

Chapter 1

Meaning

Our attempts to understand human life open a vast space of relevant questions – from the origin of the universe to the workings of the brain, from the details of every thought to the purpose of life. In this vast space of questions, the concept of practice is useful for addressing a specific slice: a focus on the experience of meaningfulness. Practice is, first and foremost, a process by which we can experience the world and our engagement with it as meaningful.

Of course, in order to engage in practice, we must be alive in a world in which we can act and interact. We must have a body with a brain that is functioning well enough to participate in social communities. We must have ways to communicate with one another. But a focus on practice is not merely a functional perspective on human activities, even activities involving multiple individuals. It does not address simply the mechanics of getting something done, individually or in groups; it is not a mechanical perspective. It includes not just bodies (or even coordinated bodies) and not just brains (even coordinated ones), but moreover that which gives *meaning* to the motions of bodies and the workings of brains.¹

Let me illustrate this point by analogy to a work of art. There are all sorts of mechanics involved in producing a painting: a canvas, brushes, color pigments, and sophisticated techniques. The image itself is but a thin veneer. Yet in the end, for the painter and for the viewer, it is the painting as an experience of meaning that counts. Similarly, in the pursuit of our enterprises, we engage in all sorts of activities with complex bodies that are the result of millennia of evolution. Still, in the end, it is the meanings we produce that matter.

This focus on meaningfulness is therefore not primarily on the technicalities of “meaning.” It is not on meaning as it sits locked up in dictionaries. It is not just on meaning as a relation between a sign and a reference. But neither is it on meaning as a grand question – on the

meanings of which they are part. In this sense, living is a constant process of *negotiation of meaning*.

I will use the concept of negotiation of meaning very generally to characterize the process by which we experience the world and our engagement in it as meaningful.² Whether we are talking, acting, thinking, solving problems, or daydreaming, we are concerned with meanings. I have argued that even routine activities like claims processing or eating in a cafeteria involve the negotiation of meaning, but it is all the more true when we are involved in activities that we care about or that present us with challenges: when we look in wonder at a beautiful landscape, when we close a delicate deal, when we go on a special date, when we solve a difficult mystery, when we listen to a moving piece of music, when we read a good book, or when we mourn a dear friend. In such cases, the intensity of the process is obvious, but the same process is at work even if what we end up negotiating turns out to be an experience of meaninglessness. Human engagement in the world is first and foremost a process of negotiating meaning.³

The negotiation of meaning may involve language, but it is not limited to it. It includes our social relations as factors in the negotiation, but it does not necessarily involve a conversation or even direct interaction with other human beings. The concept of negotiation often denotes reaching an agreement between people, as in "negotiating a price," but it is not limited to that usage. It is also used to suggest an accomplishment that requires sustained attention and readjustment, as in "negotiating a sharp curve." I want to capture both aspects at once, in order to suggest that living meaningfully implies:

- 1) an active process of producing meaning that is both dynamic and historical
- 2) a world of both resistance and malleability
- 3) the mutual ability to affect and to be affected
- 4) the engagement of a multiplicity of factors and perspectives
- 5) the production of a new resolution to the convergence of these factors and perspectives
- 6) the incompleteness of this resolution, which can be partial, tentative, ephemeral, and specific to a situation.

I intend the term *negotiation* to convey a flavor of continuous interaction, of gradual achievement, and of give-and-take. By living in the world we do not just make meanings up independently of the world,

meaning of life as a philosophical issue. *Practice is about meaning as an experience of everyday life.*

If the kind of meaning I am interested in is an experience, and if it is not the kind we can find in dictionary definitions or in philosophical discussions, then I need to address the questions of where it is located and how it is constituted. In this chapter, I will first argue that:

- 1) meaning is located in a process I will call the *negotiation of meaning*
- 2) the negotiation of meaning involves the interaction of two constituent processes, which I will call *participation* and *reification*
- 3) participation and reification form a duality that is fundamental to the human experience of meaning and thus to the nature of practice.

These concepts are essential to my argument, and I will start by explaining in some detail what I mean by them and just why they are important.

Negotiation of meaning

The experience of meaning is not produced out of thin air, but neither is it simply a mechanical realization of a routine or a procedure. For Ariel, no two claims are the same, even though she has learned to coerce these claims into manageable categories. Indeed, medical claims processing is largely a classificatory activity. Its purpose is to impose standards of sameness and difference in the midst of a flow of change so that claims can be recognized as belonging to categories amenable to well-understood treatment. But for Ariel, this routinization must constantly be achieved anew, claim after claim.

