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# Reassembling Repair: of Maintenance Routine, Botched Jobs, and Situated Inquiry

**Philippe Sormani**  
*University of Vienna and  
Swiss Institute - Rome*

**Ignaz Strebel**  
*ETH Wohnforum*

**Alain Bovet**  
*ETH Wohnforum*

**Abstract:** This paper draws upon a video ethnography of building care and makes this work available to an investigation of how “non human agency” is sustained in actual cases of repair and maintenance activities. Therefore, the paper homes in on a particular situation of maintenance work, bringing together a caretaker and a couple of tenants, regarding a low water pressure problem (LWPP) at the couple’s flat. The paper examines how the participants engage in a situated, temporally unfolding, collaborative and yet distributed inquiry regarding the encountered problem and its candidate solutions. Maintenance routine, in the course of the examined situation, appears to stand in an asymmetrical relationship with repair work due to a prior ‘botched job’, and the outlined video analysis demonstrates just how the involved participants establish, elaborate and, eventually, suspend this relationship. The expression “reassembling repair” encapsulates this moment of suspension, when the caretaker, upon the tenants’ final hint, indeed repairs the LWPP (by reassembling and removing its ‘root cause’), instead of sustaining his maintenance routine (to temper only the problem’s ‘symptoms’). In describing participants’ situated inquiry, their practical deliberations and its eventual denouement, the paper offers an apt opportunity to reflect upon socio-material approaches that simplify, simply invoke, or actually “neglect the situation” in favor of renewed epistemologies or generalized ontologies in Science and Technology Studies.

**Keywords:** situated inquiry; respecification; building care; caretaker; maintenance routine; reassembling repair.

**Corresponding author:** Philippe Sormani, Department of Science and Technology Studies, University of Vienna, Universitätsstraße 7 Staircase II/6th floor (NIG), A-1010 Vienna – Email: philippe.sormani@univie.ac.at

## I. Introduction

One cannot decline to have a situation for that is equivalent to having no experience, not even one of disagreement (Dewey 2008[1938], 74)

Of late, repair and maintenance work has become a topic of both empirical and conceptual interest in Science and Technology Studies (STS). Given that repair and maintenance has presumably always constituted the flipside of the artifacts, infrastructures, and technologies devised by man- and womankind, one may wonder why – and how – it has become an important part of the topical agenda of current STS. That it has entered the core concerns of STS seems without doubt, at least ‘from within’ the field. Indeed, not only does this special issue of *Tecnoscienza* bear testimony to the special place given to this special topic, but prior and parallel research endeavors do so as well (e.g., Denis and Pontille 2015; Jackson 2014; Jarzabkowski and Pinch 2013). In our view, this topical emphasis and renewed interest in maintenance and repair (see already Graham and Thrift 2007; Henke 2000; Orr 1996) might be usefully related to the emphasis on “non human agency” (cf. Sayes 2014) put by “actor-network theory” (ANT) and its successor projects, in and beyond the field of STS (see, e.g., Latour 2005; Law 2009; Mol 2010). It seems indeed only a small step from placing one’s methodological emphasis on “non human agency” – or, less technically put, the material features of the social world – to investigating how such agency is sustained, if not secured, in actual cases. One way of doing so, then, is to closely examine particular practices of maintenance and repair, as such practices can be shown to constitute and support those material features. Recently, several ethnographic studies have been conducted on urban infrastructures and public transport systems in this vein (e.g., Denis and Pontille 2010, 2015; Tironi 2015), some of which point “beneath materiality” (cf. Denis and Pontille 2015), and others “beyond repair” (Ureta 2014)<sup>1</sup>.

Drawing upon a video ethnography of building maintenance, this paper offers an ethnomethodological study of repair work. In doing so, the paper gives a particular twist to the “small step” evoked in the previous paragraph. More specifically, the study analyzes through which practical methods of situated inquiry – or locally deployed “diagnostic work” (Buscher et al. 2010) – the filmed participants – a married couple of tenants and the caretaker of the block of flats they live in – engage in recognizable courses of repair work to have a particular problem fixed – a low water pressure problem (henceforth, LWPP) at the couple’s flat. Hence, the paper’s title – “reassembling repair” – hints at the participants’ repair

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<sup>1</sup> For a trajectory of STS as a series of provocative ‘reversals’ (e.g., from the sociology of scientific knowledge to ANT), see Woolgar (2004).

work in situ, rather than a theorist's revolutionary project in STS (e.g., Latour 2005, 2006). How does the situation that had brought participants together, the LWPP at the couple's flat, actually unfold? How do they manifestly repair the problem in reaching a common "definition of the situation"? In answering this twin question, the outlined paper should prove of double interest:

