people in Montreal who don't speak another language
 2183 Eva But it's a controversial subject so it could be approached no?
 2184 France What?
 2185 Eva It's kind of a touchy subject here so it would be the opportunity to address it as well
 2186 France For her it's not controversial it's just a question of not understanding what is said, she doesn't
 2187 understand period=
 2188 Eva =But I kinda like it if I hear them in another language if they talk about love I don't need to
 2189 understand it to hear it (inaudible)

In this excerpt, the team's idea subsists through a dispute. The participants can be described as engaged in a dispute for two reasons: (1) they obviously disagree on a particular issue (whether the dialogue between the artworks should be in more than one language); and (2) each side defends its position by not only presenting its reasons, but also questioning the reasons of the opposite side. To say that the team's idea subsists through a dispute means that the elements that constitute the idea cannot be detached from the elements that constitute the dispute. At this precise moment, *the dispute* becomes a key aspect of the idea: The idea splits into two competing versions that are each substantiated by all sorts of arguments and counterarguments. Let's see how this alteration/transformation happens.

At the beginning of the excerpt, France invites the team to choose between two opposing ways to write the dialogue between the artworks: "should we translate [everything they say] in English or [not]?" (line 2148). Eva and Pierre immediately reject the idea of having everything in one language (lines 2150-2151), which leads Eva to clarify what "the idea" consists of ("mix[ing] the languages in some parts," line 2152) and to present the reason that supports this choice. As she explains, the characters should shift languages depending on what they talk about (e.g., "traveling" or "where [they] come from," lines 2154-2156). For her, the idea of having a multilingual dialogue is supported by the fact that the characters themselves have a multilingual experience (one in which the language changes depending on the situation).

While France initially accepts this idea (see lines 2157-2159), she quickly suggests to scale it down: If the dialogue is multilingual, "it should be just a hint" (line 2169). She justifies this position by saying that it is "for the public of the museum," adding "if you give a version in French you expect people to understand mostly French and vice versa you would give an English version of the:." (lines 2169-2171). This justification combines two lines of argument: The first

and most obvious one is that some parts of the public are likely to understand only one language (either French or English). The second argument, which is more implicit, is that the rule in Canada (in fact the law in certain circumstances) is to allow both French and English speakers to access information in their own language.

Eva rejects France's lines of argument by qualifying them as "kind of sad" (line 2172), and defends her position saying that "what is nice" (line 2171) about Montreal is that it is "bilingual" (line 2175). In other words, for her, the idea of having a multilingual dialogue is supported by the charm of a city that mixes French and English. At this point, however, France cuts her off and asks, "are you [bilingual]?" (line 2176). This question is rhetorical in the sense that France perfectly knows that Eva is not bilingual. Through this question, France is in fact implicitly referring to the following premise: For a city to be bilingual, the people living in it must be bilingual. By referring to this premise, she thus seems to intend to correct Eva's understanding of what a bilingual city is, which is also a way of presenting Eva as ignoring the linguistic reality of Montreal.

Eva answers that she "speak[s] German, French, and English" (line 2177), which leads France to explain why she questioned her bilingualism. Referring to the fact that all members of the team, except Eva, speak French, she says, "we are not talking to you in French, we are talking in English I thought you did not understand the language" (lines 2177-2178). This, in turn, leads Eva to respond in French: "*Yes I (understand) a little*" (line 2180), demonstrating her ability to speak some French as well as acknowledging that she is not fully "bilingual." In this context, this response can also be viewed as an acknowledgment that she was wrong when she said that *Montreal* is bilingual.

France then drives the point home by showing that her knowledge of the linguistic situation in Montreal is rooted in her family's experience. As she explains, her mother who

“loves to go to the museum” (line 2181), is an example of the many people in Montreal who speak only one language. Eva nevertheless does not give up on her idea. She says, “But it’s a controversial subject so it could be approached no?” (line 2183). Eva does two things here: She recasts what they are talking about as “a controversial subject” and suggests that having a multilingual dialogue could be a way to address this. But France immediately disqualifies the word “controversial.” Still speaking on behalf of her mother, she says, “for her it’s not controversial it’s just a question of not understanding...she doesn’t understand period” (lines 2186-2187). Note that by saying “period” at the end of her turn of talk, France explicitly signals that her qualification of the situation is supposed to be final, making it difficult for her interlocutor to keep questioning it.