Our engagement in practice may have patterns, but it is the production of such patterns anew that gives rise to an experience of meaning. When we sit down for lunch for the thousandth time with the same colleagues in the same cafeteria, we have seen it all before. We know all the steps. We may even know today's menu by heart; we may love it or we may dread it. And yet we eat again, we taste again. We may know our colleagues very well, and yet we repeatedly engage in conversations. All that we do and say may refer to what has been done and said in the past, and yet we produce again a new situation, an impression, an experience: we produce meanings that extend, redirect, dismiss, reinterpret, modify or confirm – in a word, negotiate anew – the histories of

but neither does the world simply impose meanings on us. The negotiation of meaning is a productive process, but negotiating meaning is not constructing it from scratch. Meaning is not pre-existing, but neither is it simply made up. Negotiated meaning is at once both historical and dynamic, contextual and unique.

The negotiation of meaning is a process that is shaped by multiple elements and that affects these elements. As a result, this negotiation constantly changes the situations to which it gives meaning and affects all participants. In this process, negotiating meaning entails both interpretation and action. In fact, this perspective does not imply a fundamental distinction between interpreting and acting, doing and thinking, or understanding and responding. All are part of the ongoing process of negotiating meaning. This process always generates new circumstances for further negotiation and further meanings. It constantly produces new relations with and in the world. The meaningfulness of our engagement in the world is not a state of affairs, but a continual process of renewed negotiation.⁴

From this perspective, meaning is always the product of its negotiation, by which I mean that it exists in this process of negotiation. Meaning exists neither in us, nor in the world, but in the dynamic relation of living in the world.

The dynamics of negotiated meaning

The processing of a given claim form by a processor like Ariel is an example of the negotiation of meaning. It takes place in a context that combines a vast array of factors, including the organization of the insurance industry, the official and unofficial training the processor underwent, the way the particular claim looks, past experiences with similar claims, the way the day is going, who else is around, what else is happening, and so on. The contexts that contribute to shaping the experience of a claim reach far and wide in time and space.

When Ariel grabs a new claim, she may not know exactly what to do, but she is in familiar territory. Even if there is a problem, she may be annoyed but she is not surprised; it will be resolved eventually. In fact, she can hardly recall the tentativeness of that first day, the unsettling mysteriousness of those training weeks, the reaching out during her first months on the floor, when just about every claim she was processing presented one problem or another. It had seemed so big then —

claims processing, Alinsu, the medical establishment. But now it is familiar. It is her job, and she is reasonably good at it.

The claim too comes with a history. It started out as a blank form designed by technical specialists at Alinsu. It was approved by various professional associations before it was printed. It was sent to a client company where a benefit representative distributed it to an employee. It was partially filled out by that employee and submitted to medical professionals who completed it. Then it was sent back to Alinsu, where it was first sorted by clerical personnel to be routed in a bundle to Ariel's processing unit. And now it is on her desk, to be coerced somehow into the confines of the processible.

Processing claims requires a very specific way of looking at a claim form. The ability to interpret a claim form reflects the relations that both the claim and Ariel have to particular practices. Ariel contributes to the negotiation of meaning by being a member of a community and bringing to bear her history of participation in its practice. Similarly, the claim contributes to this process by reflecting aspects of practice that have been congealed in it and fixed in its shape. I would say that the processor as a member of a community of practice embodies a long and diverse process of what I will call *participation*. Similarly, the claim as an artifact of certain practices embodies a long and diverse process of what I will call *reification*. It is in the convergence of these two processes in the act of processing the claim that the negotiation of meaning takes place.

As a pair, participation and reification refer to a duality fundamental to the negotiation of meaning. In order to clarify why this is so, I will first discuss each term separately before turning to the duality that their complementarity forms.

Participation

My use of the term *participation* falls within common usage. It is therefore helpful to start with Webster's definition: "To have or take a part or share with others (in some activity, enterprise, etc.)." Participation refers to a process of taking part and also to the relations with others that reflect this process. It suggests both action and connection.

In this book, I will use the term participation to describe the social experience of living in the world in terms of membership in social communities and active involvement in social enterprises. Participation

in this sense is both personal and social. It is a complex process that combines doing, talking, thinking, feeling, and belonging. It involves our whole person, including our bodies, minds, emotions, and social relations.