- on the one hand, the paper contributes to empirical inquiry on repair and maintenance work in STS by delivering a case study that homes in on participants' work of "accomplishing materials and activities in context" (Jarzabkowski and Pinch 2013, 581). More specifically, it focuses upon lay participants' working at "reassembling repair" as a particular concern of housing (by said couple of tenants) in the face of a professional's studious display of maintenance routine regardless of this concern (as in the case of the caretaker, to begin with; see already Hughes 1951);
- on the other hand, the study questions the inclination of leading practitioners in (post-) "Actor-Network Theory" (ANT) to address issues primarily on a theoretical level (for example when substituting a "script" or "affordance" approach with an "accomplishing" one, as in the case of Jarzabkowski and Pinch). In turn, the paper points out that any such conceptual substitution – even if we may agree with it (as we largely do with Jarzabkowski and Pinch) – typically assumes, rather than explicates, a prior understanding of the everyday situations that it uses for illustrative purposes (in particular, the practical understanding that participants display to each other, in and through their situated conduct)<sup>2</sup>.

In answer to the critical argument, the paper follows Garfinkel's pivotal recommendation to turn the phenomena of everyday life and the situated inquiries conducted by their participants into an explicit topic of analysis, rather than to rely upon them as a tacit resource for a theoretical move. Hence, the present paper does not privilege this or that conceptual definition of "the social" and its "reassembly" as a theoretical choice (see Latour 2005, 2006, and section 6 below). Rather, the paper describes how participants' own conduct already entails such choices as a practical matter, as their recognizable courses of repair work do entail particular "definitions of the situation", be it in terms of maintenance routine, urgent repair, or both (see sections 2 and 4)<sup>3</sup>.

In ethnomethodology, this strategy of relocating theoretical issues in

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<sup>2</sup> In other words, any theoretical interpretation of situated conduct in general terms (e.g., those of ANT) presupposes its intelligible achievement by participants in particular situations (otherwise, there would be nothing to be interpreted, let alone generalized by the theorist). This intelligible achievement, in turn, remains ethnomethodology's key phenomenon (cf. Garfinkel 1967, 2002).

<sup>3</sup> On Garfinkel's recommendation to avoid the conflation between analytic topic and mundane resource, see Zimmermann and Pollner (1970). On recovering "ANT" as a situated, analyzable, mundane phenomenon, see Lynch (2013); Quéré (1998) and below (sections 5 and 6).

practical concerns is referred to as “respecification” (e.g. Button 1991; Garfinkel 1991; Lynch 1993). Before introducing more fully our video ethnography and ethnomethodological approach, let us turn to a first example to briefly indicate in which sense such respecification may prove instructive.

## 2. Maintenance Routine as a Situated Achievement: a First Definition

How do participants configure a problematic situation that brings them together, such as the situation involving an unresolved low water pressure problem (LWPP)? How do they orient their respective inquiries, trial-and-error procedures, and verbal formulations, in the manifest attempt to solve this particular problem? A pervasive feature of the examined situation of pending repair was that its participants – a couple of tenants and a caretaker<sup>4</sup> – would define their encounter in alternative ways, with the result of opening up alternative trajectories of diagnostic work, regarding alternative “problem/solution pairs” (Livingston 2008, 235). A first definition of the problematic situation at hand and its potential solution *in situ* is offered by the caretaker (Edy) as he enters the tenants’ (family S.) flat. Consider the following field-note excerpt to begin with:

### *Excerpt 1 (bathroom)*

On the morning of 30 November 2013 water supply was shut down in the residential building Kanalweg 26 by caretaker Edy and plumber Thomas, to replace some 20 bonnets of gate valves on the head water pipe of this building. Once this replacement work finished and water turned back on, family S. on floor 13 let caretaker Edy know that there was hardly any water flowing at their flat. That, at least, is what he told us.

We follow Edy with the video camera as he goes into the flat of family S., to change sink and bathtub aerators. This, according to Edy, is a common thing to do after a shut down and restart of water supply in residential buildings: aerators can indeed get clogged by flushed shed material and mineral deposits from the pipes.

Edy enters the flat and walks straight into the bathroom. Without checking the water flow he begins changing the aerators. After some minor difficulties, Edy finally succeeds in changing the aerators of the two sinks in the bathroom. Then he begins working on the aerator of the bath-

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<sup>4</sup> The caretaker works full time for the real estate agency. He is in charge of five buildings (78 flats) but does not live there. He has a workshop-office in one of the buildings. When faced with a problem, tenants can either call him or find him in his office. When the task is too technical or requires too much time, he may call a technician.

tub spout. After several tries he still cannot untwist the aerator on the bathtub and gives up, saying that the plumber is needed to solve this problem.

