chapter 2 **different atherosclerosis**

Never Alone

In their outpatient clinic, vascular surgeons interact with patients. Here's what the doctors do: they ask questions (where does it hurt, how long can you walk, does it stop when you rest?) They look at the color and the texture of the skin of legs that hurt. They put their hands on places where the patients' leg arteries should be palpable and attempt to feel whether or not the arteries pulsate with each heartbeat. They scribble down notes in their files while their patients quickly or clumsily put on their clothes again. And then they propose the next step in the patients' itinerary. I've seen them doing this again and again, sitting on a stool with a white coat on, smiling, or looking serious. That's what the vascular surgeons of hospital Z showed me when I asked them about "atherosclerosis of the leg vessels": they took me to their outpatient clinic.

Then I wanted to know about pathology. The doors of the department of pathology say "No Entry." Being a researcher, I was kindly permitted to use them as an entrance even so. It was, however, not possible to see atherosclerotic leg vessels any random week there. The pathology resident who was to be my informant phoned me when he had something to offer. "I've got a leg," he said. A few days and preparatory steps later we finally saw what I had come looking for. Atherosclerosis.

In the small room he shared with two others, books and papers all around, the pathology resident had installed the double microscope for the occasion of my visit. "If I'm alone I use one with just a single pair of eyepieces," he said, "this one is used when a supervisor wants to

check what we are doing." We sat down with the microscope on the table between us. Each of us looked into one of the eyepieces. He focused the image, asking me when what I could see was sharp. With an inbuilt pointer he taught me what to see. As if he were, today, the supervisor.

"You see, there's a vessel, this here, it's not quite a circle, but almost. It's pink, that's from the colorant. And that purple, here, that's the calcification, in the media. It's broken. They have done a bad job with the decalcification. Not done it long enough, so the knife had a problem cutting. Look, all this, this messiness here, that's an artifact from that." He shifted the pointer to the middle of the circle. "That's the lumen. There's blood cells inside it, you see. That only happens when a lumen is small. Otherwise it's washed out during the preparation. And here, around the lumen, this first layer of cells, that's the intima. It's thick. Oh, wow, isn't it thick! It goes all the way from here, to there. Look. Now there's your atherosclerosis. That's it. A thickening of the intima. That's really what it is."

And then he adds, after a little pause: "Under a microscope."

My endeavor hinges on this last addition. The pathology resident utters it as if he is saying nothing special. "Under a microscope." But it implies a lot. Without this addition, atherosclerosis is all alone. It is visible *through* a microscope. A thickened intima. There is something seductive about it. To bow one's head over a microscope and let one's eyes be directed by the pointer. If only be-

Studying Practice

In this book I reflexively attend to the genre of "relating to the literature." I am not all that comfortable with this genre, for there is the danger that it implicitly strengthens a number of assumptions against which the text is making explicit arguments. Besides, it is never possible to relate to the literature specifically enough. Out of sheer love for detail, I would prefer to not include any references at all, since they will inevitably be too crude. But that is not wise. "A paper that does not have references is like a child without an escort walking in the night in a big city it does not know: isolated, lost, anything may happen to it" (Latour 1987, 33). Presenting this quote is a way of relating to the literature that I will use only sparingly throughout this book: treating it as a source of authority. If Latour says papers need references, then so they do, or would you want to disagree with him? And if papers need references, then so do books.

The reference to Latour that helps to introduce some of the background of the present study is to his *We Have Never Been Modern* (Latour 1993). In that book, Latour seeks ways out of the nature-culture divide —just like Barker, Strathern, Haraway, and many others whom I have not mentioned. Latour doesn't follow the way this divide was framed and institutionalized in the twentieth century, but, in a wider gesture, links it up with modernity. All modern thinkers, he claims, glorify their ability to distinguish between natural and social phenomena, disqualifying those who are "unable" to do so as premoderns. Meanwhile, however, or so Latour argues, in the

cause a vessel cross section makes for a beautiful image. With all its pink and purple and its strange forms that slowly come to be discernible if their nature is explained. There's something seductive about it: to use instruments as "mere" instruments that unveil the hidden reality of atherosclerosis.

But when "under a microscope" is added, the thickened intima no longer exists all by itself—but through the microscope. What is foregrounded through this addition is that the visibility of intimas *depends on* microscopes. And, for that matter, on a lot more. On the pointer. And on the two glass sheets that make the slide. Don't forget the decalcification that, even when it isn't done long enough, allows the technician to cut thin cross sections of a vessel. There's the work of that technician. The tweezers and the knives. The dyes that turn the various cellular structures pink and purple. They are all required if pathologists are to see the thick intima of a vessel wall.

It may be foregrounded or forgotten. When they talk bodies, doctors switch. Sometimes they add "under a microscope" or some equivalent of that. Sometimes they don't. My ethnographic strategy hinges on the art of never forgetting about microscopes. Of persistently attending to their relevance and always including them in stories about physicalities. It is with this strategy that disease is turned into something ethnographers may talk about. Because as long as the practicalities of *doing* disease are part of the story, it is a story about practices. A praxiography. The "disease" that ethnographers talk about is never alone. It does

practices of the so-called modern world the natural and the social are as intertwined as they are in so-called premodern *thinking*. This implies that there are clashes between the knowledge *articulated* in technoscience societies and the knowledges *embedded* in their practices. While the importance of a clear-cut distinction was loudly proclaimed, it wasn't converted into action. Therefore, *modernity* is a state we have never been in, for only our theories make modern divides. Our practices do not.

Latour addresses several versions of the natural/social divide. One of these is the distinction between *subject* and *object*. In the schematic models of modernity, or so Latour explains, the subject, which is social, actively knows, and the object, being known, is natural. In order to overcome this divide we have to learn to realize that the world we live in is a mixture. Latour's way of achieving this is to claim that subjects and objects are two poles of a spectrum, which have many quasi subjects and quasi objects, mixtures, in-between them. The moral of the book is that instead of dialectically jumping between the ideas that reside in the minds of subjects and some objective reality *out there*, we would do better to admit that in our daily lives we are engaged in practices that are thick, fleshy, and warm as well as made out of metal, glass, and numbers—and that are persistently uncertain.

