- 1. A Relativistic Account of Einstein's Relativity (1988).txt the reader of the novel is not supposed to go further back to Agatha Christie's office, and to see if Hercule Poirot has left traces of his passage that resemble in some ways what is in the novel. On the other hand, the reader of the astronomy paper is
- 2. An Unexpected Journey (2017).txt electronic media: the fact that, far from making social relations more virtual, they multiply their material inscriptions. Passing through routers, cables, databases, our associations leave traces that can be easily recorded, massively conserved and instantly retrieved: Once you can get information as bores, bytes, modem, sockets, cables and so on,
- 3. Don't Throw the Baby Out with the Bath School (1992).txt to account for scientific work-or to alternate by using an equally unobservable state of nature. In the other frame the only observables are the traces left by objects, arguments, skills, and tokens circulating through the collective. We never see either social relations or things. We may only document the

In the first one, social scientists were allowed to use an unobservable state of society and a definition of social relations to account for scientific work-or to alternate by using an equally unobservable state of nature. In the other frame the only observables are the traces left by objects, arguments, skills, and tokens circulating through the collective. We never see either social relations or things. We may only document the circulation of network-tracing tokens, statements, and skills. This is so important that one of us made it the first principle of science studies (Latour 1987, chap. 1). Although we have not yet fully articulated this argument, it is the basis of our empirical methods.

- 4. Harman_-Graham_-Latour_-Bruno-_-Graham-Harman-_-Peter-Erdélyi-Prince-and-the-W olf_-Latour-and-Harman.txt on February 4, 2008: http://anthem-group.net/2008/02/08/recording-of-graham-harmans-talk-at-the-media-s chool-atbournemouth-university/ The fire alarm incident has nonetheless left a trace in the blogosphere: http://testsociety.wordpress.com/2008/02/13/more-realism/ See Latour, B. (1999). "On Recalling ANT." Actor Network Theory and After. Eds. J. Law and
- 5. Latour, Bruno An Inquiry into Modes of Existence (Harvard, 2013).txt through a quest for its own subsistence. But wait, we're still not finished, for this Circle, even taken up again, leaves no more durable traces than if you had drawn it on sand or in water. You have to start over again: if you stop, it disappears. In its
- 6. Latour, Bruno An Inquiry into Modes of Existence (Harvard, 2013).txt the political Circle [POL], while it always has to start over, disappears, as we have seen, as soon as it is interrupted, without leaving any traces but the slight crease of habit. Even the end time that is to permit the definitive and salvific Presence, so typical of 368 The Passage
- 7. Latour, Bruno An Inquiry into Modes of Existence (Harvard, 2013).txt own ontology. In any situation, provided that one comes near enough to follow it as closely as possible, one must be able to detect the traces left behind by the particular pass of

- morality-bearing beings. Just as a geologist can hear the clicks of radioactivity, but only if he
- 8. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt there at their disposal, whereas the social is not a type of thing either visible or to be postulated. It is visible only by the traces it leaves (under trials) when a new association is being produced between elements which themselves are in no way 'social'. They insisted that we

Whereas, in the first approach, every activity—law, science, technology, religion, organization, politics, management, etc.—could be related to and explained by the same social aggregates behind all of them, in the second version of sociology there exists nothing behind those activities even though they might be linked in a way that does produce a society—or doesn't produce one. Such is the crucial point of departure between the two versions. To be social is no longer a safe and unproblematic property, it is a movement that may fail to trace any new connection and may fail to redesign any well-formed assemblage. As we are going to learn throughout this book, after having rendered many useful services in an earlier period, what is called 'social explanation' has become a counter-productive way to interrupt the movement of associations instead of resuming it

According to the second approach, adherents of the first have simply confused what they should explain with the explanation. They begin with society or other social aggregates, whereas one should end with them. They believed the social to be made essentially of social ties, whereas associations are made of ties which are themselves non-social. They imagined that sociology is limited to a specific domain, whereas sociologists should travel wherever new heterogeneous associations are made. They believed the social to be always already there at their disposal, whereas the social is not a type of thing either visible or to be postulated. It is visible only by the traces it leaves (under trials) when a new association is being produced between elements which themselves are in no way 'social'. They insisted that we were already held by the force of some society when our political future resides in the task of deciding what binds us all together. In brief, the second school claims to resume the work of connection and collection that was abruptly interrupted by the first. It is to help the interested enquirers in reassembling the social that this book has been written.