Participation is an active process, but I will reserve the term for actors who are members of social communities. For instance, I will not say that a computer “participates” in a community of practice, even though it may be part of that practice and play an active role in getting certain things done.⁵ Neither will I say that a fish in its bowl in the living room participates in a family. But I would be open to considering that a family dog, for instance, participates in some peripheral but real way in that family. In this regard, what I take to characterize participation is the possibility of mutual recognition. When we shave a piece of wood or mold a piece of clay, we do not construe our shaping these objects as contributing to their experience of meaning. But when we engage in a conversation, we somehow recognize in each other something of ourselves, which we address. What we recognize has to do with our mutual ability to negotiate meaning. This mutuality does not, however, entail equality or respect. The relations between parents and children or between workers and their direct supervisor are mutual in the sense that participants shape each other’s experiences of meaning. In doing so, they can recognize something of themselves in each other. But these are not relations of equality. In practice, even the meanings of inequality are negotiated in the context of this process of mutual recognition.

In this experience of mutuality, participation is a source of identity. By recognizing the mutuality of our participation, we become part of each other. In fact, the concept of identity is so central that I will postpone more detailed discussion until Part II, where it will be the main topic. Here I will just say that a defining characteristic of participation is the possibility of developing an “identity of participation,” that is, an identity constituted through relations of participation.

Before I proceed, it is worth clarifying a few more points about my use of the term participation.

- First, participation as I will use the term is not tantamount to collaboration. It can involve all kinds of relations, conflictual as well as harmonious, intimate as well as political, competitive as well as cooperative.
- Second, participation in social communities shapes our experience, and it also shapes those communities; the transformative potential

goes both ways. Indeed, our ability (or inability) to shape the practice of our communities is an important aspect of our experience of participation.

- Finally, as a constituent of meaning, participation is broader than mere engagement in practice. Claims processors are not claims processors just while they work in the office. Of course, that time of intense engagement with their work and with one another is especially significant. But they do not cease to be claims processors at five o’clock. Their participation is not something they simply turn off when they leave. Its effects on their experience are not restricted to the specific context of their engagement. It is a part of who they are that they always carry with them and that will surface if, for instance, they themselves happen to go to the doctor, fill out an insurance form, or call a customer service center. In this sense, participation goes beyond direct engagement in specific activities with specific people. It places the negotiation of meaning in the context of our forms of membership in various communities. It is a constituent of our identities. As such, participation is not something we turn on and off.

From this perspective, our engagement with the world is social, even when it does not clearly involve interactions with others. Being in a hotel room by yourself preparing a set of slides for a presentation the next morning may not seem like a particularly social event, yet its meaning is fundamentally social. Not only is the audience there with you as you attempt to make your points understandable to them, but your colleagues are there too, looking over your shoulder, as it were, representing for you your sense of accountability to the professional standards of your community. A child doing homework, a doctor making a decision, a traveler reading a book – all these activities implicitly involve other people who may not be present. The meanings of what we do are always social. By “social” I do not refer just to family dinners, company picnics, school dances, and church socials. Even drastic isolation – as in solitary confinement, monastic seclusion, or writing – is given meaning through social participation. The concept of participation is meant to capture this profoundly social character of our experience of life.

Reification

The term *reification* is less common than participation. But I hope to show that, in conjunction with participation, reification is a

very useful concept to describe our engagement with the world as productive of meaning. Again, it will help to start with Webster's definition of reification: "To treat (an abstraction) as substantially existing, or as a concrete material object."⁶

Etymologically, the term reification means "making into a thing." Its usage in English has a significant twist, however: it is used to convey the idea that what is turned into a concrete, material object is not properly a concrete, material object. For instance, we make representations of "justice" as a blindfolded maid holding a scale, or use expressions such as "the hand of fate."

In everyday discourse, abstractions like "democracy" or "the economy" are often talked about as though they were active agents. When a newscast reports that "democracy took a blow during a military coup," or that "the economy reacted slowly to the government's action," the process of reification provides a shortcut to communication.

This succinctness derives from a slight illusion of excessive reality, but it is useful because it focuses the negotiation of meaning. This is the subtle idea I want to capture by using the term reification. We project our meanings into the world and then we perceive them as existing in the world, as having a reality of their own. For example, my own use of the term reification in the context of this book is itself a case in point. The term is a projection of what I mean. It is an abstraction. It does not do the work by itself. But after a while, as I use it to think with, it starts talking to me as though it were alive. Whereas in participation we recognize ourselves in each other, in reification we project ourselves onto the world, and not having to recognize ourselves in those projections, we attribute to our meanings an independent existence. This contrast between mutuality and projection is an important difference between participation and reification.