At this point, the idea of having a multilingual dialogue appears to be failing. Too many things seem to oppose it: not only the linguistic skills of the public of the museum and the Canadian language policies aimed at protecting them, but also the reality behind Montreal’s supposed bilingualism, how France’s mother experiences this reality, and France’s resolute determination to defend all these things. However, Eva has not yet said her last word: “But I kinda like it if I hear [the artworks] in another language if they talk about love I don’t need to understand it to hear it” (lines 2188-2189). Eva does several things here. First, she suggests that the core purpose of the dialogue is to communicate feelings or emotions (e.g. “love”). Second, she argues that feelings are not only communicated in various ways, apart from through words (one can “hear” them), but also that these other ways are self-sufficient to some extent (one does not “need to understand [words] to hear [feelings]”). This quasi-theory of feelings in art is a strong argument in favor of a multilingual dialogue, because it questions the assumption on which France has based her entire argumentation (that the public needs to understand the language spoken by the artworks).

This descriptive analysis shows how the team's idea subsists through a particular alteration process: a dispute. The first characteristic of this process is that there is no longer one idea, but two competing versions of it: the multilingual version supported by Eva and Pierre, and the (predominantly) unilingual version advocated by France. More striking, though, is the fact that the dynamic of arguments and objections at the heart of this dispute causes *both* versions to be developed in new and unexpected ways. The unilingual version is supported by the linguistic peculiarities of the public of the museum, Canada's language policies, the reality behind Montreal's supposed bilingualism, how France's mother experiences this reality, and France's strong feelings about all this. The multilingual version, on the other side, is supported by the supposed multilingual experiences of the characters, the charm of a city that mixes English and French speakers, and what looks like the beginning of a theory of feelings in art. Thus, the team's idea profoundly changes during this episode. However, it also maintains a set of core features *through* this change: The fact that the team members disagree about the languages in which the artworks should speak presupposes that they agree that the artworks ought to speak to each other. This part of the idea is reproduced *by and through* the dispute. In this respect, the transformations the idea undergoes during this episode can be regarded as the "price" of its subsistence.

Part II: when subsistence and reference move in different paths.

In this second part, we examine how the movement of subsistence of the idea crosses a different movement in our analysis, that of reference. Our main objective in the first part presented above was to account for the subsistence of the following idea: revealing a secret relationship between artworks by giving them a voice. As we showed, how this idea was reproduced radically changed over the course of the two episodes we analyzed. In the first episode, the idea subsisted through a session of improvisational brainstorming. As is typical in

improvisation, a unifying thread progressively emerges through the participants' successive turns of talk (the romantic relationship between the bust of de' Medici and Mary Drummond's portrait). As is typical in brainstorming sessions, this unifying thread serves as a basis for generating various bits of scenarios that often have very little in common. In the second episode, the idea subsisted through a dispute over the languages in which the artworks could speak. The team's project idea then split into two competing versions: the multilingual version defended by Eva and Pierre and the unilingual version advocated by France, each of which supported by specific arguments and counterarguments.

In many ways, the story of this idea is that of a metamorphosis, yet this metamorphosis is not such that the idea changes beyond recognition. It retains a set of core features (revealing relationships between artworks by giving them a voice). Thus, every single change in the network of elements through which these core features materialize are integral to the idea's subsistence.

Now, is our analysis of this subsistence entirely satisfactory? That is, have we been able to account for *all* the alterations/transformations through which the "secret social life of artworks" subsists? No, we only accounted for the alterations that could be detected in the two brief video excerpts we analyzed. Our account does not say anything about how the idea subsisted beyond/outside these excerpts. More specifically, it does not say anything about the team's key activities that turned this idea into an actual prototype.

Hence, there is much more to say about the subsistence of this idea. Then again, while our analysis misses many aspects of this subsistence, it also contributes to it in its own way. It enables the idea to start flowing within networks made up of our video files, transcripts, and written analyses. These networks do not only contribute to the idea's subsistence (expressed through our video files, transcriptions, and written analyses), but also add a very specific feature or value to it: They make it possible to go back into the flow of its subsistence; that is, they make

it possible to travel back in time to the team's encounter with the two artworks and the dispute over the number of languages they should speak, and to retrace the elements that support our analyses of these two moments. Anyone who "plugs into" these networks (by reading the transcripts and the analyses, and/or by watching the videos) can check for themselves whether improvisational brainstorming is indeed what characterizes the first episode and whether the participants were indeed having a dispute in the second.