Relating to this statement allows me to explain to you better, I hope, what it

not stand by itself. It depends on everything and everyone that is active while it is being practiced. This disease is *being done*.

No, pathologists do not *make* the thick atherosclerotic vessel walls they look at, nor do they *construct* them. Those are clumsy words for what happens in the department of pathology of hospital Z. They suggest that material is assembled, put together, and turned into an object that subsequently goes out in the world all by itself. Instead of the "construction" metaphor of the workshop we might try to mobilize a theater metaphor for what happens in the hospital. When a disease is being done, we may say that it is *performed* in a specific way. The word "performance" has various appropriate connotations. There may (but need not be) a script available for doing a disease. If the script is not put to play, it is of no value for what happens in the theater. At different times and places scripts are staged in various ways. If there is no script, actors improvise. The stage props are as important as the people, because, after all, they set the stage.

But then again, the performance metaphor has some inappropriate connotations as well. It may be taken to suggest that there is a backstage, where the real reality is hiding. Or that something difficult is going on, that a successful accomplishment of a task is involved. It may be taken to suggest that what is done here and now has effects beyond the mere moment—performative effects. I don't want those associations to interfere with what I want to do here: to shift from an epistemological to a praxiographic inquiry into reality. So I need a word that doesn't suggest too much. A word with not too much of an academic history. The English language has a nice one in store: *enact*. It is possible to say

is I am trying to do in the present book. What I am attempting is similar. I investigate knowledge incorporated in daily events and activities rather than knowledge articulated in words and images and printed on paper. I privilege practices over principles and study them ethnographically. This turns *doing anthropology* into a *philosophical move*. A move away from the epistemological tradition in philosophy that tried to articulate the relation between knowing subjects and their objects of knowledge. The ethnographic study of practices does not search for knowledge in subjects who have it in their minds and may talk about it. Instead, it locates knowledge primarily in activities, events, buildings, instruments, procedures, and so on. Objects, in their turn, are not taken here as entities waiting out there to be represented but neither are they the constructions shaped by the subject-knowers. Objects are—well, what are they? That is the question. That is the question this book tries to address.

So just as Latour in *We Have Never Been Modern* recommended, I want to escape the subject/object divide. But there is also a difference. I want to escape from this dichotomy *twice*. I will argue in what follows that it is not a *single* dichotomy; there are (at least) *two* subject/object divisions

that in practices objects are *enacted*. This suggests that activities take place—but leaves the actors vague. It also suggests that in the act, and only then and there, something *is*—being enacted. Both suggestions fit in fine with the praxiography that I try to engage in here.

Thus, an ethnographer/praxiographer out to investigate diseases never isolates these from the practices in which they are, what one may call, *enacted*. She stubbornly takes notice of the techniques that make things visible, audible, tangible, knowable. She may talk bodies—but she never forgets about microscopes. This turns the distance from the outpatient clinic (which, in hospital Z, is located on the first floor of wing F) to the department of pathology (on the fourth floor of wing D) into one that is very long indeed. An unbridgeable distance, or so it seems. For the techniques that make atherosclerosis visible, audible, tangible, and knowable in these two places exclude each another.

We walk to the fridge. The pathology resident takes out a plastic bag with a label attached to it. Inside it there's a foot with twenty-eight centimeters of leg. It was amputated the previous day and routinely sent to the pathology department for inspection. Could the plane of resection, the skin, and the vessels please be prepared and assessed under a microscope? While he carries the amputated lower leg to a table, the resident puts his hand on the place where one might expect the dorsal foot artery. "Hah, nice pulsations," he says provocatively. And then he looks at me and adds: "Ain't I horrible?"

at stake. Sure, they depend on one another. The many dichotomies that infest the modern philosophical tradition are all interrelated. And yet there are also endless varieties and incongruities between them. When it comes to an investigation of disease by ethnographic means, it is important to stress the double character of the subject/object divide. The subtext making relations to the literature throughout this chapter aims to show just this. That there is, first, a division between subject-humans and objects-nature. And that second, there is a related but different division between actively knowing-subjects and passive objects-that-are-known. Escaping from the first dichotomy involves different moves than getting away from the second.

Subjects/Objects 1

If humans, who can talk, are, because of this ability, to be respected as subjects, while other entities, silently part of nature, may be turned into objects, then the question arises: which of these kinds of entities may scholars hope to publish printed texts about? There is a long-standing differentiation: the social sciences know about humans and their societies, while the natural sciences know about the natural world. A lot of disciplines do not fit into this scheme: geography, architecture, and medicine to name but three. And yet it is persistent. There are various reasons for this. One of these is that many social scientists fear that as soon as the divide is not respected, natural scientific methods will take over. Imperialistically they will reach

In the outpatient clinic, surgeons feel the pulsations of dorsal foot arteries in patients whose legs hurt when they walk. Each time the heart beats, a person's blood is pushed forward through the arteries, and this can be felt on the body's surface (in contrast with flow through the veins, which carry the same blood a lot calmer back to the heart again). In the pathology department the gesture of feeling for pulsations is empty. The arteries of dead limbs do not pulsate. It is a sick joke to feel for them even so.

He's a good informant, this resident, even if he makes sick jokes. Or, he's a good informant because he makes sick jokes. Jokes that may have a psychological function: they may facilitate this young man's entrance in the esoteric world of pathology, where, unlike most other places, cold human lower legs are things one may take out of a fridge and walk around with. But the joke quoted here also contains ethnographic information. It enlarges the fact that the requirements for enacting disease in a clinical way are no longer met once a patient is dead. However skilled a novice doctor may be in feeling pulsations, this is not going to help him when it comes to diagnosing the vessels of an amputated lower leg.

