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**Tacit and Explicit Knowledge: Harry Collins's Framework**

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# Taking the Collective Out of Tacit Knowledge

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**Résumé :** Les concepts de « collectif » et « social » sont couramment confondus, via des affirmations à propos des faits collectifs et de leur nécessité justifiées par des éléments de preuve mobilisant uniquement des faits sociaux ou interactionnistes. C'est notamment le cas dans l'argument de Harry Collins en faveur de la connaissance tacite. Mais l'erreur est profondément enracinée dans l'histoire de la philosophie, via la notion de présuppositions partagées popularisée par le néo-kantisme, lequel a confondu les énoncés logiques de nécessité avec les énoncés factuels à propos des groupes. Les affirmations néo-kantiennes de ce type se heurtent à des difficultés partagées par l'argument de Collins en faveur de la connaissance tacite collective. La solution alternative, un compte rendu complètement social de nos capacités de compréhension et d'interprétation, évite ces difficultés, et permet un modèle de la connaissance tacite qui satisfait les supposés besoins d'explication que la partie « collective » du compte rendu de Collins vise à satisfaire.

**Abstract:** The concepts of “collective” and “social” are routinely confused, with claims about collective facts and their necessity justified by evidence that involves only social or interactional facts. This is the case with Harry Collins’ argument for tacit knowledge as well. But the error is deeply rooted in the history of philosophy, in the notion of shared presuppositions popularized by neo-Kantianism, which confused logical claims of necessity with factual claims about groups. Claims of this neo-Kantian kind have difficulties shared by Collins’s argument for Collective Tacit Knowledge. The alternative, a fully social account of our capacities of understanding and interpretation, avoids these difficulties and allows for a model of tacit knowledge that serves the supposed explanatory needs that the “collective” part of Collins’s account purports to meet.

In *Tacit and Explicit Knowledge*, [Collins 2010], hereafter TEK, Harry Collins argues against the use of a certain model of tacit knowledge, associated with the standard example of knowledge of how to ride a bicycle, as a model for all tacit knowledge. He distinguishes this kind of embodied knowledge, which he calls “Somatic” Tacit Knowledge, from two other kinds, “Relational” and “Collective” Tacit Knowledge. Collective Tacit Knowledge as Collins conceives it falls into a familiar category: it is a collective object. Collective objects are tempting explanatory devices for various reasons, but they also have characteristic problems, one of which Collins recognizes but makes no attempt to solve, namely the problem of transmission, or what Collins calls “the deep mystery” of “how to make explicable the way that individuals acquire Collective Tacit Knowledge” [TEK, 138]. Put differently, this is the problem of how a collective object gets into individual heads. Collins does argue, and argued in the past, that at least some kinds of tacit knowledge can be acquired only through direct contact with others who possess it. This suggests an alternative explanation of the phenomenon of tacit knowledge itself, one that is “social” or interindividual rather than “collective”. My concern in this article will be with the differences between these two kinds of explanation and the status of social explanations as rivals to collective explanations, especially in connection with tacit knowledge and Collins’s examples.

## 1 Social vs. collective

The terms “social” and “collective” are often used interchangeably, or without distinction, and this lack of discrimination is especially evident in the cognitive science literature. In the literature of social theory and sociology, in contrast, the terms are sharply distinguished, at least in theoretically sensitive contexts, and typically denote explanatory alternatives with different ontological implications. Indeed, the terms represent an important dividing line between traditions. Émile Durkheim made a point of criticizing his rival Gabriel Tarde for replacing

the expression “collective psychology” by “interpsychology”. The first expression appeared to him to be tainted with ontology, because it seems to imply that there is a collective psychology proper. [Durkheim 1906, 133]

The issue marked a major fault line within French sociology. One of the cardinal points made by Tarde was that the mechanisms for explaining social phenomenon involved processes between individuals, notably imitation, which incidentally plays a large role in cognitive science discussions of social interaction, rather than anything “collective” [Tarde 1890]. This led to the use of the term “social” as a way of distinguishing from and contrasting to “collective”. Durkheim of course rejected this bottom-up approach to the explanation of social phenomena. Durkheim’s sociologization of Kant involved

the idea that there were collective, shared, psychological contents, contents irreducible to the processes of individual psychology, and that appeals to these collective contents were necessary to account for social life. His approach was explicitly “collective”. This fault line has persisted. In American sociology, movements such as Symbolic Interactionism rejected any such explanations, and attempted to explain such things as “significant symbols”, to use the term of G. H. Mead [Mead 1934], in terms of social interaction, but also from the bottom up, as products of the interactive process.