Consequently, we have a new way of marking the difference between felicitousness and infelicitousness (Austin, 1975; Latour 2013). The difference is no longer *only* between existing more or less, but *also* between being corroborated more or less (which is a specific way of existing more or less). Thus, from the issue of subsistence (or reproduction), we move to that of reference (or objectivity).

Let's illustrate this point by returning to our analysis of the first episode. A good deal of this analysis boils down to one assertion: "The team is doing a form of improvisational brainstorming." The main elements that support this assertion are the video of the team's interaction, the corresponding transcript, and elements we pointed out in our analysis, namely the definition of improvisation, the definition of brainstorming, some elements that fit the definition of improvisation, and some elements that fit the definition of brainstorming. These elements contribute to the chain of reference of the assertion "The team is doing a form of improvisational brainstorming" to the extent that they help to maintain the connection between the team's interaction and improvisational brainstorming. Put differently, they answer objections that could be raised to question this connection (see Table 1).

Some of these elements are themselves supported by other elements presented in our analysis. For instance, the assertion "the romantic relationship between the bust and the portrait emerges through the participants' successive proposals" (a mark of improvisation) is

substantiated by the following elements: (1) the team takes up the idea of a romantic relationship suggested by Eva and adds the cruising scenario; (2) François takes up the cruising scenario and adds the idea of an impossible love; (3) Pierre takes up the idea of an impossible love and adds the idea that de' Medici is afraid of dogs; and (4) Bruno takes up the romantic relationship and adds the scenario of long-distance relationship. Indeed, these new elements answer possible objections that could be raised to question the fact that the romantic relationship emerges through the participants' successive proposals (see Table 2).

These latter elements are, in turn, supported by yet other elements. For instance, the assertion "Pierre takes up the idea of an impossible love and adds the idea that de' Medici is afraid of dogs" is corroborated by the following elements: (1) he says that "[De' Medici] wants to talk to her but...he is afraid of dogs"; (2) this comment comes right after François suggested the idea of an impossible love; and (3) this comment can be found on lines 922-923 in the transcript. As shown in Figure 2, the chain of reference of our analysis of the first episode takes the form of a tree. Each element of the tree represents a connection. Each branch represents a set of elements that keep a connection intact. While only the elements of the trunk directly maintain the main connection offered in our analysis (i.e., between the team's interaction and improvisational brainstorming), all the other elements indirectly contribute to it; that is, they maintain connections that, through various levels of intermediaries, sustain this connection. For instance, the fact that Pierre takes up the idea of an impossible love and adds the idea that de' Medici is afraid of dogs contributes to sustaining the connection between the romantic relationship and its emergence through the participants' successive proposals, which in turn contributes to sustaining the connection between the team's interaction and improvisational brainstorming.

Interestingly, it is difficult to differentiate the chain of reference of our analysis from the line of subsistence of the idea developed by the Museomix participants. There are two reasons for

this: First, we cannot detach the idea from the apparatus (from our videos, transcripts, and written analyses) that gives access to it. If we remove the apparatus, we also lose the trajectory of the idea. Second, and this is a key point, the *apparatus itself* directly contributes to the idea's subsistence in that it allows it to flow through videos, transcripts, and written analyses. However, it does so by imposing its own specific mode of existence: reference. Just like in quantum physics, where the measuring apparatus tends to destroy the superposition of the wave and the particles, our observation apparatus tends to erase the superposition of reference and subsistence: everything seems to be a matter of reference (see also Barad, 2007).

The only way to maintain the difference between the chain of reference of our analysis and the line of the idea's subsistence is to *approach them in movement*; that is, to examine their own special *trajectories*. At this point, it is useful to note that the chain of reference of our analysis of the first episode is far from being entirely satisfactory; that is, there are many questions or objections it does not answer: Are our definitions of brainstorming and improvisation based on good sources? Would other scholars agree that the team is doing a form of improvisational brainstorming? How could we check whether our video recording of the team's interaction does not miss important elements?