In the department of pathology, no pulsations can be felt and no interview questions can be asked. Does this leg hurt? Even if there were a patient present who might want to answer such a question, it wouldn't make sense. Either a leg

everywhere and human subjects, instead of being listened to, will get objectified. (For a debate about this question, see, for example, the debate between Collins and Yearly and Latour and Callon, in Pickering 1991.) But not respecting the divide also opens another possibility, one that is hardly ever mentioned: it might also be that the social sciences have methods that are capable of reaching out, of going everywhere—even if they can't do everything. Indeed, or so I will argue here, methods like this exist. One of these is a sociological tradition designed for the study of human subjects. If pulled and pushed a bit, it may be broadened to encompass subject/objects of all kinds.

In order to make this claim, I begin by taking you back to another outdated text. In 1959, Goffman borrowed the language of the theater in order to talk about human subjects. When people present themselves to each other, Goffman said, they present not so much *themselves* but *a self,* a persona, a mask. They act as if they were on a stage. They *perform.* In everyday life people present themselves to each other. And while acting, they treat the other people present as both their coactors and the audience of their play (Goffman [1959] 1971). With his suggestion that we might investigate performances, Goffman opened up the possibility of a sociology of the individual. He launched a study of social selves. In shops, factories, churches, pubs, schools, hospitals, and other settings where sociologists may venture and observe what happens, identity is not expressed: it is performed.

Goffman's sociology was designed as a supplement to a specific kind of psychology. Not a static character typifica-

is part of the living body of a patient who is able to talk about it, or a leg is cut off. And however much its absence may hurt, the absent leg no longer hurts itself. In a department of pathology, several crucial requirements for enacting atherosclerosis in a clinical mode are lacking. In the outpatient clinic, it is the other way around. There the techniques of pathology are out of place. They cannot be applied. Making a cross section of an artery is fine—if one has an artery. But nobody is going to cut an artery out of a living body in order to find out how bad it is. Doing so would cause a problem bigger than the one needing a solution. Is it thick, the intima of the femoral artery of that patient, who's sitting on his chair so sadly? It may well be. Who knows? Nobody does. As long as the patient's skin is left intact, no head will bend over a microscope and observe cross sections of the patient's vessels.

The practices of enacting clinical atherosclerosis and pathological atherosclerosis *exclude* one another. The first requires a patient who complains about pain in his legs. And the second requires a cross section of an artery visible under the microscope. These exigencies are incompatible, at least: they cannot be realized simultaneously. This is not a question of words that prove difficult to translate from one department to the other. Surgeons and pathologists who talk with one another tend to understand each other very well. It is not a question of looking from different perspectives either. Surgeons know how to look through microscopes and pathologists have learned how to talk to living patients. The incompatibility is a practical matter. It is a matter of patients who speak as against

tion, nor some behaviorist variant that has only room for input-output correlations, but a dynamic psychology in which, after a developmental process, adults have real selves deep down, back stage. In *The Social Presentation of the Self in Everyday Life,* Goffman left this backstage identity on one side as a topic to be studied by psychologists. The sociological object was framed as something differently. The identity people *perform* is not deep, it is a *mere* performance. Due to his sociological training, or so he claimed, Goffman had enough distance so he could always see the curtains. But to the players and everyday, nonsociological observers, the gap between performance and reality often goes unnoticed. They may be carried away by the play. In Goffman's words: "At one extreme, one finds that the performer can be fully taken by his own act; he can be sincerely convinced that the impression of reality which he stages is the real reality. When his audience is also convinced in this way about the show he puts on—and this seems to be the typical case—then for the moment at least, only the sociologist or the socially disgruntled will have any doubts about the 'realness' of what is presented. At the other extreme, we find that the performer may not be taken in at all by his own routine. This possibility is understandable, since no one is in quite as good an observational position to see through

body parts that are sectioned. Of talking about pain as against estimating the size of cells. Of asking questions as against preparing slides. In the outpatient clinic and in the department of pathology, atherosclerosis is *done* differently.

Founding or Following

There is a certain economy in isolating objects from the practices in which they are enacted. When the intricacies of its enactment are bracketed, the body becomes established as an independent entity. A reality all by itself. Alone and self-sufficient. This makes it possible to relate the pain articulated in the consulting room with the thickened intima visible under a microscope. It is possible. Forget about "articulated in the consulting room" and "visible under a microscope" and pretend that both practices share a single, common object. They have as their *referent* a single disease, residing *inside* the body. In its leg arteries, to be precise. It surfaces in symptoms, the patient's complaints among them. And it is unveiled when the vessels are finally put under the microscope.

It often happens. The practicalities of enacting disease are bracketed. Atherosclerosis is taken to be one disease. The patient's pain is among the *symptoms* that surface, and the thickened vessel walls are called the *underlying reality* of the disease. This layered image turns pathology into a crucial discipline, for it unveils the underlying reality of disease. Pathology is, indeed, called the *foundation* of modern medicine by many analysts for that very reason. Some simply

the act as the person who puts it on" (28). But while the psychological "realness" of the identity on stage might be doubted (by the sociologist, the socially disgruntled, and the person who puts it on), the social consequences of the publicly displayed role are impressive even so. The identity people perform in public, on stage, is the one others react to and is thus the one that is socially effective. It is, therefore, an important object of sociological study.

Again, the outdated text I relate to here has been covered up later on by many other texts (written by Goffman himself as well as by other authors) that tell more or less different stories about identity and/or performance. Instead of digging out that history in detail here, I will make a big jump (over lots of intricate details) to two texts of a few decades later. One articulates clearly the idea that, somewhere in-between, along the way, the curtains have vanished. The other broadens the study of performances from human identities to entities of heterogeneous kinds.