9. Latour, Bruno - Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt good as any. As soon as you open it, it's like a rain, a flood, an epidemic, an infestation. With every two lines, a trace is being left by some writer that some group is being made or unmade. Here it's the CEO of a big company who

Where should we start? As always, it is best to begin in the middle of things, in medias res. Will the reading of a newspaper do? Sure, it offers a starting point as good as any. As soon as you open it, it's like a rain, a flood, an epidemic, an infestation. With every two lines, a trace is being left by some writer that some group is being made or unmade. Here it's the CEO of a big company who deplores the fact that five years after the merger the firm's various branches are still not fully integrated. She wonders how to 'promote a common corporate culture'. A few lines further down finds an anthropologist explaining that there is no 'ethnic' difference between Hutus and Tutsis in Rwanda, but that it's really a 'class difference' that has been 'instrumentalized' by colonialists and then 'naturalized' as a 'cultural' one. In the letters

section, a Scot reminds his readers of the 'Glorious Alliance' between France and Mary Queen of Scots, which explains why Scotland should not share the rabid Europhobia of Englishmen.

10. Latour, Bruno - Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt which kind of group and level of analysis we will focus on, or we follow the actors' own ways and begin our travels by the traces left behind by their activity of forming and dismantling groups. The first source of uncertainty one should learn from is that there is no

To sum up, whereas for sociologists the first problem seems to settle on one privileged grouping, our most common experience, if we are faithful to it, tells us that there are lots of contradictory group formations, group enrollment—activity to which social scientists are obviously crucial contributors. The choice is thus clear: either we follow social theorists and begin our travel by setting up at the start which kind of group and level of analysis we will focus on, or we follow the actors' own ways and begin our travels by the traces left behind by their activity of forming and dismantling groups.

The first source of uncertainty one should learn from is that there is no relevant group that can be said to make up social aggregates, no established component that can be used as an incontrovertible starting point.22 Many a sociological enquiry has begun by setting up one—or several—type of groupings, before apologizing profusely for this somewhat arbitrary limitation made necessary, it is often argued, by the 'obligation to limit one's scope' or 'by the right of a scientist to define one's object'. But this is not at all the sort of setting, the sort of obligation, the sort of apologies, sociologists of associations wish to start with. Their duty is not to stabilize—whether at the beginning for clarity, for convenience, or to look reasonable—the list of groupings making up the social

- 11. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt as the actors' own expressions and behaviors? If you find this test too easy to meet, then ANT is not for you. A list of traces left by the formation of groups From the many disputes among social theorists and among actors themselves about what should be the basic building
- 12. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt group instead of mapping the controversies about group formation, it is exactly the opposite and for a good empirical reason. Group formations leave many more traces in their wake than already established connections which, by definition, might remain mute and invisible. If a given ensemble simply lies there, then it
- 13. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt groups—we have regained because groupings have constantly to be made, or remade, and during this creation or recreation the group-makers leave behind many traces that can be used as data by the informer. One way to mark this difference is to say that social aggregates are not the

- 14. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt argument to be made about a given agency, no detectable frame of reference. An invisible agency that makes no difference, produces no transformation, leaves no trace, and enters no account is not an agency. Period. Either it does something or it does not. If you mention an agency, you have
- 15. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt time anew; it can never be simply postulated. If it has no vehicle to travel, it won't move an inch, it will leave no trace, it won't be recorded in any sort of document. Even to detect Polonius behind the arras that became his shroud, the Prince of
- 16. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt things Neanderthals could have been using already. Those objects are perfectly respectable but, as we saw in the preceding chapter, they no longer leave a trace, and thus there is no way they could appear again as mediators.156 The discussion begins to shift for good when one introduces not matters

This is what I have always found so refreshing in science studies: until its development, the conversation between philosophers, sociologists, and political scientists about the right divide between 'Nature' and 'Society' had always been illustrated by boring, routine, millenary old matters of fact such as stones, rugs, mugs, and hammers that were basically things Neanderthals could have been using already. Those objects are perfectly respectable but, as we saw in the preceding chapter, they no longer leave a trace, and thus there is no way they could appear again as mediators.156

The discussion begins to shift for good when one introduces not matters of fact, but what I now call matters of concern. While highly uncertain and loudly disputed, these real, objective, atypical and, above all, interesting agencies are taken not exactly as object but rather as gatherings.157 You cannot do with Monte Carlo calculations what you do with mugs; you cannot do with genetically modified organisms what you do with mats; you cannot do with quaternions what you do with black swans.158 This is exactly what the fourth uncertainty wishes to thrive from: the mapping of scientific controversies about matters of concern should allow us to renew from top to bottom the very scene of empiricism—and hence the divide between 'natural' and 'social'. A natural world made up of matters of fact does not look quite the same as a world consisting of matters of concern and thus cannot be

used so easily as a foil for the 'symbolic-human-intentional' social order. This is why what could be referred to as the second empiricism doesn't look at all like the first: its science, its politics, its esthetics, its morality are all different from the past. It is still real and objective, but it is livelier, more talkative, active, pluralistic, and more mediated than the other.