This is only a small sample of the virtually-endless list of objections that could be raised to question the connection between the team's interaction and improvisational brainstorming. The important point here is that these objections are of a different kind than those we raised when reflecting on our analysis's ability to retrace the idea's subsistence. While our main concern earlier was whether we had analyzed enough episodes, our concern is now whether our analyses are sufficiently reliable or objective. So, we must now choose between two ways of continuing our research project: Either we analyze more episodes in which the idea of a secret relationship

between artworks subsists, or we start devising new ways of checking the reliability of the analyses we already made.

This alternative is for a large part a byproduct of the eventful nature of subsistence. As things subsist (persist in being) by continuously altering themselves, our effort to verify/corroborate something at one point of its existence is likely to be of little use for verifying/corroborating it at later point of its existence (this is why our work as researchers is so difficult). This is exactly what happened in our case study. The apparatus we used to verify the fact that the relationship between the artworks first materialized through a session of improvisational brainstorming could hardly be used to verify the fact that it later materialized through a dispute. In other words, it was impossible to maximize our research in terms of subsistence and reference *at the same time* (see also Cicourel, 1964). Here, the particular trajectory of our research becomes clear: What happened is that we deliberately limited what we could say in terms of reference to maximize what we could say in terms of subsistence. Put differently, we constantly limited ourselves to what could be said based on video excerpts, transcripts, and our knowledge of both English and French to be able to follow the subsistence of the team's idea over a number of episodes. Thus, we kept the level of corroboration of our research relatively stable to increase its level of exhaustiveness (see Figure 3).

Conclusion

In this paper, we have presented a pragmatist take on ethnomethodology-inspired interaction analysis that proposes to treat social phenomena relationally. Building on Latour's (2013) work, we distinguished two modes of existence (subsistence and reference) and showed how interaction analysts operate at the junction between these modes. As our (meta-)analysis illustrated, what is remarkable about interaction analysis is that it tends to privilege subsistence over reference. While the methodological apparatuses of most natural and social sciences seem to

be designed to produce findings that are as verifiable as possible, the apparatuses on which interaction analysis relies seem to be designed primarily to report, as exhaustively as possible, the alterations/transformations through which social phenomena subsist. After all, is this eventfulness not what Garfinkel (2002) was trying to get at when he introduced his idea that social order is always accomplished “for another next first time” (p. 272), or his idea of each moment’s irreducible “thisness” (p. 22)?

Our (meta-)analysis also shows, however, that interaction analysis never completely breaks away from the demands of reference. Just like the rest of the sciences, it concerns itself with verification. The constant care with which interaction analysts try to maintain a form of continuity between their video excerpts, transcripts, and analyses testifies to this. The difference between scientists in other disciplines and interaction analysts, it seems, is merely a question of *degrees* of objectivity/verification. In contrast with most scientists, interaction analysts do not try to expand their chains of reference continuously. They conduct their analyses based on video or audio excerpts, transcripts, and occasionally their knowledge of the context of the videos; then they move on to the next analysis. This methodological discipline is at the center of virtually all ethnomethodology-inspired forms of interaction analysis.

What is fascinating about this discipline when we look at it from the pragmatist perspective we have developed here is how well interaction analysis registers the ontological difference between subsistence and reference. Everything happens as if interaction analysis somehow anticipated not only that there is something that always eludes the work of reference, but also that one way of accounting for it is to limit the size of our chains of reference in order to start moving sideways, *along* with it. Interaction analysts seem to be saying to other scientists: “Sure, your way of describing the world makes it possible to verify the accuracy of your descriptions, but you are missing something that is as important as verification, which is the

eventfulness and processuality of the world. Our way of describing the world may not always be as solid or objective as yours, but it captures this eventfulness, and it does so with a certain objectivity (the level of objectivity that recordings, transcripts, and written analyses allow).”