The concept of reification

I will use the concept of reification very generally to refer to the process of giving form to our experience by producing objects that congeal this experience into "thingness." In so doing we create points of focus around which the negotiation of meaning becomes organized. Again my use of the term reification is its own example. I am introducing it into the discourse because I want to create a new distinction to serve as a point of focus around which to organize my discussion. Writing down a law, creating a procedure, or producing a tool is a similar

process. A certain understanding is given form. This form then becomes a focus for the negotiation of meaning, as people use the law to argue a point, use the procedure to know what to do, or use the tool to perform an action.

I would claim that the process of reification so construed is central to every practice. Any community of practice produces abstractions, tools, symbols, stories, terms, and concepts that reify something of that practice in a congealed form. Clearly, I want to use the concept of reification in a much broader sense than its dictionary definition. But I want to preserve the connotations of excessive concreteness and projected reality that are suggested by the dictionary definition. Indeed, no abstraction, tool, or symbol actually captures in its form the practices in the context of which it contributes to an experience of meaning. A medical claim, for instance, reifies in its form a complex web of conventions, agreements, expectations, commitments, and obligations, including (on the part of medical professionals) the right to bill for certain services and the obligation to do so in a standardized way and (on the part of the insurance company) the right to decide if the claim is legitimate and duly filled out, together with the obligation to honor the claim if it is.⁷

With the term reification I mean to cover a wide range of processes that include making, designing, representing, naming, encoding, and describing, as well as perceiving, interpreting, using, reusing, decoding, and recasting. Reification occupies much of our collective energy: from entries in a journal to historical records, from poems to encyclopedias, from names to classification systems, from dolmens to space probes, from the Constitution to a signature on a credit card slip, from gourmet recipes to medical procedures, from flashy advertisements to census data, from single concepts to entire theories, from the evening news to national archives, from lesson plans to the compilation of textbooks, from private address lists to sophisticated credit reporting databases, from tortuous political speeches to the yellow pages. In all these cases, aspects of human experience and practice are congealed into fixed forms and given the status of object.

Reification shapes our experience. It can do so in very concrete ways. Having a tool to perform an activity changes the nature of that activity. A word processor, for instance, reifies a view of the activity of writing, but also changes how one goes about writing. The effects of reification can also be less obvious. Reifying the concept of gravity may not change its effect on our bodies, but it does change our experience of the world

What is important about all these objects is that they are only the tip of an iceberg, which indicates larger contexts of significance realized in human practices. Their character as reification is not only in their form but also in the processes by which they are integrated into these practices. Properly speaking, the products of reification are not simply concrete, material objects. Rather, they are reflections of these practices, tokens of vast expanses of human meanings.

The double edge of reification

As an evocative shortcut, the process of reification can be very powerful. A politician can reify voters' inarticulate longings in one phrase that galvanizes support. A good tool can reify an activity so as to amplify its effects while making the activity effortless. A procedure can reify a concept so that its application is automatic. A formula can express in a few terms a regularity that pervades the universe.

But the power of reification – its succinctness, its portability, its potential physical persistence, its focusing effect – is also its danger. The politician's slogan can become a substitute for a deep understanding of and commitment to what it stands for. The tool can ossify activity around its inertness. Procedures can hide broader meanings in blind sequences of operations. And the knowledge of a formula can lead to the illusion that one fully understands the processes it describes.

The evocative power of reification is thus double-edged. Classifying people under broad categories can focus attention on a kind of diversity, but the reification can give differences and similarities a concreteness they do not actually possess. Similarly, if an organization displays a statement of values in its lobby, it has created a reification of something that does or should pervade the organization. Though this "something" is probably much more diffuse and intangible in practice, it gains a new concreteness once framed in the lobby. It becomes something people can point to, refer to, strive for, appeal to, and use or misuse in arguments. Yet, as a reification, it may seem disconnected, frozen into a text that does not capture the richness of lived experience and that can be appropriated in misleading ways. As a focus of attention that can be detached from practice, the reification may even be seen with cynicism, as an ironic substitute for what it was intended to reflect.

Indeed, my use of the term reification does not assume an inherent correspondence between a symbol and a referent, a tool and a function, or a phenomenon and an interpretation. On the contrary, the concept

by focusing our attention in a particular way and enabling new kinds of understanding. Similarly, reifying the concept of body weight as a measure of self-worth does not make us heavier but can weigh heavily on our sense of self. The reification of claims processing through the type of forms and procedures described in Vignette II can detach work activities from other personal experiences to the point where the generally reificative nature of the work gives the job of claims processing a particular character. Even the regularly scheduled breaks reify what is work and what is not.

Again, I should clarify a few points about my use of the concept of reification before proceeding.