- 17. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt that, I agree, breaks down the original metaphor somewhat: a network is not made of nylon thread, words or any durable substance but is the trace left behind by some moving agent. You can hang your fish nets to dry, but you can't hang an actor-network: it has
- 18. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt devised to make sense of their data. In order to trace an actor-network, what we have to do is to add to the many traces left by the social fluid through which the traces are rendered again present, provided something happens in it. In an actornetwork account the relative

- 19. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt I won't be able to add any other explanations. P: You are really extraordinary! If your actors don't act, they will leave no trace whatsoever. So you will have no information at all. So you will have nothing to say. S: You mean when there is no trace
- 20. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt up data? S: No, of course not, but still I want . . . P: Good, at least you are more reasonable than some of our colleagues. No trace left, thus no information, thus no description, then no talk. Don't fill it in. It's like a map of a country in
- 21. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt s sake, leave it blank! Terra incognita. S: But what about invisible entities acting in some hidden ways? P: If they act, they leave some trace. And then you will have some information, then you can talk about them. If not, just shut up. S: But what if they are
- 22. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt if I add nothing, I simply repeat what actors say. P: What would be the use of adding invisible entities that act without leaving any trace and make no difference to any state of affairs? On the Difficulty of Being an ANT 151 S: But I have to make the actors
- 23. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt half hour, I have to confess, I've been wondering the same thing . . . 199 See Garfinkel, Ethnomethodology's Program, p. 264. PART II How to Render Associations Traceable Again This page intentionally left blank Introduction to Part II: Why is it so Difficult to Trace the Social? It should be the simplest
- 25. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt plug-ins is clearly visible in Thevenot's list of regimes of action. See Thevenot, 'Which road to follow?' 208 Second Move Every pellet leaves a trace behind it that now has an origin, a label, a vehicle, a circuit, sometimes even a price tag.275 While information technology, standing as one
- 26. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt an 'undocumented alien' or extricating yourself out of the FBI's grip because of a misspelling of your name. Other vehicles leave such a thin trace as if 275 The massive digitalization of many types of documents may offer Tarde a belated vindication. The poor statistics available at the end of
- 27. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt What does it mean to speak of legal, religious, scientific, technical, economical, and political 'ways' of associating? And how could this be comparable with the traces left by the calibrated definitions of social ties? This is where the simile of the Copernican revolution is but a meek understatement; this is

Now comes the tricky part as here comes the straw that breaks the camel's back: displacement yes, but of what? What does it mean to speak of legal, religious, scientific, technical, economical, and political 'ways' of associating? And how could this be comparable with the traces left by the calibrated definitions of social ties? This is where the simile of the Copernican revolution is but a meek understatement; this is where the real rupture is going to occur with any sort of 'social' science ifwe don't modify for good the meaning of this adjective—and this is where the few readers I have managed to keep until now may well abandon the theory for good.334 To understand what I take to be the ultimate goal of ANT, we have to let out of their cages entities which had been strictly forbidden to enter the scene until now and 334 This is also the place where I have to part company finally with Tarde, who never thought it necessary to differentiate the types of threads with which he was weaving his definition of the social world. In this sense, Tarde maintained a substantive and not a relativist definition of sociology.

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allow them to roam in the world again.335 What name could I give them? Entities, beings, objects, things, perhaps refer to them as invis-ibles.336 To deploy the different ways in which they assemble the collective would require an entirely different book, but fortunately I don't need to make the point positively, only to indicate the direction and explain why we keep minimizing our chances of being 'objective' when we stick too long to the sociology of the social.

- 28. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt no longer solid bedrock on which to build 111 ensemble, generates no trace and no information 31 entities 103, 201, 259, 262, 264, 267 detection of circulating 233 if they act they leave some trace 150 psycho-genes are soul generating 216 societies bundles of composite 218 'epistemology of social sciences', defects in epistemology and sociology 102 ethnomethodology 68 everything is data 133-4 Exeunt sociologists 95
- 29. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt oligopti- con 175-83 localizing the global 173-4 panoramas 183-90 first source of uncertainty 27-30, 182 mediators vs. intermediaries 37- 42 no relevant group to make up social aggregates 29 no work no group 34-7 traces left by formation of groups 30-4 fishermen 106 -7, 109, 132 five sources of uncertainty, task of stabilizing important 232 Flatland 172, 247 Fleck, Ludwig, on Wasserman's reaction to detect syphilis 112-14, 112
- 30. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt n Greimas, A.J. 54n, 55n, 128n 'group', sets neither size nor content 29 group defined, list of anti-groups set up 32 group formations, leave more traces in their wake 31 group performation, maps out the anti-groups making up their social world 56 groups, 'constantly being performed 22, 33, 63, 87 groups and agencies, have to
- 31. Latour, Bruno Reassembling the Social_ An Introduction to Actor-Network-Theory (Oxford, 2005).txt confines of 82 tautology of 69 -70 technique and 238 that tried to mop up a few elements 263 three modes of existence and 84 -5 to 'explain' the new associations 265 traces left by calibrated definitions of 239 traditionally conceived 74 welcome associations only if covered in 234 what they have become in hands of technical setups 81 social to