Somewhere between the fifties and the eighties, psychology lost its power to study the real reality of individuals. Sociology, when observing what individuals do in public, *on stage,* no longer feels that there is anything deep that it is missing out on. In terms of the stage metaphor, one could say that there are *only* stages these days. The curtains and the dressing rooms have gone. Sociologists take sociological reality at face value. The "mere" has dis-

assert this. Others see it as a reason for criticism: what kind of medicine is this, that wants to heal living patients but is based on the knowledge of dead bodies?

However, if one doesn't bracket the specificities of enacting reality the picture changes drastically. If one doesn't stay within the confinements of the body, but follows the various practices in which atherosclerosis is enacted throughout the hospital, the topography of the relation between pathology and clinic appears to be completely different. In hospital practice, thickened vessel walls do not *underlay* legs that hurt. They come, instead, *after* them. And, moreover, they only do so for a small proportion of patients. In practice, thickened vessel walls are only revealed in those patients whose legs have been amputated or in those who have been operated on and from whose bodies small parts are sent up to floor 4 wing D to be put under the microscope. In practice, if pathology has anything to do with atherosclerosis at all it is not as a foundation, but as an afterthought.

The pathology resident carries the amputated foot-with-leg that he just took out of the refrigerator to a table. He measures the length of the leg: twenty-eight centimeters. Makes a note of that. Then he takes a dissection knife out of a drawer. He cuts two small pieces

appeared from the performance. "My argument is that there need not be a 'doer behind the deed,' but that the 'doer' is variably constructed in and through the deed," writes Judith Butler while talking about doing gender identity (1990, 142). The opposition between surface appearance and deep reality has disappeared. And people's identities do not precede their performances, but are constituted in and through them. Identity depends on what happens on stage: but then psychology is either wiped away, or turned into another branch of sociology.

The specific identity that Butler is concerned about is that of *gender.* Turning this into a topic for sociological investigation is a way to push aside another tradition that claimed to know about it: psychoanalysis. Psychoanalytic stories say that early on in people's lives their identity is not yet fixed: it may still take various forms. But somewhere before the age of four one becomes either a woman or a man. This, then, is what Butler challenges. "What is signified as an identity is not signified at a given point in time after which it is simply there as an inert piece of entitative language" (144). Identity, Butler tells, is not given but practiced. The *pervasive and mundane acts* in which this is done make people what they are. These acts deserve to be taken seriously both in their stubbornness and in their volatility.

But how to study the acts in which people *do* their selves? How can one avoid being *taken in* by the face-value reality of what happens if one no longer frames the stage in the way theaters do, with curtains, but as if one is making a documentary film with a hand camera that may be carried everywhere? Goffman had his scholarly distance to rely on when he studied performances, a distance that made

of tissue from the plane of resection, puts them in plastic containers, and numbers these. He scribbles the numbers in his notebook next to a rough drawing, indicating with arrows where each specimen was taken from. He does the same with a few pieces of skin. Then he starts to look for the arteries. It's not easy to find these now that they do not pulsate. But finally he succeeds. He cuts several pieces of each and puts them in containers as well. The containers have holes. They are all dropped in a small bucket that is filled with a fluid that will prevent their disintegration. The next day technicians will turn the preserved pieces of tissue into slides. And in a few days' time the resident and I will be bend over the microscope and see arteries with impressively thick intimas: atherosclerosis. We'll also inspect the cells of the plane of resection. They look all right: not gangrenous. And the skin cells indeed show the signs of long and severe oxygen deprivation. The resident writes this down and takes his notes to his supervisor.

Pathology has the final word in cases of amputation. While the patient is recovering in a hospital bed and learning to live with an incomplete leg, pathologists decide whether the operation was justified and properly executed. Pathologists may also make judgments about the walls of small pieces of arteries that are cut out of poorly functioning circulatory systems in the course of less drastic operations. They may judge all kinds of arteries once they do not function

him aware of the curtains, but what does Butler have, so many years on? Friction. Differences. Contradictions. "The injunction *to be* a given gender produces necessary failures, a variety of incoherent configurations that in their multiplicity exceed and defy the injunction by which they are generated" (Butler 1990, 145). Clashes and transgressions make diverging rules and regulations visible. Because *doing* a woman is not the same thing in a supermarket as it is in the classroom, because *staging* a man in bed is quite different from staging a man at a professional meeting, it is possible to investigate what it is to perform this, that, or the other gender. Instead of distance, now, here, it is *contrast* that makes it possible to be a good observer.

Human subjects can be studied in this way: by investigating their contrasting identities as these are performed in a variety of sites and situations. But what about the entities of the natural world, the objects? The investigation of gender identity in terms of performance begins by diminishing the importance of a few natural objects. The vagina for instance. This organ is no longer capable, all by itself, of turning someone into a woman. A lot more is required to *do* womanhood: specific styles of talking, ways of walking, dressing, addressing. A womanly way of screaming, raging, smiling, eating, soothing, loving. If gender is not fixed and physical but viscous and performed, the body's sexual organs are not enough to mark it.

But then again. Performing identities is not a question of ideas and imaginations devoid of materiality either. A lot of *things* are involved. Black ties and yellow dresses. Bags and glasses. Shoes and desks and

any longer, once the blood has stopped flowing through them. But they never answer the question "what to do?" that drives the enactment of atherosclerosis in the clinic. In the daily hospital dealings with patients with atherosclerosis, pathology is not foundational, because it cannot found action. However basic its truth, pathology cannot get to know what vascular surgeons want to know when they make decisions about treatment. Should this patient, Mr. or Mrs. So-and-So, be operated, and, if so, where, and how? Pathology remains silent on these questions.