Outside of these contexts, however, confusion in the use of these terms reigns. “Collective” is used, especially in the context of cognitive science, for processes that are not collective but social in the sense of interindividual. Nevertheless, “social” is routinely used in these literatures in a way that does not discriminate between “collective” and “social” in the sense of social interaction. The point may be illustrated by a text by Michael Tomasello. On the one hand, he uses the “collective” language of “shared intentionality”:

Underlying these two singular characteristics of human culture—cumulative artifacts and social institutions—are sets of species-unique skills and motivations for cooperation [...]. [W]e may refer to the underlying psychological processes that make these unique forms of cooperation possible as “shared intentionality”. [Tomasello 2009, xiii]

On the other hand, when he explains the underlying psychological processes, they are social; they involve interaction between individuals, where one individual is engaged with other individuals in ways that transform the other individuals,

First, humans actively teach one another things, and they do not reserve their lessons for kin. [...] Second, humans also have a tendency to imitate others in the group simply in order to be like them, that is, to conform. [Tomasello 2009, xiv]

Imitation is an imperfect one-on-one process which does not produce collectively standardized results; teaching might be designed to produce standardized results as external behavior, but what people take away from the actual interactive experience of being taught, the internal psychology, is individual. They may be good or bad at arithmetic. They are disciplined to be standard in the answers they give to arithmetic questions. Being disciplined and desiring to conform produce social results. The skills and the desires allow teams to work together. But “shared intentionality” implies something more, a common mental content together with a common motivation. This parallels the issue in Collins: the idea of Collective Tacit Knowledge implies something more than that which may be transmitted by the mechanisms involved in personal contact mentioned by Tomasello or described by Collins himself.

Some of the confusion about these terms is legitimate. It is not always obvious which term is the correct one. There are widely used but problematic

notions, such as “sharing”, that make sense primarily as a collective fact, but which might also be understood as part of interaction, for example in relation to joint attention, with “social” but not “collective” implications. Yet it is easy to slide from facts about interaction to collective claims, despite their very different implications. Moreover, there are definitional issues that confuse matters. One may of course redefine the notions of “sharing” and “intention” in a way that eliminates the oddity of saying that multiple people have the same intention. One might redefine “intention” in terms of some common external goal, for example, such as winning a war, and treat as “sharing” anything intentional directed toward that goal. But this merely has the effect of allowing a huge variety of very different intentional and psychological causal structures and backgrounds, involving, for example, different and conflicting beliefs about the world, to count as “the same” intention, and thus something that could be said to be shared. But this is not a “collective” notion of intention in the sense that there is significant shared or collective internal or psychological content. Indeed, we may have very different concepts even of an external goal such as winning a war.

## 2 Collins and the idea of Collective Tacit Knowledge

In this article I will try to sort out some of these distinctions in relation to the case of tacit knowledge, which presents them in a particularly clear form. It is one of the virtues of *Tacit and Explicit Knowledge* [TEK] that it sharpens this issue. My basic thesis will be a simple one. Claims about “collective” facts normally depend on transcendental, “conditions for the possibility of”, arguments; the actual empirical evidence only supports non-collective “social” claims. This argument has direct bearing on the problem of tacit knowledge. One role of the concept of tacit knowledge has been to account for mutual interaction and understanding. In this role tacit knowledge is assumed to be shared, a common possession of those interacting, for example as speakers of a common language, and that this shared tacit knowledge is a condition for the possibility of the kind of communication through meaningful speech that language permits. Another role, however, has been to account for highly individual skills and competences, such as the skill of using one’s own physically distinctive body to perform complex tasks such as riding a bicycle. These roles are very different, and not obviously congruent, a point made by Collins.

Collins argues that the “bicycle” model of tacit knowledge, based on the standard example of embodied but inarticulable tacit knowledge of how to ride a bicycle, is unable to account for certain facts that a full account of tacit knowledge should account for. A “collective” kind of tacit knowledge would explain what is needed. This is a paradigmatic argument from explanatory necessity, with a transcendental argument as a solution, though Collins puts

his claim somewhat differently, as a claim about what the most parsimonious explanations is. Whether this self-explication is appropriate is a question to be dealt with later. But there are two problems with it. In the first place, Collins does not consider alternatives, so it is unclear what it is more parsimonious than. The other is that ontologically, it is anything but parsimonious. Collins joins a long line of historical figures as well as contemporary thinkers who believe that there is some sort of collective mental element that is out there, in some sense, is assimilated or acquired by the participants, and functions as a shared structure which is in turn a condition for certain performances that cannot be explained or accounted for in any other way. A collective intention, for example, is a fact beyond individual intentions and irreducible to them. To assert an irreducible new thing is to make a new ontological commitment. Traditionally, doctrines of collective intention have struggled with the question of what sort of collective intender or collective fact is implied by the notion of collective intention [Roth 2012], [Searle 1995, 2010], [Turner 1999]. An individual intention can be recognized and acknowledged by others or made the subject of agreement between people. Intersubjective agreement of this sort does not raise these questions.

