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The Power of Example

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Preface

This is a series of excursions into the lands of art and literature, law and ethics, and, not least, the varied landscapes of the humanities. There is a common theme – the inevitability of examples in concept formation and cultural understanding. As befits such matters, the procedure is example-based throughout, interspersed with the kind of hints and comments that are needed to make the examples stand out as examples *of* something.

I am deeply grateful to Struan Robertson, who has not only proved his proficiency as a translator but also, through his many queries, prompted a good number of improvements in the texts which make up this book.

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Readability and Understanding

Ease of reading and understanding

What makes texts easy to read and what makes them difficult to read? An example of the focus in so-called readability research is a formula for readability developed by the Swedish statistician C.H. Björnsson. According to Björnsson, the ease with which a text may be read can be determined by taking the average length of a sentence in the text and adding the percentage of words with more than six letters. The lower the total figure, the easier the text is to read, it is suggested. Björnsson found that in books for children and teenagers the total of the length of the sentence plus the percentage of long words was around 27, around 47 in the daily and weekly press, and around 56 in non-fiction publications. This way of measuring readability has gained widespread acceptance in pedagogical circles, and it has even been suggested that libraries should issue product information about their books by giving their lix value, as Björnsson calls it.

What his investigations show is that it tends to take a little longer to absorb the content of texts with long sentences and long words than texts with short sentences and short words.

There is nothing startling about this as a research finding. The same may be said about a long series of other studies of factors in texts that make them easy or difficult to read. To give an example, there is some evidence that the more unfamiliar words a text contains, the harder it is to read, and the more hyphenated words there are in a text, the more premodifiers, the more inserted subordinate clauses and so forth the text contains, the harder it is to read. In other words, the more convoluted the syntax and the more unusual words and structures an author uses, the more time the average reader needs to absorb the meaning of the text.

These are findings that anyone, upon reflection, may arrive at unaided. One can make a distinction between the value of research to the development of a research area and the value of research to outsiders. Research on readability seems to be largely limited to the values of the first kind. Such studies are first and foremost contributions to the development of theory and method in some areas of linguistics.

An extreme example of this, and for that reason a good example in this context, is a 1974 doctoral dissertation by a Swedish linguist called Christer Platzack, with the title *Language and Readability* (*Språket och läsbarheten*). Platzack presented a number of hypotheses on the way different grammatical constructions might influence reading speed, and then investigated whether the hypotheses could be confirmed in a study of a number of research subjects. One such hypothesis was: 'A text with a subordinate clause inserted between a finite verb and an object is less readable than the same text with the subordinate clause placed after the object.' Some research subjects read a text on the history of Bulgaria, and their reading speed was measured. Others read more or less the same text, but in twelve sentences the subordinate clause was inserted between the verb and the object instead of placing it at the end of the sentence.

To give an illustration, the first version contained the following sentence: 'Slavic tribes supplanted the earlier settlers when they streamed in hordes into the Balkan Peninsula from the North.' In the second version this was replaced with the following sentence: 'Slavic tribes supplanted, when they streamed in hordes in to the Balkan Peninsula from the North, the earlier settlers.' The researchers found clear differences in the readability of the two texts. It took longer to read the text that contained sentence structures like the second example above. One may also draw a practical conclusion from this: texts that are intended to be read through quickly should avoid sentence structures with inserted subordinate clauses, like the second sentence above.

Platzack's investigation of this and a number of similar hypotheses is interesting as a clear example of attempts to apply methods inspired by the natural and social sciences to a humanistic discipline. The core of the scientific ideal underlying his investigations is what is known as the hypothetical-deductive method, which states that the procedure in all scientific investigations is to begin by formulating a hypothesis and then conducting experiments that may verify or falsify that hypothesis. If the outcome is not as expected and the hypothesis is therefore not supported, a new hypothesis is formulated and tested, and so on. It is a basic tenet of all positivistic philosophy of science that scientific activity includes the formulation and testing of hypotheses. However, other procedures are usually dominant in the history of literature, philosophy, film studies and other disciplines in the humanities. To the dedicated positivist, this means that existing research in such areas as film, theatre, literature and history is underdeveloped. Research in these fields should be replaced as soon as possible with hypothesis-testing activities, with experimental methods, with the application of all the finesses of statistics, etc.

To the interested layman, there is a risk that the more research in the humanities moves in that direction, the less interesting it becomes. Testable hypotheses may arouse so little interest that the degree of certainty that may be attributed to them will no longer compensate for their lack of relevance to people outside the group of specialists concerned. The important problems of understanding are at a different level.