- 32. Latour, Bruno Rejoicing_ Or the Torments of Religious Speech (Polity, 2013).txt water, then spits out toads and sticky seaweed. 4 If he hopes to avoid wounding, he'll have to tread so lightly that he leaves no trace in the sand; his handling will have to be so deft no one will feel the scalpel going in; he'll have to choose
- 33. Latour, Bruno Rejoicing_ Or the Torments of Religious Speech (Polity, 2013).txt that has made science the very close enemy of religion. These two forms of utterance depend on hard work that produces very fragile results, leaves traces so small, occupies space-time so differently, creates such incommensurable ecological niches that they had no more reason to begin to do 21 battle with
- 34. Latour, Bruno Science in Action (Harvard, 1987).txt of basic physics, ignition at constant temperature will be remembered as a technological dead end, and Diesel will occupy himself with other tasks, leaving little trace in the history books. So the number of enlisted interests is important but far from enough, because knitting and tying them together may be
- 35. Latour, Bruno The Making of Law_ An Ethnography of the Conseil d'Etat (Polity, 2010).txt regimes of enunciation from leading in opposite directions.68 The law would have it that statements cannot be detached from enunciators without leaving a clearly visible trace 65 On shifting out see Greimas, 'Analyse sémiotique d'un discours juridique' (1976). On fiction, the best presentation is still Pavel, Fictional Worlds (1986). On the enunciation
- 36. Latour, Bruno [ed.] Making Things Public_ Atmospheres of Democracy (MIT, 2005).txt Odyssey appeals to the popular culture of "paleo-visitation": The film's premise is that extraterrestrials have visited us in the past and have left traces of their passage. Close Encounters, despite the elements of ufology in it, does dramatize the realities of science. Thus, in a now-classic scene,
- 37. Latour, Bruno [ed.] Making Things Public_ Atmospheres of Democracy (MIT, 2005).txt half-open structures, solid multi-purpose buildings and finally into the courthouses and palaces of justice of modern times. Their evolution has left behind historical traces and records, which illuminate many facets of legal and juridical history as well as their public perception. Translated from the German by Gloria Custance
- 38. Latour, Bruno [ed.] Making Things Public_ Atmospheres of Democracy (MIT, 2005).txt come up with is that of a colony of swarming ants, wherein the individual ants blend in with the group, their behavior being dictated by traces left by other individual ants. The "implexity" of the electron- system makes it impossible to represent systems involving more than about 100 electrons in a
- 39. Latour, Bruno [ed.] Making Things Public_ Atmospheres of Democracy (MIT, 2005).txt observation of wolves is, however, a relatively rare event, and it is more common to detect traces of their passage or of their presence. These traces can be visual: Wolves leave teeth marks on their prey and tracks in the snow. The traces can also be audible: Packs of wolves
- 40. Latour_-Bruno-After-Lockdown_-A-Metamorphosis-_Polity_-2021_.txt with these agents you're always in for a surprise. 'Infralunar' and 'supra-lunar' weren't such bad terms, in the end, for spotting the trace left by this great split. It would be easy to say that your [tes] parents' generation sees death everywhere and that the following generation
- 41. Latour_-Bruno-After-Lockdown_-A-Metamorphosis-_Polity_-2021_.txt term that comprises the agents what biologists call 'living organisms' as well as the effect of

- their actions, their niche if you like, all the traces they leave in passing, the external skeleton as well as the internal one, the termitaria as well as termites. Sébastien Dutreuil suggests we stick
- 42. Paris, Invisible City_ The Plasma (2012).txt changing scale. Ultimately, a city cannot be the framework within which an individual moves, simply because this framework itself is made of nothing more than traces left by other individuals who have moved about or are still there, in place. Favouring the point of view of the paedestri-an, the
- 43. The Whole is Always Smaller Than Its Parts (2012).txt really a difference between the two? What is meant by a collective entity lasting in time? In this article, we wish to consider how digital traces left by actors inside newly available databases might modify the very position of those classical questions of social order. Our aim is to test
- 44. The Whole is Always Smaller Than Its Parts (2012).txt orders, we wish to acknowledge the limitations of the simulation approach for collective systems and prefer letting the agents produce a dynamics and collect the traces that their actions leave as they unfold so as to produce a rich data set (Grauwin 2011). In other words, data mining does not result