What makes these arguments transcendental arguments is that “Collective Tacit Knowledge”, “collective intentionality”, and so forth are the conditions for the possibility of outcomes that Collins and similar users of these arguments believe cannot be explained in any other way. We are supposed to accept the existence of Collective Tacit Knowledge and his characterization of it because it meets this explanatory necessity. It is this general kind of conclusion that will concern me here, as it has in many other places. The counterclaim is this: the leap to a “collective” solution is unwarranted and the characterization of things to be explained as themselves “collective” is also unwarranted. But here I propose to explicitly discuss the distinction between collective and social in general, with an eye to explaining its sources and the case to be made against appeals to collective facts, as well as their undeniable attractions.

My basic point will be this: “Collective” mental objects, of which tacit knowledge in Collins’s account is an instance, are accessible *only* through transcendental arguments or arguments that share the problems of transcendental arguments. What I will show here is that these arguments are, as a group, defective in important ways that are relevant for any empirical explanatory account of the subject matter of tacit knowledge. As I have noted, Collins himself concedes one of the central issues with these accounts, the problem of how Collective Tacit Knowledge is acquired. In contrast, “social” explanations, that is to say those that involve interpersonal interactions and interpersonal processes such as imitation, are not subject to these defects; however, social mechanisms of the kinds that are generally known and accepted as genuine causal and psychological processes, never produce, account for, or explain the kinds of facts that collective accounts proceed from. But social explanations have their own issues.

To keep track of the relevant issues, it is useful to think in terms of a scoreboard. The advantages of the “collective” model, in Collins’s case the idea of Collective Tacit Knowledge, are these:

- a) Fills an explanatory need in a simple, or single cause, and in this sense “parsimonious” way (but see below on ontological non-parsimony).
- b) Enables understanding of other people.
- c) Enables claims about the content of what is tacit.

The disadvantages are these:

- a) Underdetermination: as with all regress or transcendental arguments, the Achilles heel of these arguments is the fact that the same overt results can be accounted for in different and inconsistent ways.
- b) The problem of location: it is difficult to get a coherent answer to the question of where the collective stuff is located, and consequently how it interacts with ordinary causal and interpersonal processes.
- c) Transmission: there is no good way of accounting for how it is that the collective stuff is acquired by individuals, especially of how it is that the “same” stuff becomes part of the individual psychological or cognitive processes that are directly involved in thought and action explanation.
- d) Circularity: much depends, in these arguments, on characterizing the thing to be explained in such a way that only collective explanations qualify as explanations.
- e) Ontological non-parsimony: the explanation requires ontological commitment to a novel collective object, in this case Collective Tacit Knowledge.

“Individual” or “social interaction” accounts have their own issues, but they come down to three major problems:

- a) How can individual content and interactive processes operating between individuals aggregate to produce collective outcomes, such as a common language, co-operation, teams, joint collective action, and so forth?
- b) How are we to understand meaning, language, the worldviews of others, and practices if we do not treat these as collective facts?
- c) How can we understand alien cultures and contexts of knowledge if not by reference to their shared presuppositions, assumptions, tacit knowledge, and meanings?

In short, despite the oddity of their claims, collective accounts seem to be about something, and serve some important cognitive purposes. The question is whether these purposes can be served by a better alternative explanation.

The focus of my discussion here will be with the undeniable intellectual attractions of collective notions as means of achieving understanding. To know that the people of the Middle Ages “assumed” something different than we do

about God's place in a hierarchical teleological order of the world, for example, illuminates and makes intelligible some of the otherwise puzzling things that they wrote and believed. So to vindicate non-collective social explanations, these achievements also need to be accounted for, and in a way that is consistent with a reasonable understanding of the mechanisms that these non-collective social explanations employ. So in much of this article I will be concerned with giving an account of what sort of understanding one gets by attributing presuppositions, Collective Tacit Knowledge, and the like to a group of people, or to the individuals that compose the "group". This is also the focus of much of Collins's book as it relates to Collective Tacit Knowledge. Collins deals with this problem under the heading of the problem of making tacit knowledge explicit, something he does through the introduction of a series of distinctions organized around the notion of strings and the distinction between the physical and the meaningful, which he discusses in terms of transformations of strings as distinct from translation. My account will dispense with the whole apparatus of presuppositions, strings, Collective Tacit Knowledge, and the like as misleading and unnecessary. My concern will be with Collins's claims about what he calls "The Irreducibility of the Collectivity" [TEK, 124].