Britt-Louise Gunnarsson, another Swedish linguist, has made a study of how easy it is for different categories of reader to understand the text of the Swedish Co-Determination in the Workplace Act (*medbestämmandelagen*). She soon realised that the choice of words, and factors such as the length of sentences and their grammatical structure, had no decisive effect on the comprehensibility of the text. Neither is re-writing the text in more everyday language very helpful. The critical difficulties in understanding the texts of laws are related to their being written by professionals for professionals. The texts of laws are not usually written from the citizen's point of view; rather, they adopt a 'court-based perspective', as Gunnarsson expresses it. To make a text like the Co-Determination Act more understandable to ordinary people would require a more in-depth review of the entire text, a review aimed at bringing out the point of the Act as seen from the viewpoint of the man in the street.

The moral of this brief excursion into the realm of readability is that we have to make a distinction between ease and difficulty of reading on the one hand and understandability or intelligibility on the other. The speed at which a text can be read is not the most important factor when it comes to more advanced language activities like the communication of research results to colleagues or interested laymen. The exact opposite may be the case; the purpose may be to deliberately compel the reader to read at a slower pace than normal. An extreme example of this strategy is the work of the German

philosopher Martin Heidegger. He wanted his readers to adopt a reflective and questioning approach, and he developed his own style to this end. As a result, his texts are very different from the normal language of philosophy in use at universities. The result is difficult to read, as was the intention. As he clearly indicates by his style, Heidegger's texts are meant to be read in a reflective manner.

What, then, is the issue, if it is not a question of the length of sentences, convoluted syntactical structures and the like? What other obstacles are there on the path to understanding? What is involved in understanding something? My proposal is that all understanding is example-based. Let us therefore consider some examples.

Staging

About twenty five years ago, Sweden's Social Insurance Employees and Insurance Agents' Union wanted to poll its membership about future trends in the country's social insurance offices. With a view to obtaining a well-considered and representative opinion from its members, the Union organised an extensive programme of study circles based on a book entitled *The Computer* (*Datorn*, 1978). About half the Union's 20 000 members, an unusually high proportion, attended the study circles. They gave a more positive reception to the historical section of the study material than to the technical sections, which dealt with different forms for data processing. Why was that? The chapter on the evolution of social insurance was written by a historian (Thomas Fürth), who described in narrative form the way the complicated public insurance system in Sweden grew from the 'hundred men funds' (*hundramannakassorna*, the voluntary sick-relief funds with one hundred members each) of a century ago to the computerised govern-

ment social insurance system of today. The chapter was written largely as a running narrative and the author spoke directly to his readers at the social insurance offices: 'The sick-relief funds of the 1870s and 1880s were, of course, very different from your workplace today. Most of those funds had no employees.' And so on. The historian also introduced two new concepts to structure his presentation – *the tradition of the popular movement* and *the tradition of the government authority*. It may be said that the social insurance system evolved in the tension between these two traditions – that was Thomas Fürth's basic idea. It transpired that the social insurance office employees could identify with this description. They found both the concrete description of the background to their own places of work and the contrast between the popular movement and the government agency tradition to be accurate and relevant information. By contrast, the representatives of the government agency tradition felt the historian's presentation was inaccurate. At least one critic could find no such conflict between the different traditions in the insurance sector.

A section on computers as work aids was written in a different way by a different author, an expert on computer systems development. This presentation was abstract and general in its approach; the examples were also abstract, and the author made no attempt to address the employees directly. The computer systems expert summarised the conclusions of the government report on the social insurance system as follows:

> The attitude of the technical expertise, which has found an increasingly clear expression, may be summarised in the following main points:
> - the association with the present central system structure and computer supplier is very strong...
> - the conception of what service to the general public may involve is highly simplified...

As a summary of a large volume of material, this may be informative to someone already familiar with the subject. To a person who is not familiar with the details, it will generate many questions that remain unanswered. What is meant by the association with the present central systems structure and computer supplier being very strong? What does it mean to me as an employee at this particular social insurance office? How is it relevant to me here and now?

The people who read the course material found it difficult to relate the general information in the technical section to their own situation; its relevance to the readers was not clear. It seems reasonable to assume that a text must connect in some way with the reader's own experience and problems if it is to be seen as rewarding and relevant. The reactions to the historical and technical sections in the course material do not demonstrate that history is in itself more relevant than descriptions of technology if the aim is to raise awareness among employees of current problems in their own areas of work. But the response to the historical and technical chapters suggests that a narrative, example-based presentation that speaks directly to the readers is likely to be perceived as more relevant than an abstract, systematic presentation with a more diffuse readership as its intended audience.