This field-note excerpt, which also describes the filming situation, makes available Edy's definition of the LWPP and its attendant solution (i.e., changing the aerators) in terms of his *maintenance routine*. Several aspects of his conduct manifest that he defines the situation in just these terms: first, he casts the LWPP as a typical problem of prior maintenance (i.e., the gate valve replacement on the head water pipe), problem which then lends itself to a typical solution (i.e., aerator replacement at the 'concerned' flat). Second, he attempts to reach that typical solution without examining any particular manifestation of the problem involved (i.e., "without checking the water flow he begins changing the aerators")? Third, he appeals to the plumber's help as he encounters difficulties (when attempting to "untwist the aerator on the bathtub"). Having taken part in the initial maintenance (i.e., the building's gate valve replacement), the "plumber Thomas" is now being recruited to complete its routine achievement (i.e., by solving its incidental problems, as encountered at family S.' flat). Taken together, these three aspects of the caretaker's conduct *recognizably* define the encountered situation in terms of maintenance routine (rather than "urgent repair", as we shall see), notably by preempting any situated inquiry into the flat's particularities (which remain part of the "environment", cf. Quéré 1998, 239)<sup>5</sup>.

This first description of repair work proves instructive, insofar as it demonstrates how such work develops and draws upon a particular "definition of the situation". That is to say, the very way in which Edy, our caretaker, goes about his repair work implies not only a particular definition of the working situation (as a "routine" encounter), but also a particular understanding of the work to be done in that situation (a "maintenance" intervention). This mutual elaboration of situation and work may change and, as it manifestly does, will be further described. The offered description, so far, affords us with an ethnomethodological respecification of the "definition of the situation" as a sociological notion: a definition of the situation is already implied and manifestly disclosed in Edy's embodied professional practice, without (or prior to) any discursive formulation, which is not to say that it cannot be formulated, either by Edy

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<sup>5</sup> Edy's pre-emptive move appears to be twofold at least, as he walks not only "straight into the bathroom" (instead of asking the tenants for a specification of the problem, for instance), but also starts working on the pre-decided typical solution at once (i.e., changing the aerators). In refraining from engaging in conversation with the tenant couple, he embeds his maintenance routine in the local setting without further investigating its particular features, thereby making the maintenance routine visible as "maintenance routine" in the first place (regardless of particular setting features, its parties' local knowledge, etc.).

or by a professional sociologist. The remainder of this paper spells out some of the key consequences of this kind of practice description for our empirical understanding of repair work, STS more broadly, and Latour's notion of "reassembling the social" in particular<sup>6</sup>.

### 3. Video Ethnography and Ethnomethodology

The previous section offered a first glimpse at how a video ethnography of building maintenance makes this work available to an "ethnomethodological respecification". The video ethnography that this paper is based on involved one of us in documenting over a one-year period the working routines of professional caretakers and building maintenance personnel in Switzerland. Therefore, over twenty-four hours of video recordings were made and eventually organized into a searchable data basis. The main purpose of this ethnographic effort was to make visible the caretaker's ordinary work – indeed, mostly men at work were filmed – in its recurrent patterns, conditions and contingencies, whilst highlighting the technical and social problems that building maintenance would ordinarily deal with. The video footage, then, was based upon ethnographic fieldwork that involved 'shadowing' individual caretakers when they were making their daily rounds and fulfilling their routine duties. To get the ethnography under way, specific working days were agreed upon between the filming team and the filmed caretaker. To start with, the work of three caretakers was filmed and documented in this way<sup>7</sup>.

The outlined video ethnography allowed us to take a renewed empirical interest in a "low status" occupation, with a special focus on its everyday tasks and technical argot. In so doing, the video ethnography took up the classic interest of field studies in occupations of all kinds as promoted by E. Hughes at the "Chicago school" in the 1940s, an interest which had also led up to a prolonged ethnography of caretakers' work in urban areas (e.g., Gold 1950, 1964). Based upon participant observation and interviews, this now seminal ethnography paid special attention to the peculiar relationship, typical encounters and characteristic tensions between tenants and caretakers. Yet, as an ethnographic study written in a "realist" mode (cf. Van Maanen 1988), the study left unanswered the ethnometh-

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<sup>6</sup> For further discussion of the notion of "situation" and its continued "neglect" in some quarters of the social sciences, see Quéré (1998).