- Reification can refer both to a process and its product, and I will use the term in both senses. This liberty is not just a lack of rigor, but part of the point. If meaning exists only in its negotiation then, at the level of meaning, the process and the product are not distinct. Reification is not just objectification; it does not end in an object. It does not simply translate meaning into an object. On the contrary, my use of the concept is meant to suggest that such translation is never possible, and that the process and the product always imply each other.
- Claims processors are not the designers of the rules and forms they use, yet they must absorb them into their practice. In an institutional environment such as a claims processing site, a very large portion of the reification involved in work practices comes from outside the communities of workers. Even so, however, reification must be reappropriated into a local process in order to become meaningful.*
- The process of reification does not necessarily originate in design. A detective may spend much time studying fingerprints on a doorknob; an archaeologist is fascinated by traces of ancient life in a cave. Most human activities produce marks in the physical world. These marks are vestiges. They freeze fleeting moments of engagement in practice into monuments, which persist and disappear in their own time. Whether intentionally produced or not, they can then be reintegrated as reification into new moments of negotiation of meaning.
- Reification can take a great variety of forms: a fleeting smoke signal or an age-old pyramid, an abstract formula or a concrete truck, a small logo or a huge information-processing system, a simple word jotted on a page or a complex argument developed in a whole book, a telling glance or a long silence, a private knot on a handkerchief or a controversial statue on a public square, an impressionist painting of a butterfly or a scientific specimen in an entomological collection.

of reification suggests that forms can take a life of their own, beyond their context of origin. They gain a degree of autonomy from the occasion and purposes of their production. Their meaningfulness is always potentially expanded and potentially lost. Reification as a constituent of meaning is always incomplete, ongoing, potentially enriching, and potentially misleading. The notion of assigning the status of object to something that really is not an object conveys a sense of mistaken solidity, of projected concreteness. It conveys a sense of useful illusion. The use of the term reification stands both as a tribute to the generative power of the process and as a gentle reminder of its delusory perils.

The duality of meaning

In their interplay, participation and reification are both distinct and complementary, as suggested by the illustration in Figure 1.1.⁹ The reification of a Constitution is just a form; it is not equivalent to a citizenry. Yet it is empty without the participation of the citizens involved. Conversely, the production of such a reification is crucial to the kind of negotiation that is necessary for them to act as citizens and to bring together the multiple perspectives, interests, and interpretations that participation entails.

As the figure suggests, participation and reification cannot be considered in isolation: they come as a pair. They form a unity in their duality. Given one, it is a useful heuristic to wonder where the other is. To understand one, it is necessary to understand the other. To enable one, it is necessary to enable the other. They come about through each other, but they cannot replace each other. It is through their various combinations that they give rise to a variety of experiences of meaning.

We don't usually think of the experience of meaning as a duality because the interplay of participation and reification remains largely unproblematic. Processes of reification and participation can be woven so tightly that the distinction between them seems almost blurred. The use of language in face-to-face interactions is a good example. Words as projections of human meaning are certainly a form of reification. In face-to-face interactions, however, speech is extremely evanescent; words affect the negotiation of meaning through a process that seems like pure participation. As a consequence, words can take advantage of shared participation among interlocutors to create shortcuts to communication. It is this tight interweaving of reification and participation that makes conversations such a powerful form of communication.

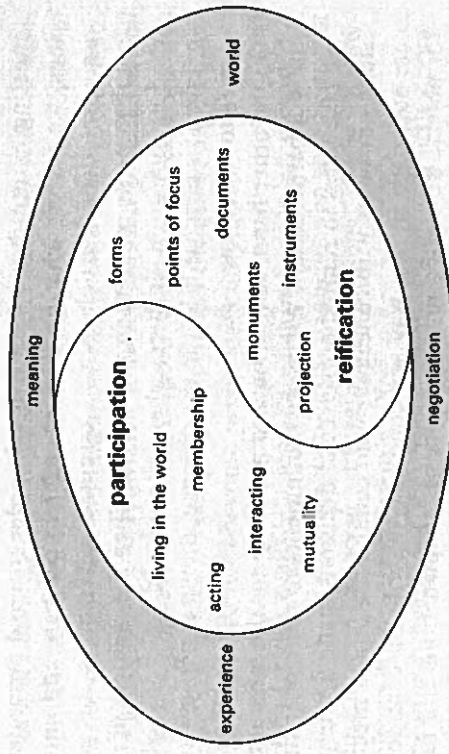


Figure 1.1. The duality of participation and reification.