### 3 Some deep history

The idea of collective mental properties or possessions begins inadvertently, with Kant. Kant contributed the idea of a transcendental argument and the notion that our possibilities of experience were shaped by categories that were the conditions of the pre-organized experience of the sort that we actually conversed and thought about. Such apparent features of the world as space and causality were the products of this mental pre-organization. The underlying organizing principles were tacit, though Kant did not use this language (in fact there is a problem in translating the term tacit knowledge into German in the first place, but the usual translation, *Implizites Wissen*, already transforms it into a quasi-Kantian notion) in the sense that they were normally not articulated, but could be.

Kant had no intention of introducing a "collective" account of these presupposed conditions of thought. And despite the psychological language of the mental of cognition that he employed, he insisted that he was not offering a psychology at all, but rather an account of the logical conditions of knowing. Nevertheless, someone had to possess these conditions, in some sense, to be a knower. Kant thought that the most basic conditions at least were common to all rational beings and indeed a condition of rationality. The philosophical argument for their presence and necessity worked with two notions. The first was the idea of a regress, in which premises needed to be justified by more basic premises. The second was the idea that this kind of analysis could produce a unique result that excluded the possibility of alternative premises for the same conclusions [Paulson 1992, 324–332]. If the claim to exclude alter-



natives worked, it would obviate any need to consider the possibility that, for example, different people had different presuppositions or implicit knowledge yet nevertheless managed to get around in the world, and even communicate; there would be only one possible set of presuppositions for everyone.

The neo-Kantians radicalized this argument by applying it not only to the certain knowledge of the physical world supplied by physics, but to a whole range of domains of thought in which objective knowledge was possible. Hermann Cohen, the key radicalizer, applied the basic idea of a domain of thought organized in a tacit but reconstructable logical hierarchy of concepts to ethics, which he argued had the character of a logically organized domain because jurisprudence, which was organized around a constitutive ethical concept, was itself a logically organized domain. The “fact of science”, the fact that there was an organized domain, implied that there was a set of presuppositions and a logical hierarchy of concepts that constituted it. The circularity is evident in the characterization of the domain: what else could account for a domain with this kind of conceptual order than an explanation of that order, and what would explain it other than a hierarchical arrangement of the concepts in terms of their logical relations?

Cohen interpreted this kind of analysis epistemologically as distinct from psychologically, like Kant. Kant had made a great point of claiming that, as Warren Schmaus put it, “he was not offering his theory of categories as an empirical, psychological account of the origin of experience” [Schmaus 2004, 30], but rather of what was presupposed by experience. Thus, as Schmaus paraphrases Kant, “to say, for instance, that the category of quantity is necessary for experience [...] is to say only that one could not experience objects without their having some quantity or another” [Schmaus 2004, 30–31]. But the application of these ideas to historically specific domains, such as the law, and then to the various academic disciplines, including theology, had the effect of localizing them to the individual members of these disciplines who were actually “knowers” who thought in terms of the organized concepts of their discipline. The trick of saying “one could not experience objects without their having some quantity or other” does not work with the objects of specialized disciplines: one can experience the actions of agents of the law without presupposing anything specifically “legal”. And one can understand the theological beliefs of others without presupposing the existence of God. So the “conditionality” could not be bound to experience, and migrated to the knower. When the idea of a domain constituted by hierarchically organized concepts was extended to the “historical *a priori*”, that is to say to the presuppositions of a past epoch that distinguished it from our own, the localization was made even more apparent. To say that people in the Renaissance experienced *Il Duomo* differently than we do implies that the difference is in them, not in *Il Duomo*. For localized domains, the categories and concepts involved were not conditions of experience as such, but of the highly specific objectivity inducing experiences of people who in some sense possessed the constituting concepts. In the law, for example, this would be people trained in the law, who could

agree on objective facts of legal science. Along with localization came another shift, more subtle, from “experience” to “meaning”: thus the objective facts of legal science were distinctive because they were legally meaningful, and meanings in general became a special realm that had to be constituted by presuppositions.