<sup>7</sup> *Building Care: That's why our cities do not fall apart* (Ignaz Strebel and Susanne Hofer, 41 min, Swiss German, German, Subtitles E). The documentary movie can be accessed via <http://vimeo.com/ethwohforum/building-care>. From the outset, the documentary movie was also made with the intention to afford us with audiovisual recordings to be used in an ethnomethodological analysis. The consequences of this double use remain to be analyzed. On non-fiction film more generally, see Macbeth (1999).

odological concern for just how the realities described were recognizably achieved as such:

- Just how did any caretaker effectuate his everyday tasks so that they could be made accountable to a standard of proper building care?
- Just how might tenants, on any given occasion, become involved in the practical effectuation, verbal formulation, and visual monitoring of caretakers' tasks?
- And just how would tools, materials, and objects be used at work?

Whilst these questions remained largely unstudied, a video-based approach offers us an apt opportunity to have them (re-)addressed. The actual *situation* of building maintenance and repair work is thus foregrounded and, as we shall see, the contingency of the situation upon itself – that is, upon how the situation may become a participants' issue from within its very unfolding, regarding notably its definition and the kind of repair work that this definition entails<sup>8</sup>.

In what follows, an *ethnomethodological respecification* is offered, insofar as our (video) ethnographic interest in building maintenance is developed in a distinctive direction. This direction has perhaps been best indicated by Sharrock and Anderson, when they distinguished “ethnomethodology’s query: how do people organize their social actions so that sense can be made of them?” (1986, 56) from the “general investigative question which any sociologist may ask, namely ‘how are social actions organized’” (ibid.). Accordingly, our description shall bear upon how co-present participants – a caretaker and a couple of tenants – *make intelligible* to each other the kind of social activity they engage in, in situ and in vivo. “Ethnomethodological respecification”, then, involves two tasks: first, an empirical description or *specification* of participants’ practical methods of repair work, methods through which they make that work intelligible to each other in its actual course (for example, through the embodied definition of the situation that is presupposed in “maintenance routine”). Second, a *reexamination* of existing concepts and concerns in STS (such as Latour’s notion of “reassembling the social”) in the light of that prior empirical specification. For this second task, the final discussion of this paper will draw upon the video analysis conducted in the next section.

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<sup>8</sup> That we focus on how caretaker and tenants deal with a deficient tap does not mean that we ignore or neglect classical themes in the sociology of building maintenance, such as the status gap between caretaker and tenants or the influence of the presence of the latter on the former’s work. We rather stick to how such themes may or may not emerge from within the situation. In the present case, the first theme did not emerge but as we shall see the second did, though in a very specific way.

#### 4. Problem Formulation as a Situated Achievement: two Redefinitions

As we have seen in the second section of the paper, caretaker Edy replaces all aerators in the bathroom except one. He then proceeds to the kitchen with the manifest intent to pursue his maintenance routine, as visible on our video recording. His very conduct manifests (t)his intent, as he rushes into the kitchen with the special aerator screwdriver in his right hand (to remove the presumably clogged kitchen sink aerator) and then fish out a clean one from his pockets with his ‘free’ left hand. To reach the kitchen, Edy has to pass through the living room, where the tenants, Mister and Misses S., have taken a seat waiting for him to finish his technical intervention. As Edy rushes into the kitchen and attempts to do so, he offers Mr. S. an opportunity to spell out the problem at hand, as the following video recording excerpt suggests<sup>9</sup>:

*Excerpt 2 (kitchen)*

- 1 Edy: und hier in der Küche  
*and here in the kitchen*
- 2 MrS: ‘ja das ist das ist das Problem  
*‘yes this is this is the problem*  
*‘((gets up and follows Edy into the kitchen))*
- 3 MrS: da ist immer weniger Wasser gelaufen seit er ‘das mon-  
tiert hat  
*there is less and less water running since he has installed*  
*‘this*  
*‘#1 ((taps on new mixer tap))*
- 4 MrS: heute Morgen ist folgendes passiert  
*this morning the following happened*
- 5 dass praktisch kein warm Wasser mehr ausläuft  
*there was virtually no warm water running*
- 6 also nur ganz wenig  
*well, only very little*
- 7 Edy: gut  
*okay*
- 8 MrS: das kalte auch, ganz wenig  
*cold too, very little*
- 9 warum ‘weiss ich auch nicht, ich weiss auch nicht was der  
do gemacht hat  
*why ‘I do not know [...] what he has done here*  
*‘((walks out of the kitchen))*
- 10 Edy: ((removes kitchen sink aerator, turns on water flow))
- 11 #2 ((only little water flows))

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<sup>9</sup> Transcription conventions are to be found in Appendix I. Screenshots (numbered #1, #2, etc.) follow the transcribed excerpts.