More generally, the negotiation of meaning weaves participation and reification so seamlessly that meaning seems to have its own unitary, self-contained existence: a medical claim is a medical claim; a smile is a smile; a joke is a joke. Of course, it is often convenient to act as though meanings are in actions or artifacts themselves. So a medical claim is indeed a medical claim; it was produced to be a medical claim; it exists for us in a civilization where everything concurs to make it a medical claim. And yet what it is to be a medical claim is always defined with respect to specific forms of participation that contextualize meaning. It cannot be assumed to be intrinsic or universal.

The complementarity of participation and reification

Although seamlessly woven into our practices, the complementarity of participation and reification is something familiar. We use it as a matter of course in order to secure some continuity of meaning across time and space. Indeed, in their complementarity, participation and reification can make up for their respective limitations. They can compensate for each other's shortcomings, so to speak.

- On the one hand, participation makes up for the inherent limitations of reification. We send ambassadors with our treaties and hire judges to interpret our laws; we offer 800 numbers as customer service for our products in addition to our careful documentation; we convene a

meeting to introduce a new policy in order to avoid misunderstandings; we discuss what we read in order to compare and enrich our interpretations. Participation is essential to repairing the potential misalignments inherent in reification. When the stiffness of its form renders reification obsolete, when its mute ambiguity is misleading, or when its purpose is lost in the distance, then it is participation that comes to the rescue.

- On the other hand, reification also makes up for the inherent limitations of participation. We create monuments to remember the dead; we take notes to remind ourselves of decisions made in the past; we share our notes with colleagues who could not attend a meeting; we are surprised by the way someone else describes a common event or object; we clarify our intentions with explanations and representational devices; we coordinate our coming and going with clocks. Mirroring the role of participation, reification is essential to repairing the potential misalignments inherent in participation: when the informality of participation is confusingly loose, when the fluidity of its implicitness impedes coordination, when its locality is too confining or its partiality too narrow, then it is reification that comes to the rescue.

One advantage of viewing the negotiation of meaning as constituted by a dual process is that we can consider the various trade-offs involved in the complementarity of participation and reification. Indeed, given an action or an artifact, it becomes a relevant question to ask how the production of meaning is distributed, that is, what is reified and what is left to participation.

- A computer program, for instance, could be described as an extreme kind of reification, which can be interpreted by a machine incapable of any participation in its meaning.
- A poem, by contrast, is designed to rely on participation, that is, to maximize the work that the ambiguity inherent in its form can do in the negotiation of meaning.

From such a perspective, communication is not just a quantitative issue. Indeed, what says more: the few lines of a tightly written poem or a volume of analytical comments on it? The communicative ability of artifacts depends on how the work of negotiating meaning is distributed between reification and participation. Different mixes become differentially productive of meaning.

The complementarity of participation and reification yields an obvious but profound principle for endeavors that rely on some degree of continuity of meaning – communication, design, instruction, or collaboration. Participation and reification must be in such proportion and relation as to compensate for their respective shortcomings. When too much reliance is placed on one at the expense of the other, the continuity of meaning is likely to become problematic in practice.

- If participation prevails – if most of what matters is left unreified – then there may not be enough material to anchor the specificities of coordination and to uncover diverging assumptions. This is why lawyers always want everything in writing.
- If reification prevails – if everything is reified, but with little opportunity for shared experience and interactive negotiation – then there may not be enough overlap in participation to recover a coordinated, relevant, or generative meaning. This helps explain why putting everything in writing does not seem to solve all our problems.

In cases of mismatches, it is necessary to analyze the situation in terms of the duality and to redress any imbalance. Merely adding more participation to participation or more reification to reification may not help much, because a form of participation or reification is by itself unlikely to correct its own shortcomings: not just another memo, not just another meeting

A fundamental duality

The duality of participation and reification will appear again and again as I develop my argument in this book. This duality is a fundamental aspect of the constitution of communities of practice, of their evolution over time, of the relations among practices, of the identities of participants, and of the broader organizations in which communities of practice exist.

In this context, as I tried to emphasize with the diagram of Figure 1.1, it is important *not* to interpret the duality of participation and reification in terms of a simple opposition. I will end this chapter by expanding this point. If you are in a hurry and feel that enough has been said already, you may want to skip the fine points I am making here and move on to the next chapter. But if you have the patience and the inclination, then reading on will help clarify both the nature of the relation between participation and reification and, more generally, what I mean

by a duality as opposed to a dichotomy. The latter clarification will be useful since I will introduce a number of dualities in the coming chapters. Indeed, thinking in terms of complex dualities rather than mere dichotomies is fundamental to the conceptual framework of this book.