To the pathology resident it is frustrating. He expected this specialism to be basic and thus to have all knowledge, an overview. But often it cannot even answer simple questions. As he puts it: "I'll never be able to diagnose the state of an artery properly. Never. Not even if I have an entire vessel. In a living patient this is ridiculous of course. But I couldn't even do it in a corpse. For what do you want to know? You want to know the location and extent of the stenosis. That implies that you'd have to make a slide every, say every three centimeters. Or maybe five. Just imagine: over the entire length of a lower leg, an upper leg, an aorta. How many slides is that? Imagine me cutting all the pieces. The technicians slicing them, coloring them, making slides. And then I'd have to assess these carefully, one by one. It wouldn't be enough to say that the wall is thick. How thick is the wall? How much of the original lumen is left? I'd have to take into account that I look at a lumen that is no longer functioning. It would take ages. It's time consuming so it's far too expensive. And because there are all these artifacts of death, it's not even certain either. It can't be done."

chairs and razors. And among the stage props is the physical body. A vagina or a penis need not cause gender identity from the inside to be relevant in staging oneself as a woman or a man. The extent to which they are relevant depends on the scene. Out in the streets one does not need a penis to perform masculinity. But in communal showers at the swimming pool, it helps a lot. So there they are, the genitals: on stage.

But where are they—where in the literature? Not in Butler's book. Butler is a philosopher who says that it is important to study the pervasive and mundane acts by which gender identity is performed. But she doesn't actually engage in such a study. Others do. Stefan Hirschauer, for instance. As a sociologist he made an investigation of the performance of gender identity (Hirschauer 1993). His point of entrance is an ethnographic study of a German treatment program for transsexuals. Transsexuality, or so Hirschauer states (following Garfinkel), can teach the sociologist a lot about what it is to perform a gender because transsexuals pass from one side of the divide to the other. What is involved in passing? The law, the job market, family relations. And, to be sure, the body. The body is, cannot but be, restyled by the person who is, or tries to be, the "other" gender, the one that his/her genitals do not denote. Length of the hair, length of pace, way of sitting, they are all adapted.

So the transsexual body is part of

In practice, the different ways in which atherosclerosis is enacted do not align. Opening up a leg in order to find out whether its arteries are bad isn't done because taking out a part of an artery for diagnostic reasons would be an intervention as big as a therapeutic one. A biopsy of just a little part of the artery, moreover, wouldn't show *where* it is bad: in the groin, the knee, the ankles? The resident's thought experiment, in which he gives himself an entire vessel to diagnose, shows that even if that impossible condition for his work were met, he would not be of great help to vascular surgeons. Even then he would not gather the kind of information that treating surgeons want in addition to their clinical diagnosis: the location and quantification of a patient's atherosclerosis.

In the process of diagnosing atherosclerosis, the knowledge on which action may be based doesn't come from the pathology department. This is not an accidental division of tasks. The knowledge required could simply never be assembled using the techniques of pathology. What about the clinic? In hospital practice, the clinical way of enacting atherosclerosis is more important. This is not to say that the clinic, in its turn, is foundational. The appropriate term here is another one. The reality enacted in the clinic comes before all others. It is the *beginning of* and the *condition for* everything else. This becomes particularly apparent when patients fail to comply with the unwritten rules of the doctor-patient interview, when patients seem to expect that their complaints and their experiences, their stories, are of no importance to the doctor.

I sit in with the angiologist, an internist specialized in vascular diseases. In the course of the morning, he sees patients with claudication, but also patients who have vascular problems other than atherosclerosis. There are, moreover, patients whom the general practitioner

staging a new gender identity. To that end it is restyled, and not only by the transsexual, but also by medical professionals. Hirschauer's study goes into this medical restyling in a lot of detail. It comes after the psychiatrist has accepted the person's claim to being the other gender. Then this false body is first diagnosed as endocrinologically normal, in order for it to get hormones that make it as normal as possible again, but this time according to the other normal values. Subsequently it is operated on: its genitals are heroically resculptured. Vagina is turned into penis or vice versa. Without those physical interventions, transsexuals, or so they say, have trouble performing the other gender. They need a body with the "right" sex to be able to have a coherent identity. Bodies thus do not oppose social performances, but are a part of them. Performances are not only social, but material as well. So there they are, the objects. They take part in the way people stage their identities. But once objects are on stage we can investigate *their* identities, too. This is what Hirschauer does and also what happens in the present book: here objects are investigated as if they were on stage. What is studied here are the identities an ob-

couldn't diagnose. They are likely to have internal problems, but of what kind? This makes the interview questions more open than they tend to be in the vascular surgeons' clinics. Not: do your legs hurt? But: what can I do for you? Or: what's your problem? Mrs. Vengar comes for the first time, suffering visibly. The angiologist looks up at her from his papers. "Well, what is troubling you?" Mrs. Vengar shakes her head, slowly. And then she says: "I don't know doctor, I don't know what it is that troubles me. That's what I come to see you for. Because I don't know."

An answer like that leaves a doctor in an outpatient clinic with empty hands. He's been there before. It is an awkward place to be. He has to get her to talk. A doctor cannot hope to guess where to begin with his further diagnostic work without some significant answer to his interview questions.

There are provinces of medicine in which the clinic doesn't take the lead. In cancers, the microscopic images of the pathologists are likely to overrule clinical stories once they are available. Biopsies are taken out of lungs, livers, breasts, and many other organs in order to inspect small slices of tissue under the microscope. The pathologist gives the diagnosis. For some diseases this is even done before patients have complaints about which they might speak. In the Netherlands and in various other countries, Pap tests are offered to women of designated ages in order to detect early stages of cancer of the cervix. So, pathology is of primary importance in medical dealings with cancers.

However, in large parts of medicine, and certainly in the hospital's dealing

ject may have when staged, handled, performed.