Gun Malmgren, a literary educator based in Sweden, has pointed out that something similar applies to adults' understanding of literature. Works of fiction must have some connection with the reader's personal situation. Like many historical accounts, novels and short stories have a narrative form. They put forward concrete examples for consideration; fictional in the one case and real in the other. But neither fictional nor real examples will be effective if they do not find the right reader at the right time. What does that mean? It may be said that one of the functions of fiction is to provide a number of types

or characters that we can use in understanding the reality in which we live. In our cultural tradition these characters play a significant role in our perception of others and ourselves – from classical figures like Odysseus, Antigone and Hamlet to Lolita, Donald Duck, James Bond and other figures in our contemporary culture. Only a small number of all the fictional characters in the history of world literature have gained more universal recognition, and only a small number of the more short-lived characters reach the status of public cultural objects for a even a short time. The characters in the television series *Dynasty* are, I assume, examples of the more short-lived type.

Gun Malmgren gives a number of examples of the ways in which different readers may find texts to be rewarding. The readers may be able to identify themselves with the fictional characters, they may suddenly find words for experiences which they themselves have had but have not been able to process for the simple reason that they could not capture them with language. The phrasing in a novel or short story may be perceived as a striking and accurate expression of the reader's experience. Others who read the same text may find it ignorant, exaggerated, etc. One example is readers' reactions to *Slamfarmen*, a novel by the contemporary Swedish author Torgny Karnstedt. A number of the readers who personally knew the workplace in the novel felt that it wasn't adequately presented in the book. This may be because the novel does not contain sufficiently accurate and detailed information or that the characters in the novel are not satisfactory from the aesthetical point of view, but if may also be because the readers did not want to know about the experiences Karnstedt describes. These may, for example, be experiences which they had repressed because they were so distressing. One function which the novel may have for some readers is to restore this kind of repressed experience to the level of consciousness.

If literature and other art forms are to work, there must be a fortunate combination of inherent qualities in the work, and needs and experiences in the reader, viewer, or listener. In fortunate cases a fictional character or an event in a film etc. becomes a type that can be used as an object of comparison to clarify one's own situation or to better understand one's surroundings. For me, the bishop in Ingmar Bergman's film *Fanny and Alexander* is such a character, and one that serves as a succinct summary of an extensive complex of phenomena and events. This fictitious figure is one of the most frightening human beings I have ever experienced. Both the film *Fanny och Alexander* and Ingmar Bergman's text of the same name portray in a very real way experiences that many people have had. In this respect, the art of literature is no different to pictorial art (film, photography, painting etc.). Peter Gullers characterises the successful photographic work of art as a *staging*. Reality is modified to make something clear. The photograph as a conscious work of art serves as a model that contributes to a clearer view of the world. Works of art do not simply represent reality. They help to shape it. This is the level at which the crucial problems of understanding lie.

One and the same piece of reality can be seen in many different ways in different perspectives. One may focus on different aspects of the same reality. That is what occurs in the sciences; they specialize in different parts and aspects of the world. The biologist addresses certain aspects of reality while systematically ignoring all others. The physicist does the same thing, as do all social scientist and researchers in the humanities. One of the obstacles to understanding scientific texts is that the reader may not be aware of the methodological limitations that characterize all activities in the research field in question. These limitations are not usually expressly set out in research reports. They are part of the tacit background to what

takes place in the scientific domain. They are part of the tacit knowledge that the reader is assumed to have, in the same way as the reader of literature and the viewer of art is assumed to be familiar with the traditions and conventions that apply in that particular aesthetic area.

The major problems in understanding do not concern the outer form, but 'the difficulty in incorporating the content of the texts into one's own conceptual world', as Ingela Josefson has put it. To deal with problems in understanding of this kind, one must have more than the traditional apparatus of the science of linguistics (phonetics, word formation, clause structure and the like). We are dealing with elements such as concepts, perspective, staging, tacit knowledge, needs and experiences. At this point it may be helpful to turn to the philosophical tradition known as hermeneutics.

Art and experience

Hermeneutics is the discipline concerned with understanding, and the literature in this area is extensive. A bibliography that covers the literature of hermeneutics from the 16th century to our times lists more than four thousand authors. The list of books covers over four hundred closely- printed pages. The bibliography is divided into general hermeneutics and special areas of hermeneutics. These special areas are theological hermeneutics, philological hermeneutics, historical hermeneutics, hermeneutics of the theatre and pictorial arts etc., and judicial hermeneutics. General hermeneutics is divided into philosophical hermeneutics, psychological hermeneutics, the philosophical literature on explanation and understanding, and metahermeneutics, i.e. literature on hermeneutics.