The presuppositions in these cases had to belong to the people who were of the time, or of the discipline. And because the function of the presuppositions was to assure or explain the “objectivity” of results in the domain, they had to be uniform or shared. None of this was argued for: it was a given in the Kantian lineage of the idea of objectivity and constitution. Because these were not thought of as matters of psychology, but as matters of the logic of concepts—Cohen, for example, claimed to be making inferences from the facts of universal jurisprudence, a mythical discipline unconnected to actual lawyers—there was no sense that a psychological account was needed. Eventually, various neo-Kantians saw the need to provide accounts that made sense of the facts of localization.

This contrast—epistemic or meaningful as distinct from psychological and local or historical—produced a peculiar and confused result. What was the relation between the fact of localization, the fact that only a set of related people were knowers of this kind, and the epistemic content, the presuppositions, themselves? Was it possible to avoid questions like “how were the presuppositions acquired by these knowers, and why did some people have them and others not have them?” In short, can one historicize, socialize or sociologize epistemology without at the same time psychologizing it?

For these localized presuppositions there was no avoiding the question of where they came from and what sort of reality they had. The more common and plausible solution to the problem of where the presuppositions came from and had their real existence was to place them into some sort of collective mind. The group mind is a solution to the problem created by localization. But it is a concept with its own history. Ontologizing the problem of collective mental life introduced a novel and problematic entity. Part of the Kantian legacy was to separate mind and brain, which facilitated the idea that groups could have minds without the causal accouterments of brains. But there were still nagging problems about cause. If the presuppositions of the group are not given in experience and thus accessible to individual reflection, they have to be acquired. And if they are presupposed by experience, they have to be acquired some way other than by ordinary learning, which operates through experience, with empirical inputs, and produces individual mental results, like habits and beliefs, rather than collective possessions. This is the core of the transmission problem that Collins acknowledges but, like the neo-Kantians, cannot solve.

The larger problem here is about the distinction between epistemic and psychological inherited from Kant: the status of the presuppositions, concepts, and categories which are the conditions of explicit knowledge. If we

grant that they are logically required, does this imply that they are therefore necessarily causally real in some sense? This kind of reasoning seems to generate causal claims from transcendental arguments. And there is a long tradition of transcendental reasoning which implies something like this, but it is vague or evasive about what is implied [Turner 2010, 14–30].

## 4 Separating the logical and the psychological

We think that there ought to be some sort of close relationship between the logical and the psychological or the social: when we say “we” or “possession”, as well as “knowledge”, we seem to be talking about something that is in people’s heads and accessible, to some extent, to them. The fact that we can sometimes self-explicate our presuppositions, or make our tacit knowledge explicit through explaining ourselves more fully, or do this for others by identifying their presuppositions, seems to indicate that we are saying something about what is already there in the mind. But the logical and the psychological work in quite different ways. So this sense may simply be an illusion.

Consider the following comment by Hans Kelsen about the interpretation of the League of Nations covenant, paragraph 1 of article 4. It reads “The Council shall consist of Representatives of the Principal Allied and Associated Powers [...]”. As he points out, it would have made the United States and Japan permanent members of the council, despite the fact that the United States never ratified the treaty and Japan withdrew. As Kelsen says:

[...] a literal interpretation of paragraph 1 certainly does not correspond to the intentions of the authors of the statute. They assumed as a fact that all the “Principal Powers” would ratify the Treaty of Versailles at least and thereby become members of the League. They did not think at all of the case where one of these states, after having ratified the Treaty, would withdraw from the League. They therefore refrained from stipulation that only members of the League could be represented on the Council. [Kelsen 1939, 48]

The two middle sentences of this passage are related as follows: there is a claim about an “assumption” and another claim about something “they did not think at all”. The initial claim about what they assumed is not in conflict with the second claim about the psychological fact about not having noticed the possibility that countries would fail to ratify or leave the League. The second claim is, rather, a clarification or psychological explanation of the first. In this case the fact is not, however, an occurrent fact (i.e., something that the person is currently conscious of or is otherwise manifest), but an omission or absence of a psychological fact. Yet both the psychological claim and the

“assumption” claim are true and they are consistent with one another. Indeed, as Kelsen’s passage reads, the assumption claim is in some sense supported and explained by the psychological one.

So what sort of fact is the fact about the assumption? One way of approaching this question is to ask *for whom* it is a fact. If it is not a fact in a psychological sense of introspectability—one cannot introspect an omission—it was therefore not an introspectable fact for the signatories. Is it a fact for the interpreter, who is providing an explanation of the failure to make the logically possible inference that countries might withdraw from the treaty? Is the explanation the kind of explanation that makes the inference intelligible—intelligible to the interpreter and the audience of the interpreter?