In the literature there has been a lot of discussion about the term *performance*—a term that does not only resonate the stage but also success after difficult work and the practical effects of words being spoken. I do not want these resonances, nor do I want this text to be burdened with discussions that it seeks no part in. But if one doesn't want to be a part of, let alone be played out in, controversies raging in *the literature,* if one doesn't want one's texts to be grinded between concerns that aren't one's own, then what can be done? It may be helpful to avoid the buzzword. To look for another term. A word that is still relatively innocent, one that resonates with fewer agendas. I have found one. And, even if I have been using the term *performance* elsewhere in the past, I have carefully banned it from the present text. I use another verb instead, *enact,* for which I give no references, precisely because I would like you to read it in as fresh a way as possible. In practice, objects are enacted.

Talking about the enactment of objects builds on and is a shift away from another way of talking about objects, one in which the term *construction* has a prominent place. From the late seventies to the early nineties objects were thematized in ways analogous to psychodynamic investigations of subjects. During that period, the term *construction* was widely used, and the term *making* also appeared frequently (just

with atherosclerosis of the leg arteries, pathology doesn't have such a strong position. Instead, the reality of the outpatient clinic comes first. This doesn't mean that the patient's story is always taken at face value. But it certainly implies that the patient's story either opens up or forecloses further moves along the diagnostic and therapeutic track of atherosclerosis.

The vascular surgeon says to Mr. Zender, a man in his early forties: "Now, tell me, what's your job?" Mr. Zender answers with the name of a job I've never heard before. Neither has the surgeon, for he says: "Well, I don't know what that is, but please don't explain it to me, just tell me: do you have to walk a lot?" "No," says the patient, "it's mostly sitting. But recently, with this pain in my legs, I find myself looking for an excuse to walk. Go to the second floor. That kind of thing." "So, do you. What if you sit down at home?" "You see doctor, as long as I do things, it's all right. But like, if we've done the washing up, children to bed, sit on the couch in front of the television, then it starts hurting." The surgeon summons Mr. Zender to the examination table. And says meanwhile: "I'll just have a look to reassure you. So that you won't say I didn't even examine you. But let me tell you one thing. You may have pain in your legs all right. But there's nothing wrong with your leg arteries."

In the vascular surgery outpatient clinic, it is clear and distinct. This story isn't about atherosclerosis. In severe cases, patients with atherosclerosis may

two examples: Edward Yoxen, "Constructing Genetic Diseases," 1982; and Cecil Helman, "Psyche, Soma and Society: The Social Construction of Psychosomatic Disorders," 1988). The term *construction* was used to get across the view that objects have no fixed and given identities, but gradually come into being. During their unstable childhoods their identities tend to be highly contested, volatile, open to transformation. But once they have grown up objects are taken to be stabilized.

One of the pivotal texts (everybody relates to it, I might as well) is *Laboratory Life* (Latour and Woolgar 1979). It tries to get away from a place where reality is supposed to have fixed traits. "Scientific activity is not 'about nature,' it is a fierce fight to *construct* nature. The *laboratory* is the workplace and the set of productive forces, which makes construction possible. Every time a statement stabilizes, it is reintroduced into the laboratory (in the guise of a machine, inscription device, skill, routine, prejudice, deduction, program, and so on), and it is used to increase the difference between statements. The cost of challenging the reified statement is impossibly high. Reality is secreted" (243). The image is beautiful: just as glands secrete hormones, laboratories secrete reality. And yet in the nineties the idea that it is always expensive to change the identities of objects has started to lose ground. By that time we may read that "matter isn't as solid and durable as it sometimes appears. And if it does hold together? Well, this is an astonishing achievement" (Law and Mol 1995, 291).

(But who put this into the literature, to draw it out again now, in a quote? Hmm, I was one of the authors doing so. Does

have pain even when resting, but then their legs will hurt a lot more when they walk. And if someone looks for an occasion to move his aching legs when resting, he may be in trouble, but such trouble cannot be eased by the vascular surgeon. The surgeon shrugs his shoulders when asked where the pain may come from, says he doesn't know, and refers the patient back to the general practitioner. It is only when a patient articulates the complaints specific to atherosclerosis that vascular surgeons start to do a physical examination with the expectation of finding the disease they are feeling for.

The Objects

When the practicalities of enacting disease are stressed, not bracketed, it becomes clear that pathology does not play a foundational role in the diagnosis of patients with atherosclerosis in their leg arteries. If it plays a role at all, it is as an afterthought. A well-aimed clinical interview is far more important: it takes the lead. But what follows from this? One might attach a "merely pragmatic" significance to it. One might unbracket practicalities, admit they exist, even pay attention to them, and yet still see them as a subordinate matter. Something to do with the state of the art, limits to the possibility of knowing, but not the reality of the body. Someone arguing in this way would say that even if pathology isn't the foundation of medical practice, thick vessel walls are still causing complaints.

quoting one's own earlier words still work to situate a later text, or does relating to the literature only make sense if *the literature* and *the author* are two separate, different, bounded and exclusive entities? It's up to you. Does it work here?)

In a variety of sites in the nineties the idea that objects might not just gradually acquire an identity that they then hold on to has been pushed aside, or complemented, by this new idea. That maintaining the identity of objects requires a continuing effort. That over time they may change. If I claim that this is *in the literature,* why then not relate to Charis Cussins here? She makes the objects dance, and her title alone is telling enough for what I try to convey: that there is an ongoing "ontological choreography" (Cussins 1996). The present book is one of the products, symptoms, or elements of the process of *decentering the object* (as John Law calls it in Law 2002). It does not simply grant objects a contested and accidental history (that they acquired a while ago, with the notion of, and the stories about their *construction*) but gives them a complex present, too, a present in which their identities are fragile and may differ between sites. It does so by deploying sociological, and more specifically ethnographic, methods of study. By describing the various performances—or enactments—of the objects' identities on stage.