However, the intersubjectivist presuppositions that underlie ethnomethodology made it difficult to define and illustrate this insight. By emphasizing human agency in the production of science, ethnomethodologists contributed to the deconstructionist turn that rightfully criticized the excesses of scientism (in particular the claim of a direct correspondence between mathematical formalism and the “substance” of phenomena; see Latour, 1999, 2013). However, they also flattened the differences that may exist between various claims, theories, or disciplines in terms of degrees of objectivity/verifiability by reducing these differences to a matter of “mere” intersubjective negotiation. The pragmatist take on interaction analysis we have developed and illustrated here addresses this issue. It can help interaction analysts investigate not only how different actors (scientists, reporters, laypersons) produce various degrees of objectivity/verifiability, but also how, in doing so, these actors might have to compose with other values or modes of existence.

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

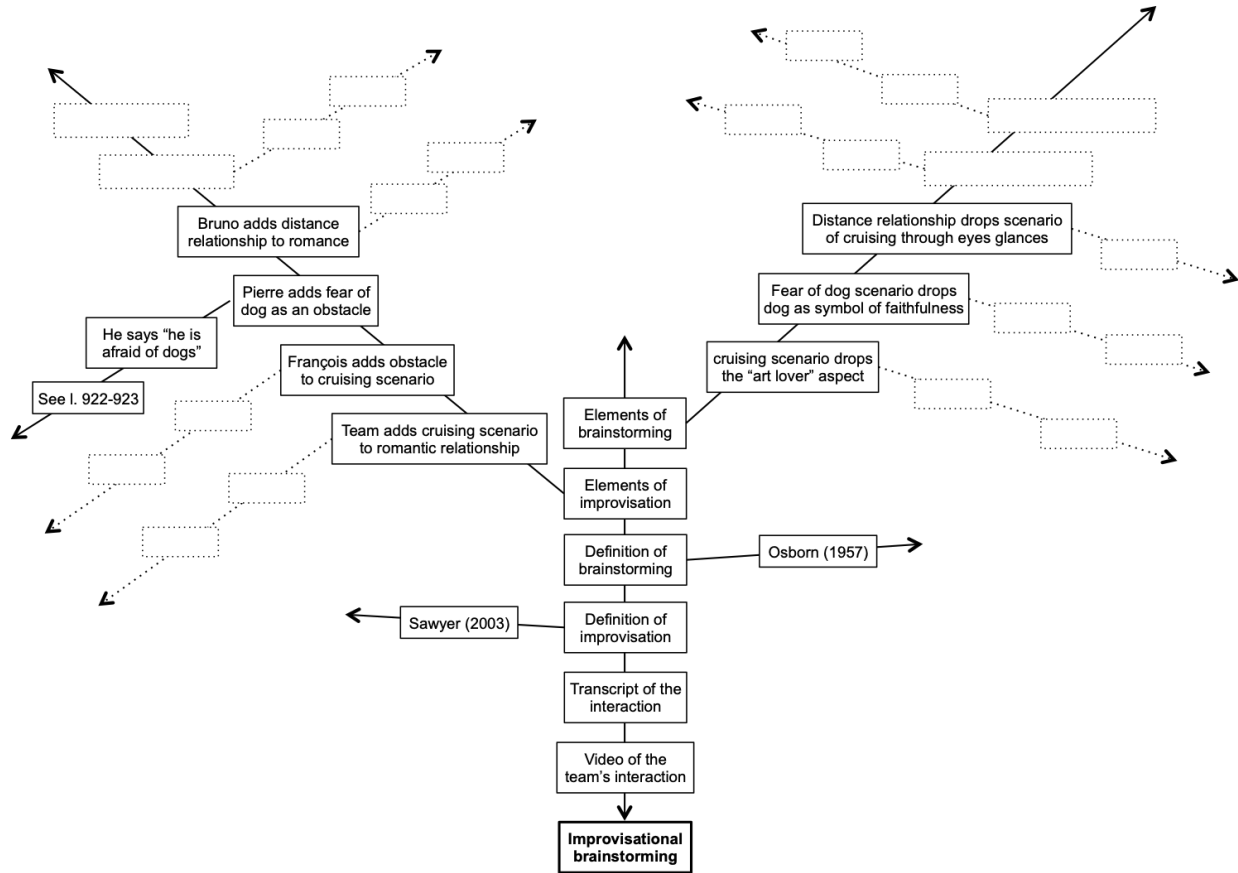


Figure 2. Part of the tree of reference of analysis of episode 1. The dotted arrows and boxes represent the parts of the tree that were not visualized because of lack of space.