As suggested by Figure 1.1, a duality is a single conceptual unit that is formed by two inseparable and mutually constitutive elements whose inherent tension and complementarity give the concept richness and dynamism. In what follows, I will clarify this idea by contrasting the duality of participation and reification with related, more traditional dichotomies of opposites – for example, tacit versus explicit, formal versus informal, individual versus collective, private versus public, conscious versus unconscious, or people versus things. I will do so via a list of statements, in each case saying both what the duality of participation and reification is and what it is not.

◆ *Participation and reification are a duality, not opposites.*

Participation and reification are not defined merely by opposition to each other. The tacit is that which is not made explicit; the informal that which is not formalized; the unconscious that which is not conscious. But participation is not merely what is not reified. Both participation and reification are processes defined each in their own terms. As a result, they are not mutually exclusive. On the contrary, they take place together; they are two constituents intrinsic to the process of negotiation of meaning, and their complementarity reflects the inherent duality of this process.

Participation and reification both require and enable each other. On the one hand, it takes our participation to produce, interpret, and use reification; so there is no reification without participation. On the other hand, our participation requires interaction and thus generates shortcuts to coordinated meanings that reflect our enterprises and our takes on the world; so there is no participation without reification.

◆ *Participation and reification are two dimensions that interact; they do not define a spectrum.*

One way to avoid thinking starkly in terms of opposites is to consider a spectrum. Knowledge can be more or less explicit; learning can be more or less formal; an impression can be more or less conscious; a meaning can be more or less individual. While a continuum does allow more nuanced distinctions, it is still a relation between opposites.

Moving to one side implies leaving the other. More of one implies less of the other.

With an interacting duality, by contrast, both elements are always involved, and both can take different forms and degrees. In particular, there can be both intense participation and intense reification. In fact, the creative genius of great scientists and artists can be construed as stemming from their ability to bring the two together: on the one hand, an intense involvement with the reificative formalisms of their discipline; and on the other, a deep participative intuition of what those formalisms are about. This is true of a scientist like Albert Einstein, who insisted on the importance of exploring ideas intuitively as well as being able to give them mathematical expression. It is as true of a musician like Johann Sebastian Bach, who combined intricate forms of musical structure with melodic inspiration.

Such a perspective has pedagogical implications for teaching complex knowledge: an excessive emphasis on formalism without corresponding levels of participation, or conversely a neglect of explanations and formal structure, can easily result in an experience of meaninglessness.

◆ *Participation and reification imply each other; they do not substitute for each other.*

Increasing the level of participation or reification does not dispense with the other. On the contrary, it will tend to increase the requirements for the other.

Indeed, reification always rests on participation: what is said, represented, or otherwise brought into focus always assumes a history of participation as a context for its interpretation. In turn, participation always organizes itself around reification because it always involves artifacts, words, and concepts that allow it to proceed.

Explicit knowledge is thus not freed from the tacit. Formal processes are not freed from the informal. In fact, in terms of meaningfulness, the opposite is more likely. To be understood meaningfully as a representation of a piece of physics knowledge, an abstract reification like $E = mc^2$ does not obviate a close connection to the physics community but, on the contrary, requires it. In general, viewed as a reification, a more abstract formulation will require more intense and specific participation to remain meaningful, not less.

From such a perspective, it is not possible to make everything explicit and thus get rid of the tacit, or to make everything formal and thus get rid of the informal. It is possible only to change their relation.

- ◆ *Participation and reification transform their relation; they do not translate into each other.*

A dichotomy tends to suggest that there must be a process by which one can move from one to the other by translation into a different but equivalent state. We can transform tacit knowledge into explicit knowledge or vice versa; we can formalize a learning process; we can share our thoughts; we can make our emotions more conscious. By contrast, a change in the relations of participation and reification is never neutral; it always transforms the possibilities for negotiating meaning.

- Participation is never simply the realization of a description or a prescription. Participating in an activity that has been described is not just translating the description into embodied experience, but re-negotiating its meaning in a new context.
- Reification is not a mere articulation of something that already exists. Writing down a statement of values, expressing an idea, painting a picture, recounting an event, articulating an emotion, or building a tool is not merely giving expression to existing meanings, but in fact creating the conditions for new meanings.

As a consequence, such processes as making something explicit, formalizing, or sharing are not merely translations; they are indeed transformations — the production of a new context of both participation and reification, in which the relations between the tacit and the explicit, the formal and the informal, the individual and the collective, are to be renegotiated.

- ◆ *Participation and reification describe an interplay; they are not classificatory categories.*

There is a fundamental difference between using a distinction to classify things (e.g., meanings, thoughts, knowledge, learning) as one pole or the other and using a distinction to describe an inherent interplay.