12 Edy: hhh oi  
bbb ob



#1 ((Mr. S. taps on new mixer tap))



#2 ((only little water flows))

Upon Edy's place formulation ("and here in the kitchen", line 1), Mr. S. follows him into the kitchen (line 2) and ventures a formulation of the problem (from line 2 onwards). That is, Mr. S. formulates the LWPP as requiring an *urgent repair* (due to a previous seemingly 'botched job' "since he has installed this", line 3), rather than as being simply addressed as part of general maintenance routine (due to the building's central gate valve replacement). How does Mr. S. achieve this redefinition of the situation, *recognizably* so? First, he points out a particular problem in the

kitchen, regarding the “new mixer tap” in the kitchen sink, namely the problem that “there is less and less water running” (line 3). Second, he hints at an alternative cause of this problem, relating it back to the plumber’s prior intervention in the kitchen, a potentially ‘botched job’ (“since he has installed this”, *ibid.*), rather than to the plumber’s joint maintenance routine with Edy in the morning (the general gate valve replacement). Third, the latter’s maintenance routine is identified as occasioning the *acute expression* of the problem, which would thus require an urgent repair (its cause remaining the potentially ‘botched job’, (“I do not know what he has done here”, line 9). In walking out of the kitchen (at line 9), Mr. S. demonstrably leaves the floor to Edy for making the pending repair, then and there. Edy, in turn, seems to be responding to this *technical expectancy*. Indeed, he does not only engage in the routine task as before (by removing the kitchen sink aerator, line 10), but he also checks its local grounds now (by turning on the water flow *prior* to replacing the aerator with a new one, *ibid.*). As only little water flows even without an installed aerator (*ibid.*), no clogged aerator can be the cause of the LWPP, much to Edy’s surprise (“oh”, line 12)<sup>10</sup>.

In particularizing the problem and relocating its cause, the described redefinition of the situation (by tenant Mr. S.) raises the question of its specific solution *in situ* (rather than its standard solution across sites). After his local solution attempt fails (see note 10 above), Edy – manifestly at his wits’ end – decides to call plumber Thomas. His call builds upon Mr. S.’ redefinition, whilst spelling out his own efforts in the kitchen so far, as can be seen in the following video excerpt:

*Excerpt 3 (kitchen call)*

- |   |      |  |
|---|------|--|
| 1 | pb:  | Ja Edy, hallo?<br><i>Yes Edy, hallo?</i>   |
| 2 | Edy: | #3 Grüss Dich ((Thomas))<br><i>Hello ((Thomas))</i>  |
| 3 | Edy: | Du? du hast doch bei Frau Familie S. eine neue Mischba-<br>terie reingemacht?<br><i>you have put in at Mrs ... family S. a new mixer tap, right?</i> |
| 4 | pb:  | bei Frau?<br><i>at Mrs?</i>  |
| 5 | Edy: | S Familie S<br><i>S. family S.</i>   |
| 6 | pb:  | eh in welchem Block wohnt sie?   |

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<sup>10</sup> In the sequel to the examined episode, Edy starts opening up the shutoff valves of both the hot and cold water supply in the kitchen. These valves are to be found underneath the kitchen sink (cf. Appendix II). However, as the water flow remains the same, the LWPP remains, at least as far as the hot water supply is concerned (see below).

- 7 Edy: *uh in which block do they live?*  
 sechundzwanzig  
*twenty six*
- 8 pb: ja  
*yes*
- 9 Edy: jetzt, Kaltwasser war der Hahn fast zu  
*now, coldwater the tap was almost closed*  
 10 den habe ich jetzt aufgemacht  
*I have now opened it*  
 11 und jetzt auf der linken Seite ist der Warmwasserhahn  
*and now on the left side is the hot water tap*  
 12 den kannst Du nicht weiter aufmachen und es kommt fast  
 kein warmes Wasser  
*this you cannot open more and there is almost no hot water*
- 13 pb: ja  
*yes*
- 14 kannst Du das dann noch anschauen  
*can you have a look at it again*



#3 Edy: Grüss Dich ((Thomas))

How does caretaker Edy, in turn, reformulate the problematic situation at hand, if only for plumber Thomas to recognize it as such (rather than in terms of their unproblematic maintenance routine)? Edy's call to plumber Thomas is interesting, insofar as it accepts and elaborates Mr. S.' prior redefinition of the problem and its cause (the 'botched job', requiring an urgent repair), whilst shifting the burden of the problem's solution (from himself to Thomas, identified as being initially or at least potentially responsible). In so doing, Edy reproduces indeed Mr. S.' prior redefinition (in terms of a "particular problem," its "alternative cause," and now "acute expression"). There is, however, one aspect of Mr. S.' redefinition that Edy modifies, and that is the "technical expectancy" that he, Edy, being already present in the kitchen, should and would repair the prob-

lem at hand. Indeed, Edy first reports his unsuccessful efforts so far (lines 9-12), and then solicits the plumber to step in (line 14). In suggesting his sustained *maintenance routine* to have failed, Edy manifestly makes the case for the plumber's next *urgent repair* (or arguably *urgent repair*)<sup>11</sup>.