Thus, the remarkable shift has been made: a social scientific way of working has

The question is: are they? Beware. I won't answer this question with a straightforward "yes" or "no." For when they move beyond the disease/illness distinction, ethnographers may talk of bodies—but not of isolated bodies. So I won't speak about the relation between vessel walls and complaints *inside* the body here. I'll stubbornly stick to studying "reality enacted" and will approach the question ethnographically yet again.

The pathology resident takes his notes to his supervisor. "I've checked everything," he says, "the cells in the plane of resection were fine, so they've done their amputation high enough. The skin cells showed signs of long and severe lack of oxygen. They were in complete shambles. And all my cross sections were of very sick vessels. Thick intimas, hardly any lumen left." The supervisor takes the notes. Wants to know a few further details. Comments on the slightly off use of a technical term. And then says: "Okay. I'd better have a last look at your slides and sign the report. They can be happy. They've been approved."

Pathology may not be the foundation of all medical action but in cases such as these it judges what was done. The surgeons did an amputation because even when at rest the patient was in agony, his skin was in a very poor condition, and there was no possibility of improving his circulation. His lower leg was cut off. This specificity allows pathology to be practiced. It comes after the clinic, but only shortly after it. Just a few days. Thus, their objects can be compared. The pain of the clinic and the thick intimas of the pathology department are mapped

come to extend itself to encompass the physicalities whose study used to be the prerogative of the natural sciences. The dividing line between human subjects and natural objects has been breached—but not in a way such that physics can take over the world, or that genetics is allowed to explain us all. The (serious) game played here makes a move that is the other way around: like (human) subjects, (natural) objects are framed as parts of events that occur and plays that are staged. If an objects is real this is because it is part of a practice. It is a reality *enacted*.

Subjects/Objects 2

Since the time sociology invented "illness" as an object of study in its own right, it has tried to add knowledge of the illnesses people live with to that of the diseases that plague their bodies. Philosophers tend to frame a similar concern in terms of minds and bodies. The hope keeps coming back. Sociopsychological subjects and natural objects should both be attended to. Here's a quote from the early eighties: "We are now faced with the necessity and the challenge to broaden the approach to disease to include the psychosocial without sacrificing the enormous advantages of the biomedical approach" (Engel 1981, 594).

Addition is advocated over and over again: psychosocial insights must be added to biomedical facts. But this is not the only way of pressing medicine to overcome its neglect of human subjectivity. There's another one as well. It appears, for instance, in the answer Mark Sulli-

onto one another. They are both impressively severe. It turns out that there is atherosclerosis in the one just as much as there was in the other. The objects of clinic and pathology *coincide*.

In order to find out whether the objects of the clinic and pathology indeed coincide, they must be related. When does this happen? When are clinical and pathological atherosclerosis related? In the process of deciding about the treatment of a patient who has pain on walking, they are not. But as soon as a piece of vessel is available, a link can be made. Then it is possible to make a cross section and ask if the thickness of the vessel wall is as impressive as the complaints that were uttered just a little earlier in the clinic. This may be the case. The objects of clinic and pathology may coincide. Sometimes, however, they do not.

The pathologist: "You, since you're so interested in atherosclerosis, you should have been here last week. We had this patient, a woman in her seventies. She had renal problems. Severe ones, too. So she was admitted. And the next day she died. Paff, from one moment to the next. The nephrologists were aghast, and so, of course, was her family. So we were asked to do an obduction. It was unbelievable. Her entire vascular system was atherosclerotic. One of her renal arteries was closed off, the other almost. It was a wonder her kidneys still did anything at all. It was hard to see where they got their blood from. And it was more or less the same for every other artery we took out: they were all calcified. Carotids, coronary ar-

van gives to the question he uses as a title: "In what sense is contemporary medicine dualistic?" (Sullivan 1986). Sullivan argues that instead of adding the patient's subjectivity to medicine's *objects* of inquiry, it should be approached quite differently: as a knowing instance, a *subject* of knowledge. Contemporary medicine, says Sullivan, inherited its dualism not from Descartes, but from Bichat. Bichat stood at the cradle of modern pathology. His work marks the moment in the early nineteenth century when pathology came to take its foundational place in medicine—says Sullivan. "For Bichat, the medical subject and the medical object were not two different substances within the same individual, but two different individuals: one alive and one dead. Knower and known are epistemologically distinguished with the physician assuming the position of the knower and the patient/corpse the position of the known" (344).

Where the dissection room is turned into the place where truth about diseases may be spoken, the patient is silenced. "Here, the *activity* of self-interpretation or self-knowledge is eliminated from the body rather than the entity of mental substance. The body known and healed by modern medicine is not self-aware" (344). The verdict is stretched out from Bichat's writings to "modern medicine," for this has not left the episteme, the mode of knowing, that rose with the birth of the clinic. (If I left it at that, the last sentence would contain an *implicit* reference to the literature, to a book, that I think I had better make explicit. It is a book that inspired so many later writings about medicine, Sullivan's

teries, iliac arteries: everything. Thick intimas, small lumens. And she'd never complained. Nothing. No chest pain, no claudication, nothing. We phoned her general practitioner just to check it. He said she'd been visiting him for coughs and things. High blood pressure. But not with any complaint that made him think of atherosclerosis."

The pathologist remembers this patient well because her condition surprised him. Pathologists expect bad vessel walls to cause complaints. But for one reason or another this expectation isn't always fulfilled. The pathologist quoted here rightly takes this to be a phenomenon of interest to the observer.

If a relation between the atherosclerosis of pathology and the atherosclerosis of the clinic is made, in practice, their objects may happen to coincide. But this is not a law of nature. It may also happen that a patient who never complained turns out to be severely atherosclerotic at the postmortem. In such a case, the objects enacted in the clinic and in the pathology department don't map. They *clash*. One atherosclerosis is severe while the other isn't. One atherosclerosis might have been a reason for treatment while nobody ever worried about the other. In such instances the objects of pathology and clinic cannot be aspects of the same entity: their natures are simply not the same. They are different objects.