The issues here become a little clearer if we consider some different ways of formulating Kelsen’s comment, and the relation between the “did not think” and the “assumption” parts of the sentence. If we treat the assumption part as an “as if” statement, namely that the writers of the document proceeded “as if” nations would not withdraw from the covenant, we capture the meaning without adding any term, such as assuming, that suggests something psychological or suggests that the “assumption” is a transcendental condition. The sentence becomes one in which the “as if” clause allows us to give an intelligible interpretation, though not necessarily a correct one. The notion of “as if” is explicitly an appeal to a fiction in *Vaihinger’s* sense [Vaihinger 1911]: it contradicts the actual psychological facts to say that the signatories actually “assumed” this. But it is a fiction that allows us to make sense of their reasoning, which would otherwise be unintelligible.

It is a fiction that, for a particular audience, makes sense of the conduct of the authors of the document. First, it is an audience that already understands the meaning of the terms of the fiction. But second, the need for this particular kind of sense-making is restricted to people who have noticed the problem of withdrawal from the covenant, and only to those people. The people who wrote the treaty did not need to think about, or use, the “assumption” because they all failed to notice the issue. They also did not understand each other in the fictive or hypothetical “as if” sense; they were living in a world in which this possibility had not come to notice.

The failure to notice was a “failure” only from a different perspective. From theirs, there was only agreement and mutual understanding, and nothing to explain. They all noticed, and attended to, the same things. If we had the power to appear on the future, and proposed a clause which resolved the problem, they might say “we did not notice that”, or they might say “you are assuming that nations will withdraw from the covenant”. But we wouldn’t have “assumed” anything either. We would simply have had a different experience—in this case the historical experience of withdrawals from the League. If we had not had that experience, we might also fail to notice this possibility. Indeed, as there was no legal procedure in the covenant for withdrawal, there is a sense in which the possibility of withdrawal was itself invented by those who wished to

withdraw, and by their insistence on treating the covenant as merely a treaty which could be repudiated in the normal manner of formal repudiations of treaties, something that was not intended or even imagined by the original authors of the covenant.

This gets us to an odd result: claims about “assumptions” say no more than “as if” claims. The point of appealing to claims, in this practical context of interpretation, is to make sense of some belief or action that we do not understand. The aid to understanding what claims about assumptions provide is relative to the beliefs, noticings, and so forth of the persons interpreting the claims. The correctness of claims about assumptions as well as the content of the “as if” claims are relative to the specific misunderstanding, without a misunderstanding there is nothing for the claim to be about.

This does not mean, however, that someone—the authors of the covenant, for example—would not assent to the attribution of the assumption as a clarification of what they meant, or even produce the “assumption” if they were faced with a question that implied that withdrawal was possible. The question itself, in this case, would have brought the possibility to notice, or at least brought to notice the fact that the questioner had imagined this possibility. So to answer “yes, that is what was assumed” tells us nothing about a state of mind in the past. It is merely a retrospective interpretation provided in response to a new question which implied a possibility that had not been considered. This, indeed, is a model for what happens when the tacit is made explicit: the person making the tacit explicit tells the hearer what he thinks would enable the hearer to make sense of the relevant inferences.

## 5 What happens when the tacit is made explicit?

The Kelsen example suggests that there is no stable object that corresponds to such things as “presuppositions”. In his discussion of Collective Tacit Knowledge, Collins is unequivocal that it is such as stable object: “knowledge that is located in society” [TEK, 138], a “shared background of tacit knowledge” that are necessary because they “work as conditions [of] communication” [TEK, 142], and so forth. The key to his argument against the bicycle model is precisely that Collective Tacit Knowledge, unlike bodily tacit knowledge, can be conveyed through language as well as through sharing physical activities, and indeed that “Collective Tacit Knowledge is, to a large extent, located in the language of the collectivity rather than its practices” [TEK, 135]. But according to Collins, the tacit knowledge of the individual who uses the language and the knowledge located in it is knowledge of how to decode strings. This creates a large puzzle, which cannot be pursued here: if the material of interaction is strings, how does “language” relate to this, and how can

“knowledge” be found in language, if language in its external sense consists of strings?