## 5. Reassembling Repair as a Situated Achievement: Denouement

As we have seen, the LWPP at family S.' flat has been defined and re-defined in alternative ways: first in terms of "maintenance routine" (by Edy, the caretaker), then in terms of "urgent repair" (by Mr. S., one of the tenants), and finally by taking into account maintenance routine for achieving swift repair (by Edy, on the basis of Mr. S.' prior definition, in view of the plumber's subsequent intervention). The participants' configuration (and reconfiguration) work suggested that, and how, maintenance routine stands in an asymmetrical relationship with urgent repair – that is, not only both of which, maintenance and repair, mobilized alternative scales ("building" vs. "kitchen"), alternative problem formulations ("standard" vs. "particular"), and alternatively expected solutions ("replacement" vs. "repair"), but it also took the involved participants *work* to establish, exhibit, and elaborate this asymmetrical relationship (starting with Edy's studious display of maintenance routine). The participants' encounter, however, came to a temporary ending with the *suspension of this manifest asymmetry*, as the final video excerpt suggests:

### *Excerpt 4 (living room and bathroom again)*

- |     |      |  |
|-----|------|--|
| 1   | Edy: | da kommt dann der Sanitär schnell vorbei<br><i>there the plumber will drop by quickly</i>                        |
| 2   | MrsS | ja, ja<br><i>yes, yes</i>  |
| 3   | Edy: | also das Kaltwasser ist jetzt offen, das ist gut<br><i>the cold water is open, this is fine</i>                  |
| 4   | MrsS | ja, ja,<br><i>yes, yes</i>   |
| 5   | Edy: | der Hahn war fast zu<br><i>the tap was almost closed</i>   |
| → 6 | MrsS | ja, 'eben warm kommt ja im Badezimmer auch nicht<br><i>yes, 'hot water is not flowing in the bathroom either</i> |

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<sup>11</sup> In the remainder of the call, the urgency of this next repair is further elaborated by Edy – "maybe you can do it straight away", "when are you coming?", etc. – as well as by the plumber – "should I come right now?" – to whom Edy responds: "that would be good, we can then do that, then we can tick it off." Participants' conduct displays thus the relative urgency of the repair.

- 7 Edy:        ‘( ((walks into bathroom)) )  
 auch ‘nicht?  
 also ‘not?  
 ‘( ((follows Mrs S. to bathroom)) )
- 8 MrsS        nein  
 no
- 9 Edy         dann hat er     ‘hier nicht geöffnet  
 then he has not opened ‘here  
 ‘( ((points to main hot water tap of the  
                   flat)) )
- 10 MrsS       ‘schau jetzt hier  
 ‘look here now  
 ‘( ((points to water taps in bathroom sinks)) )
- 11 Edy:       ja dann ist klar, also da habe ich jetzt zwei neue Siebchen  
 reingemacht  
 yes then it is clear, here I have put in two new aerators
- 12 MrsS       ja, ja,  
 yes, yes
- 13 Edy:       die waren verkalkt  
 they have been calcified

In what sense may we speak of a “denouement” of the unfolding situation and its manifest asymmetry between maintenance and repair? The video excerpt selected from the closing of the encounter suggests that its participants, through their respective formulations and situated inquiries, reach a new definition of the situation. Through that redefinition, the situation not only caused the LWPP (at Mr. and Mrs’ S. flat) in the first place, but may also be mobilized to have this problem solved (namely, the “(closed) main hot water tap of the flat”, line 9). In the selected excerpt, Edy starts with summarizing the situation in asymmetric terms, namely by announcing the upcoming repair in the kitchen (“there, the plumber will drop by quickly”, line 1), whilst making sure to highlight his partially successful maintenance so far (“the cold water is open, this is fine”, line 3). In so doing, Edy recognizes the pending problem in the kitchen (the unsatisfactory hot water flow). At the same time, he manifestly assumes his prior intervention to have solved the LLWP in the bathroom (as he already did when rushing from the bathroom into the kitchen). Mrs S.’ interjection (at line 6), in turn, challenges this basic assumption, as it singles out the remaining “hot water” problem in the bathroom, too (in addition to the blocked aerator on the bathtub, for instance). Her interjection, then, contributes to the denouement of the situation, insofar as it connects the various expressions of the acute LWPP (in the kitchen and in the bathroom) and hints at their common cause, eventually spelled out by Edy: the “(closed) main hot water tap of the *flat*” (line 9; emphasis added). Incidentally, the asymmetry between “maintenance routine” and “urgent repair” seems to be *dissolved*, as the prior definition and redefinition that it hinged upon (made by both Edy and Mr. S.) now turn out to be false (in the light of Mrs. S.’ interjection). In conclusion, we may speak

of the situation's denouement as its participants' "reassembly of repair," insofar as the situation's denouement challenges the studious display of maintenance routine and calls for material intervention to fix the local problem at hand<sup>12</sup>.