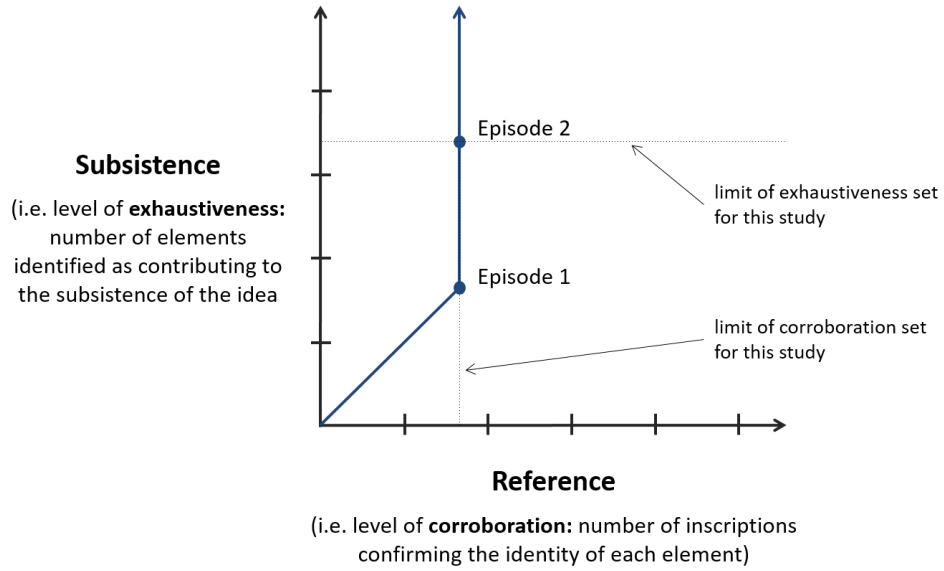


Figure 3. Trade-off between exhaustiveness and corroboration in illustrative case study.

Table 1

Elements that contribute to the chain of reference of the assertion “The team is doing a form of improvisational brainstorming.”

Possible Objections	Ways to Address These Objections
One needs to see the team’s interaction again to check that they are doing improvisational brainstorming	Watch the video of the team’s interaction
One must be able to discern the relevant elements of the interaction	Read the transcript of the video
One needs a definition of improvisation	During improvisation, stories are collectively produced: They emerge as each participant adds some new elements to those already introduced by others
One needs a definition of brainstorming	In brainstorming sessions, participants aim to produce as many ideas as possible. Their ideas are therefore only loosely connected
The interaction must fit the definition of improvisation	The romantic relationship between the bust and the portrait emerges through the participants’ successive proposals
The interaction must fit the definition of brainstorming	The romantic relationship between the bust and the portrait is explored through various scenarios that are only loosely connected

Table 2

Elements that contribute to the chain of reference of the assertion “The romantic relationship emerges through the participants’ successive proposals.”

Possible Objections	Ways to Address These Objections
A team member must take up an element of the scenario offered by another member, then add a new element to it	The team takes up the idea of a romantic relationship suggested by Eva and adds the cruising scenario
This must happen more than once	François takes up the cruising scenario and adds the idea of an impossible love
This must happen more than twice	Pierre takes up the idea of an impossible love and adds the idea that de’ Medici is afraid of dogs
This must happen more than three times	Bruno takes up the romantic relationship and adds the scenario of a long-distance relationship

Notes

¹ In his seminal book, *Method and measurement in sociology*, Cicourel (1964) argued that social research is torn between two incompatible goals: reliability and ecological validity. The more researchers pursue reliability (i.e. ensuring that different researchers produce the same results when doing the same experiments), the more they have to “freeze” the phenomenon, that is, remove it from the contingencies of its ecological milieu. Conversely, the more researchers pursue ecological validity (i.e., minimizing or avoiding “manufacturing” the phenomenon), the less they are able to ensure reliability.

² Note that subsistence and reference should not be conflated with, respectively, the realm of everyday life and the realm of science. Indeed, using inscriptions to refer to a given event is an everyday practice. Therefore, the difference between science (incl. interaction analysis) and everyday life does not reside in the use of inscriptions *per se*, but rather in the *amount* of (corroborating) inscriptions used to describe a particular phenomenon. In other words, the difference should not be viewed as a radical change in nature, but rather as a matter of degree.