The German philosopher Hans-Georg Gadamer's *Truth and Method* from 1960 is without doubt the most influential

contribution to hermeneutic literature in recent decades and, furthermore, the book's official theme is precisely what we are addressing – reflection on the conditions for understanding. Gadamer is not interested in contributing to the development of methods in interpretive fields such as law and theology. He wants to shed light upon the fundamental conditions of all understanding. That sounds promising, so let us briefly turn our attention to Gadamer.

Since the end of the nineteenth century, many philosophers have maintained that the natural sciences are explanatory while the human sciences in the broad sense (the liberal arts, social science, theology, and jurisprudence) focus on understanding. Gadamer makes no contribution to this discussion. Like his philosophical mentor Martin Heidegger, he stresses that understanding is something that characterizes all human activity. In the world of man, understanding is a fundamental characteristic, and one that applies irrespective of whether it concerns the humanities, the natural sciences, art, or practical activities. Understanding is an essential feature of the human form of life. Gadamer's fundamental tenet is that all understanding involves *application* – an application to oneself, to be more precise. This can hardly be taken as a comment on ordinary processes of understanding in everyday life. When I understand an expression like 'Hello!' or 'Good morning!', it would seem rather pointless to say that this involves an application of those words to myself. The words mean the same to me as they do to everyone else. At the level of our everyday understanding of language, Gadamer's proposition is of no interest. But having worked through the book many times, and having discussed it in detail, chapter by chapter, with many of my colleagues and students, I have come to the conclusion that Gadamer's book does not deal with what he says it does. Contrary to what he maintains, it is, in fact, not about

the essential conditions of understanding. What Gadamer says about that adds little or nothing to what Heidegger has already said. What lies at the core of Gadamer's text is *why we should concern ourselves with the classic works of art.* Why should we devote ourselves today to works of literature and art that were produced long ago and that for some reason or another have become canonized as classics in their field? They may be the tragedies of Sophocles and Shakespeare, the lyrics of Rilke, Raphael's paintings, Rodin's sculptures and so on. As an answer to the question 'Why should we concern ourselves with the classics?', Gadamer's theory of application is both interesting and reasonable. If we are to understand a classic work, it must speak to us. It must grip us in some way. In that sense, understanding involves an application to the readers or viewers themselves. If our association with the classics is to be rewarding, we have to dedicate ourselves to them. What does this mean?

In *Truth and Method*, Gadamer's writings on these matters are abstract, historical and weighted with knowledge, But in a little book of autobiographical and biographical sketches, he writes simply and without pretension about his life (translated into English as *Philosophical Apprenticeships*, 1985). His association with the classics, especially classical Greek and Roman literature, was always an important aspect of his life. For fifteen years in the nineteen-twenties and thirties, Gadamer was a member of a small circle that met every Thursday evening at the home of the theologian Rudolf Bultmann to read the classics of Greek literature.

> One of us was condemned to read out a German translation, and the others followed in the Greek text. We read thousands of pages in this manner. Sometimes a discussion developed and new outlooks resulted; but Bultmann was always calling us back to order to continue the reading. Whether it was

> Greek tragedy or comedy, a Church father or Homer, a historian or a rhetorician, we hurried through the entire ancient world one evening a week for fifteen years. This schedule was maintained by Bultmann with strictness and perseverance, week after week. We began punctually at 8:15 P.M. and read until the clock struck eleven.

A few years later, in the winter of 1943–44, after the centre of Leipzig had been destroyed, Professor Gadamer sat with his students in a house that had chanced to survive. Without heating, without electricity and with no glass in the windows, he continued his seminar on Rilke by candlelight. They had come to the third Duino elegy. Here, Gadamer's abstract expoundings on the work of art as a 'transformation into structure' (*Verwandlung ins Gebilde*) are replaced by a concrete example. In Gadamer's experience from the war years, Plato and Rilke and other classics played a decisive role. These texts were not mere digressions from the barrenness of reality. Gadamer's reality was shaped by his constant association with the classics. They became a part of him. In *Truth and Method* he speaks of understanding as a fusion of horizons. That is what the Bultmann seminar and the Rilke seminar exemplify. Rilke's texts, created in a different situation and read in that special context, helped to make the new context what it was. Without that, it would have been a different situation, a different world. When the reader or viewer genuinely assimilates a classical work of art, for example the kind that the Greek tragedies or the poetry of Hölderlin and Rilke illustrate, he is changed by it. Gadamer talks of a 'transformation into the true'. 'It is not enchantment in the sense of a bewitchment that waits for the redeeming word that will transform things to what they were, but it is itself redemption and transformation back into true being.' It is Gadamer's thesis that this is the nature of art. Essence definitions tend to fit some examples better than others, and

Gadamer's version is no exception to the rule. Expressions like 'redemption' and 'transformation into the true' are perhaps more to the point if we are thinking of, say, Hölderlin's poetry rather than a case like Carl Barks' Duckburg drawings.