## 6. Discussion and Conclusion: 'Reassembling Repair' as a Members' Phenomenon, STS Implications

In *Reassembling the Social*, Bruno Latour invites his readers, addressed as "interested enquirers", to actually do so: "It is to help the interested enquirers in *reassembling* the social that this book has been written" (Latour 2005, 8). A closer look at Latour's invitation is in order, prior to spelling out some of the implications of our video analysis of repair work for ANT, if not for STS more broadly.

Latour's invitation takes a both programmatic and methodological form. The invitation takes a programmatic form, insofar as said book is intended as an "introduction to ANT" (at least if we stick to its ironic subtitle). This introduction, then, sets up ANT, as the renewed "sociology of associations," in competition with the received "sociology of the social" (Latour 2005, 1-17). The latter, arguably, has become part of "common sense" well beyond the social sciences: "Offering comments about the inevitable 'social dimension' of what we and others are doing 'in society' has become as familiar to us as using a mobile phone, ordering a beer, or invoking the Oedipus complex – at least in the developed world" (Latour 2005, 4). ANT, in turn, challenges this "common sense" assumption of an inevitable and homogenous "social dimension" which, as part of a stable and objective "society," may be routinely invoked for explanatory purposes (e.g., whenever an economic explanation fails to account for an economic phenomenon). Instead, ANT sets out to explain how the inevitability, homogeneity, stability, and objectivity of "the social" (or, better, "*a* social") were themselves achieved as its consequential properties, and that is, so the alternative assumption goes, as a contingent result of "*associations* between heterogeneous elements" and "things that are not themselves social" (Latour 2005, 4). The methodological task, then, becomes the empirical task of "*tracing*" these intricate associations and their assumed effectiveness – if not in practice, then at least in principle<sup>13</sup>.

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<sup>12</sup> In sum, Mrs S.' interjection turns this maintenance routine into an instrumental part of the pending repair (in contrast to Edy's prior delegation of repair work, in his pervasive attempt to stick to and sustain his maintenance routine only). In so doing, she is "reassembling repair" by defining its proper scale: the "flat", rather than the entire "building" or sole "kitchen".

<sup>13</sup> In so doing, we may add, the empirical inquiry risks turning into an "applied metaphysics" (Latour 2006, 73), or an "actant-network ontology" (Lynch 2013, 10), where "the theorist's monism frames the heterogeneous

Drawing upon a video ethnography of building maintenance, this paper examined repair work and its situated “reassembly” as a society-members’ phenomenon, rather than a social theorist’s strategic choice. An ethnomethodological respecification was thus not only offered of the initial video ethnography and its documented realities, but also of ANT, similarly generalized ontologies, or alternatively renewed epistemologies (e.g., Jarzabkowski and Pinch 2013) in STS. A single situation of maintenance routine (and, eventually, repair work) was examined for how its participants’ configured its manifest course. Particular attention was paid to their respective (re-)definitions of the situation, inquiry procedures and verbal formulations, as part and parcel of the practical methods in terms of which they managed to recognize and solve a particular housing problem (the LWPP at Mr. and Mrs. S.’ flat). In that sense, participants could be observed at “reassembling repair,” rather than simply taking for granted an established maintenance routine. In what sense, however, might this ethnomethodological description of the unfolding situation *differ* from an ANT, “ANO” (Actor-Network Ontology) (see footnote 13 above), or related conceptual framework in STS? Set aside our methodological choice to use a video recording (rather than more common documentary sources), the difference may be briefly elaborated upon by returning to Latour’s theoretical exercise in “reassembling the social.” How is this exercise conducted<sup>14</sup>?

One feature of its conduct, as a discursively available phenomenon, is that it introduces working definitions and, on that basis, builds its sociological arguments (at least in the “programmatic” and “methodological” form, as highlighted above). For example, Latour introduces three working definitions of “the social” (numbered as such in the French edition, cf. Latour 2006, 93-101):

*Definition no. 1:*

“I have argued that most often in social sciences, ‘social’ designates a type of link (as in ‘*social ties*’): it’s taken as the name of a specific domain, a sort of material like straw, mud, string, wood, or steel” (Latour 2005, 64, emphasis added).