One way of thinking of this is that the individual possesses presuppositions that permit him or her to use the language, presuppositions that are somehow transmitted along with the learning of the language itself. But are there such things as these presuppositions that are shared and are the condition of communication? Is there something collective shared in addition to the language itself? Collins provides us with no argument that there is. He merely asserts that the conditions of communication require it. But is this really so? If we look past the problematic language of “presupposition” to the interactive processes themselves, we get an image of social life and mutual understanding like this: we interact with one another in terms of gestures and statements of various kinds, which we interpret in ways that make sense to us. When they do not, we quickly generate alternative ways to make sense of what we are told. We can do this effortlessly and unconsciously. But on occasion we also do it consciously and explicitly, for example in trying to understand people who are very different from us and live in very different societies or hold very different beliefs.

Take a simple example: it is customary for the Chinese to respond to statements that are unwelcome or to which they object with silence—silence conveys the message that the statement is objectionable. But would the person who was raised with this custom be able to find the appropriate functional substitute for it, when faced with a foreigner who was oblivious to the message being sent by silence? Would the Chinese who were not aware of the specificity of this custom, and for that matter the fact that it was a custom and not the normal human response to unpleasant speech, even understand that the person who was behaving badly by continuing to speak in an unwelcome way was in need of an explanation of the silence?

This case is a simple example of tacit knowledge being made explicit. It is found in business travelers books on how to behave in China. The behavior of the Chinese is interpreted as a rule which can be formulated as an explicit functional substitute, “silence means that the person is waiting for you to say something different and more welcome”. But this is a rule for someone in a culture in which there is an expectation that people signal and then explain their displeasure with an utterance. If the traveler was from a culture in which every act was interpreted in terms of status and therefore deference, and deference needed to be acknowledged, the advice might be “silence means that your hearer expects you to show deference by saying something acknowledging his displeasure as well as his status”.

They are functional substitutes only for people whose expectations are formed by those societies. “We” are unaccustomed to thinking in terms of prestige and deference, and would need to have the specific concepts of prestige and deference translated, explained, and illustrated with examples before we would find the second rule usable. Neither rule is in the head of the Chinese

ready to be made explicit—indeed, treating these as “rules” at all is merely to employ a convenient analogy. They are rules for travelers to use to interpret behavior and act in ways that are functional substitutes for the way they would act within their own society. But they are substitutes only. Truly fluent interaction, of the kind that is possible in the situations in which one is most familiar, would involve the full use of our capacity to attribute intentions and beliefs to others, our capacity to repair and revise attributions, and our capacity to make ourselves understood by others who have misinterpreted us by providing repairs to their inferences.

This way of formulating the problem of what it is that we do when we articulate tacit knowledge has the effect of shifting the problem from the act of stating the tacit to the social interaction between the person doing the stating and the person for whom the stating is being done. In discussing the Kelsen quote, I have already stressed the sharp differences between the psychological facts and the use of the notion of “assumption”. Assertions about “assumptions”, this discussion suggested, are better understood as attempts to provide functional substitutes for a particular audience, often an audience different from the audience in the original setting; in the case of the signatories of the League of Nations, the original audience being the diplomats of the day and the other audience being the later observers who experienced the withdrawal of states and wondered why this wasn’t provided for in the treaty itself. But the use of the term “audience” raises a different problem, about “sharing”, a notion to which, as we have seen, Collins also appeals.

As I have noted, we are routinely called upon to explain ourselves to people who don’t understand us, and we do so by empathically imagining what it is that they have wrongly inferred or wrongly believe or “assume” that we can correct by providing information that will repair the relevant inference. This interactive process does not appeal, in any essential way, to the notion of rules, or to anything “collective” or shared. “Functional substitutes” are invented on the fly as a normal part of interaction, and the ability to do this, which depends perhaps on our capacity to empathically think through or simulate the thinking of the other, applies to a huge variety of tasks, including the understanding of historical figures. When Kelsen explains the thinking of the original negotiators of the League of Nations treaty provisions, similarly, the explanation is one that could just as well be applied to a single individual: Woodrow Wilson, for example.

These attempts at explanation, like the rule about the meaning of silence for the Chinese, are audience relative and underdetermined, just as our unconscious supplying or inventing of presuppositions is. The fact that we interact with people who are similar to us in many respects means that our usual inferences about the actions of others, their intentions, the relations between their words and deeds, and the inferential relations between the different kinds of things they say become habitualized and automatic. Moreover, our interactions with others increase the extent to which our habitualized responses serve

the purposes of understanding the people around us. To the extent that there is tacit knowledge, it is contained in these habitualized responses.