In a duality, what is of interest is understanding the interplay, not classifying. The duality of participation and reification is not a classificatory scheme. It does not classify meanings, thoughts, knowledge, or learning as tacit or explicit, formal or informal, conscious or unconscious, individual or collective. Rather, it provides a framework to analyze the various ways in which they are always both at once.

Traditional dichotomies are useful distinctions when they are used to highlight an aspect of a process that has not received enough attention. But when it comes to issues like meaning, knowing, or learning,

dichotomies cannot provide clean classificatory categories because they focus on surface features rather than on fundamental processes. For instance, the contrast between explicit and tacit knowledge is quite useful because it is important to recognize the existence of aspects of knowledge that we cannot easily articulate; hence, being able to *tell* and being able to *do* are not equivalent.

Classifying knowledge as explicit or tacit runs into difficulties, however, because both aspects are always present to some degree. For example, people who know how to ride a bicycle often cannot articulate how they keep their balance. In particular, they cannot say which way they steer in order to avoid falling, even though they do it right.¹⁰ To classify riding a bicycle as tacit knowledge is tricky because people are not exactly speechless about the process. They can tell you, for instance, that you must pedal and steer, hold the bar, and not wiggle too much or sit backward unless you're a pro. Classifying knowledge then becomes a matter of deciding what counts as explicit, and that depends on the enterprise we are involved in.

Walking is a very embodied knowledge, but if someone tells me to walk, I can do it. Requiring only this yields a good enough relation between the explicit and the tacit for certain purposes, though probably not good enough for an orthopedist who needs to know which muscles I use to keep my balance and move my legs — but that is a different enterprise altogether. Conversely, I'd bet that physicists, whose knowledge many of us would consider very explicit, would have as hard a time articulating exactly how they make sense of concepts such as force and space-time as we have explaining how we ride a bicycle. When it comes to meaningful knowing in the context of any enterprise, the explicit must always stop somewhere. It is always possible to find aspects that are not explicit, and this is exactly what a duality of participation and reification would predict: we produce precisely the reification we need in order to proceed with the practices in which we participate.

The duality of participation and reification is more fundamental than our ability to put things in words, create formalisms, articulate our feelings, or share our thoughts. It is therefore important not to reduce participation and reification to any of the dichotomies I have mentioned.

- For instance, participation is not just tacit, informal, or unconscious, because our participation includes actions like having a conversation, teaching a formalized curriculum, or reflecting on our motives.
- Reification is not just explicit, because there are many ways of reifying that are not simply putting things into words. A painting, for

instance, reifies a perception of the world, an understanding. It is an expression that makes a statement and focuses our attention in specific ways. But it is difficult to say whether this expression is explicit or tacit. Similarly, building a tool or systematically ignoring people to let them know they are outsiders are acts of reification that cannot easily be classified as tacit or explicit.

- Neither participation nor reification can be easily thought of in terms of contrasts of individual versus collective, or private versus public. Participation is clearly a social process, but it is also a personal experience. Reification allows us to coordinate our actions and is therefore of a collective character, but it shapes our own perceptions of the world and ourselves.

- Reification can be public to the extent that it produces tangible objects, but participation can also be public to the extent that our actions are observable. Moreover, the effects of both on our experience are not so visible or easily classified as public or private.

Finally, the duality of participation and reification is not just a distinction between people and things. It is true that participation is something we do as persons, and reification has to do with objects. But the duality of participation and reification suggests precisely that, in terms of meaning, people and things cannot be defined independently of each other.

- On the one hand, we experience the world as we make it amenable to our practices. I remember being awed by the complex system of distinctions and nuances that wine tasters have developed to describe what to most people is merely a better or worse glass of wine.
- On the other hand, our sense of ourselves includes the objects with which we identify because they furnish our practices. Mastering the wine-tasting vocabulary and being able to appreciate and discuss all the nuances of a good wine can become a source of distinction, pride, and identity.

What it means to be a person and what it means to be a thing both involve an interplay of participation and reification. From this perspective, people and things do not have to be posited as a point of departure. They need not be assumed as given to start with. It is engagement in social practice that provides the baseline. Through the negotiation of meaning, it is the interplay of participation and reification that makes people and things what they are.

In this interplay, our experience and our world shape each other through a reciprocal relation that goes to the very essence of who we are. The world as we shape it, and our experience as the world shapes it, are like the mountain and the river. They shape each other, but they have their own shape. They are reflections of each other, but they have their own existence, in their own realms. They fit around each other, but they remain distinct from each other. They cannot be transformed into each other, yet they transform each other. The river only carves and the mountain only guides, yet in their interaction, the carving becomes the guiding and the guiding becomes the carving.