*Definition no. 2:*

“For ANT (...), the definition of the term is different: it doesn’t designate a domain of reality or some particular item, but rather is the name of (...) an enrollment. (...) Thus, social, for ANT, is the name of a type of *momentary association* which is characterized by the way it gathers together into new shapes” (Latour 2005, 64-65, emphasis added).

*Definition no. 3:*

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ontologies *attributed* to the actors within the frame” (Lynch 2013, 10, emphasis added).

<sup>14</sup> On “social theory as a practice,” see also Taylor (1983).

“the *local*, face-to-face, naked, unequipped, and dynamic *interactions*” (Latour 2005, 65, emphasis added).

In contrast to Latour’s theoretical exercise, the key point of this paper, as an ethnomethodological respecification, was *not* to make an argument for *this* or *that* working definition of “the social” (for example, by favouring definition no. 3 over definitions no. 1 and no. 2). Rather, it was (or would be) to turn such arguments themselves into observable phenomena. In the examined case of building maintenance, it could thus for instance be observed how the involved participants themselves would act under the auspices of alternative “working definitions” of the social. To begin with, caretaker Edy could be seen to be acting under the auspices of conventionally characterized “social ties” (*definition no. 1*), which imply an asymmetric, socially sanctioned distribution of knowledge, in terms (say) of “caretaker expertise” vs. “lay knowledge” (indeed, Edy *attempted* to sustain his maintenance routine, regardless of any untrained intervention by the co-present tenants). Bringing the examined encounter to a close, Mrs S.’ final interjection in turn challenged these conventional auspices and, more interestingly, achieved a “momentary association” (*definition no. 2*) of a different kind (which, indeed, involved her and her partner, Mr. S., in the diagnostic work – no longer the silent prerogative of the professional – leading up to the pending repair). Finally, Mr. S.’ problem-formulation-in-the-kitchen, and demonstrative walking-away-out-of-the-kitchen, could be seen as initiating a particular “local interaction” (*definition no. 3*), if only to have its addressee (caretaker Edy) fix the indicated problem<sup>15</sup>.

Where does the outlined difference leave us with respect to STS and other studies of repair and maintenance work? What our video analysis has offered, we trust, is an empirical reminder of *just how* participants themselves do not only act and interact *in situ*, but do also configure the very site and situation of their (inter-)action *in vivo*. This configuration work, as we have attempted to show, includes their own progressive (re-)definitions of inquiry, (re-)definitions which build upon each other, in and as the unfolding situation, rather than providing them with mutually exclusive “definitions of the social” (e.g., Latour 2005, 131). Accordingly, and with respect to repair and maintenance *in situ*, “the problem is not so much to break out of the situation as to understand fully how it allows the finite beings that we are [including Edy, Mr. S. and Mrs S.] to gain access to the world and the type of control it exercises on experience and activity” (Quéré 1998, 239). Whether “full understanding” in that direction is

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<sup>15</sup> In contrast to Mrs S.’ achievement of a new “momentary association,” Mr. S. seems to base the “local interaction” initiated by him on the conventional “social ties” implied and enacted by caretaker Edy’s conduct. Incidentally, this contrast may also to exhibit participants’ orientation to a *gendered* distribution of expertise (cf. Lagesen 2012).

to be reached by video analysis or any other means, in the domain of building maintenance or elsewhere, must remain an open question. In a nutshell, we have not so much attempted yet another “reversal” in STS (cf. Woolgar 2004) or introduced “yet another axis of symmetry” (Lynch 2013, 6-7), so as to then figure out how questions of “multiplicity” and “unity” (cf. Mol 1999), “sociality” and “materiality” (cf. Law and Mol 1995), or “stability” and “fragility” (cf. Denis and Pontille 2015) play out in particular situations. Rather, we have tried to make explicit the particular situation under scrutiny, including its participants’ ways of defining and redefining it *in their own terms, concepts, and distinctions* (such as “hot water is not flowing in the bathroom either”). “Common sense” was thus not to be challenged, but to be described in its situated operation, affording us with the very basis for the listed questions to be asked.

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### Appendix I: Transcription conventions and screenshots

|            |   |
|------------|---|
| pb         | plumber   |
| und hier   | German language line  |
| and here   | English translation line  |
| ( )        | incomprehensible passage  |
| (go ahead) | uncertain hearing   |
| ((does))   | description, comment  |
| '          | comment on simultaneous non-verbal activity; if there is a verbal line, marked on the verbal line and again on the comment line |
|            | Ex.: 'I do not know   |
|            | '((walks out of the kitchen))   |
| #1         | indication of video still placement in the transcribed activity   |

### Appendix II: Schematic representation of mixer tap