There is nothing “collective” or even “social” about this: the habits are ours as individuals. The social element is found in the capacity to guess what other people need to know in order to understand us when an interaction goes wrong, our capacity to invent and attribute inferences to others—to repair what has gone wrong when our habitualized responses fail, or those of the person we are interacting with fail. This capacity to read their minds and determine what they need to be told explicitly to repair the interaction may be rooted in such parts of the neuro-cognitive system as mirror neurons and simulation. But in any case these capacities are social rather than collective in their reach. The diplomats who signed the treaty establishing the League of Nations, like Woodrow Wilson himself, failed individually to anticipate withdrawals from the treaty. Saying “we” failed is simply to record this fact, not to invoke a collective mind or common mental processes leading to this failure. Similarly for the notion of audience I have employed here. It is merely a collection of individuals, not a body with some sort of shared collective mental content. If this is a correct account of what goes on when the tacit is made explicit, there is no explanatory need to appeal to Collective Tacit Knowledge, and therefore nothing for it to explain, parsimoniously or otherwise.

## 6 The scorecard

The “scorecard” with which I began was a list of issues with collective accounts and with their rival non-collective social accounts. How do these issues look after these considerations? It no longer looks as though Collective Tacit Knowledge fills an explanatory need in a simple, “parsimonious” way. It fills one need, the need for sense-making, by attributing presuppositions to a collective object; at the same time it ignores the problem of how this collective object gets into people’s heads. Moreover, it requires a new ontological commitment to the collective object itself. This can only be justified by a claim of explanatory necessity: we don’t have independent access to this object. But it is not clear that there is an explanatory need that the concept fills: we can account for understanding in an ontologically more parsimonious way by reference to social rather than collective processes. The understanding of other people enabled by the idea of Collective Tacit Knowledge and the content it supposedly gives us access to turn out to be more readily accounted for by our capacity to invent inference repairs. It is of course possible to describe the things to be explained in ways that force us to appeal to collective facts. But it is always possible to describe these differently without loss of empirical content.

The idea of Collective Tacit Knowledge, like all similar ideas, faces some basic issues related to the idea that these were stable objects of some kind. One



was underdetermination: there is no stable thing corresponding to “presuppositions” or tacit knowledge. There are, rather, multiple possible explications, some of which will be intelligible to certain audiences, none of which is uniquely determinate. One might insist that this inaccessibility through regress arguments is precisely the point: the shared tacit stuff is mentally inaccessible, tacit in the deepest sense, but still shared. But to say this creates another problem: if the stuff is inaccessible, how did it get into the heads of the people who supposedly possess it in the first place? This is the downloading problem, and it is insoluble: even if there was a stable determinate object that was shared, it would be impossible to explain how this stable object was related to the fact of activity and the constant flux created by normal social interaction. The fact that the location of this supposed object and the problem of its interaction with the causal world has been a problem ever since Kant, and indeed the sheer diversity of conceptions about what is supposedly out there or in the mind, and where it is located, suggests that there is no stable determinate object of this kind.

Can “individual” or “social interaction” accounts avoid these problems yet account for what needs accounting for: a common language, co-operation, teams, joint collective action, practices, and so forth? All of these involve mixtures of explicit beliefs, habits, mutual understandings, and sometimes common material objects. They all work through interaction, interaction that pushes inferences into the habitual and therefore tacit. The mystery elements in these phenomena are the aspects that are inaccessible to consciousness or accessible only through the attribution of presuppositions. If we understand presuppositions in the sense of David Lewis, there is no mystery. The constant invention of these things is a normal part of social interaction. There is nothing that needs to be located outside the mind, transmitted, downloaded, or to exist in some mysterious causal relation to ordinary cognitive processes. The creation of these repairs is an ordinary cognitive process. Cultures and the like are not things with essences or jointly motivating spirits. They are not causes at all. These terms are simply aggregate descriptions and typifications of what people do and believe, and they do habitually and therefore tacitly that is different from what we do.

Collins is a major representative of what could be understood as a naturalistic approach to the study of science, beginning with what he called the Empirical Programme of Relativism [Collin 2011, 83–108], [Collins 1981]. The most famous text on naturalistic epistemology, Quine’s “Epistemology Naturalized”, took the view that epistemology would eventually collapse into or be replaced by scientific knowledge of the process of knowing [Quine 1969]. Kant’s distinction between psychology and the epistemic was the target of this claim, just as Kant’s analytic synthetic distinction was the target of “Two Dogmas of Empiricism” [Quine 1951]. It is not a small irony that Collins proves to be the heir not of naturalism, but of Kant and these two problematic distinctions, as they were carried through in the equally problematic tradition of the collective mind.

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