Explanations will be sought. Did the patient suffer from pain but never report it? Did she always sit and avoid walking? Had her condition developed so slowly that her metabolism had adapted itself? Sometimes it is possible to find

analysis among them: Michel Foucault's study *The Birth of the Clinic* [1973].) Sullivan states that we haven't left the modern era. All knowledge assembled in the hospital still refers to a body in which surfacing symptoms point toward the underlying deviance of tissues. If doctors hear a complaint in the clinic, they try to link it to a deviance that would be visible when the patient's tissues were inspected in the department of pathology. This is only possible when the body is a corpse—or when at least the tissues themselves, cut out of a living body, are definitely dead.

Here, then, we have the second subject/object divide: a distinction between knowing subjects and objects known. It does not run parallel to the first. Since the birth of the human sciences, human subjects (whether carefully separated out from so-called natural objects or not) can have two positions in relation to knowledge: that of subject and that of object. How to escape from this divide? "Any attempt to redress the shortcomings of the clinico-pathological approach to patients must address itself not to some vague reintegration of mind into the medical body. It should rather concern itself with a reappropriation of patients' capacity for self-knowledge and self-interpretation into our definition of disease. Put as succinctly as possible: the meaning of the disability for the patient must be incorporated into the very definition of that disability as disease" (Sullivan 1986, 346).

an explanation for the difference between the objects of pathology and clinic. But even if clashes between different "atherosclerosis" can be explained, they cannot be explained away. They have a consequence. Inevitably. A practical consequence. If two objects that go under the same name clash, in practice one of them will be privileged over the other.

The vascular surgeon: "Oh no. No, we don't dream of it. We'll never go out into the population to find all the bad arteries around. For if we did, and if we then offered an operation to all those patients it would simply cost a fortune. And, more important, we would create far too many victims. If people have severe complaints, you may improve their condition. But if they have no complaints, or few, they don't have enough to gain. While they still run risks. Sometimes an operation makes things worse. Or people die. So you're not going to cut if their lives won't be improved by it."

In as far as the object of pathology clashes with that of the clinic, this is too bad for the thick vessel walls that go undetected. In the current practice of dealing with atherosclerotic leg arteries, the clinical way of working wins. Nobody in hospital Z is going to sift out all the people in the population of the region who may have thick intimas and small lumens and yet do not get treated surgically. The detection of atherosclerosis of the leg arteries is organized along clinical lines. You only ever become a vascular patient if you visit a doctor and say that you have pain on walking.

Thus, the fact that pathology isn't the foundation of all medical practice, but that the clinic takes the lead when it comes to the diagnosis and detection of this disease, is not a merely pragmatic matter. It touches reality all right. It doesn't

Something complicated is happening here. When critics (like Sullivan) say over and over again that medicine silences the objects of its knowledge, the irrelevance of what patients have to say is restated as many times as a fact. Thus, the fact is strengthened. There might be better ways of escaping. (Another reference to Foucault is suitable here: he masterfully argued for noncritical strategies for escaping dominant ways of thinking, and he engaged in them himself. See, for example, his claim that criticizing "sexual oppression" is not a revolutionary act, but just another expression of the configuration of sexuality that we have been living with since the late nineteenth century, in which sexuality is an urge tamed and domesticated as if it were a wild animal [Foucault 1981].) It might then be a good way to escape from a medicine founded on pathology to wonder whether, in practice, medicine *is* indeed founded on pathology. This implies that instead of *criticizing* pathology's foundational role, we raise questions about it, we *doubt* it. That we don't go with the textbook versions of medical knowledge, but analyze, instead, what happens in medical practices. Sullivan tries to challenge Bichat's definitions of disease by

make complaints *more real* than the size of vessel walls. But it does turn them into what will *count as the reality* in a particular site. Not under a microscope, this time, but in the organization of the health care system. *Under the microscope* atherosclerosis of the leg arteries may be a thick intima of the vessel wall. *In the organization of the health care system,* however, it is pain. Pain that follows from walking and that nags patients suffering from it enough to make them decide to visit a doctor and ask what can be done about it.

Which Site?

If the practicalities of enacting disease are bracketed, disease is located inside the body. In the legs or in the heart. In the aorta or in the leg arteries. In the groin or near the knees. Anatomy helps to say *where* things are wrong: it is an important topographical language for talking about bodies. It is not only used by pathologists when they do a dissection, but in the consulting room as well. "Where does it hurt?" physicians tend to ask their patients. Most patients visiting hospital Z have learned to answer this question somehow. They designate the sites of their bodies that hurt with a pointing finger. The doctor may translate such answers into anatomical terms and write down "lower abdomen left" or "posterior crural region right" in the patient's file.

However, the ethnographer who persistently attends to practicalities needs another topographical language. Or maybe several. If reality is enacted differently from one site to another, the question about *where* these sites are cannot be answered by a finger pointing at the regions of a body. The practicalities of

adding knowing patients to known bodies. I prefer to try to challenge Bichat's definitions of disease by doubting the assumptions of the relation between knowledge and practice that come with it. Is pathology indeed foundational if we no longer investigate medicine as if there are knowing subjects on the one hand and objects to be known on the other?

I am talking about Sullivan in order to show what, in relation to the literature, I am doing when I investigate the place of pathology in the diagnosis of atherosclerosis and contrast this with what is said and done in the outpatient clinic. I am trying to find whether, indeed, patients are silenced and pathology is foundational. And instead of studying these topics by teasing out what doctors know or what happens to patient's self-knowledge, I have analyzed the knowledge incorporated in practices. The knowledge incorporated in practices does not reside in subjects alone, but also in buildings, knives, dyes, desks. And in technologies like patient records—as David Armstrong tells us in an article that wonderfully shows how the material organization of medical practice shapes the reality of disease. Armstrong's claim is that pathology is no longer foundational since in practice disease is no longer projected onto the body's various layers