The role of tradition in understanding

The fundamental human values are always laid endangered. In the barbaric times Gadamer lived through in Germany in the nineteen-thirties and forties, he engaged, far removed from politics, in the peaceful task of addressing and advancing the European humanist tradition. His work on the classical texts, which were always at the core of his hermeneutic project, are part of the Sisyphean task of humanising mankind. When Gadamer attempted to set out what that means in a systematic, philosophical manner in *Truth and Method*, he emphasised two things:

- *traditions* play a key role in work in the humanities; their task is to pass on what is valuable in a cultural tradition, to have tradition speak to us, to gain experience on the basis of tradition;
- what understanding means is not primarily such superficial phenomena as understanding Greek or possessing knowledge of the theory of art; it is a question of *understanding the thing itself*; it is mankind, the world, reality, that is the focus of understanding.

Let me attempt to suggest how we may develop the proposals that understanding is connected to traditions in some fundamental way, and that understanding is the understanding of factual matters, of reality.

At one point in *Truth and Method*, Gadamer reminds us that there are traditions in the theatre that are based upon particular productions or performances that have come to stand as

examples. The same is true in other areas, such as music, where there are traditions of performance based on examples which have become paradigmatic. In these areas, he writes, it is not a question of one thing following upon the other in a random way. It is not a simple matter of a multiplicity of views; rather, it is that traditions are built up, traditions that each new attempt must consider. Bringing to the fore the role of traditions in this way exposes one to accusations of conservatism. Such accusations were, of course, also directed at Gadamer. Undeniably, he was conservative in a number of ways; in his taste, in his lifestyle, in the way he presented himself as a person and an author. His own aesthetic preferences are clearly stated in his writings. He turned against both those who try to ignore traditions and those who slavishly subject themselves to them. We must dedicate ourselves to the traditions. This involves active critical work with the given.

There are two factors here, on completely different levels. Firstly, Gadamer appears as a humanist, and one could also say a popular educator, when he emphasizes the importance of the traditions in art and other areas of understanding. Secondly, he addresses the field of logic. He suggests that traditions act as essential conditions for all understanding and for all aesthetic work, but these are no more than suggestions from Gadamer. He touches on the problems but does not develop them. Gadamer collected a great quantity of fascinating historical material, but his attempts to analyse the conditions that must be fulfilled in order for understanding to be possible have strangely little to contribute to the logical side of the matter.

Traditions and examples have precisely the function of being necessary conditions for the possibility of understanding. This statement has nothing to do with conservative or non-conservative attitudes in the worlds of art and politics. It

is just a reminder that there are conditions that are necessary for all understanding and that apply unconditionally to all, and in all circumstances.

One way to realize that it must be true that traditions and examples are necessary for all understanding is to examine the ways in which we learn languages. Once we have learned a language, our mother tongue, we can learn other languages with the help of translations, but how do we learn our first language? How do we learn the words for colours, for example? This is a complicated issue which, as far as I know, has not been studied in any great detail. To understand the basic role of examples, however, we do not need such empirical investigations. What is needed to bring essential conditions into focus are *thought experiments*. For example, we can imagine a situation in which the words for colours are taught by pointing to them. An older person who already knows the language can point to different objects and say which of them are red, which are not red and which of them are doubtful cases. When we use words for colours, it is assumed that we agree on what are clear cases, and what are not clear cases. Because we live in a world of gradual transitions between the colours of the spectrum, doubtful cases will necessarily occur. And as the changes are gradual, there are infinite possibilities for setting limits in different ways, depending on one's particular practical needs.

What applies to words for colours also applies to all other language expressions. All words are anchored in examples. I have learned what a symphony is by way of examples. Sometimes, when I listen to the music of Beethoven, I am listening to symphonies, sometimes something else, such as string quartets or wind ensembles of varying kinds performing pieces that do not meet the requirements of a symphony. Exactly what is required of something for it to be a symphony is something that I, like most other people who are interested

in music, cannot express well in words. But I am in agreement with others that there are a number of musical pieces, works of varying lengths by composers such as Mozart, Brahms and Shostakovich, that are undeniably symphonies. We also agree that many pieces cannot be called symphonies, for example Chopin's piano etudes or the kind of things which the Rolling Stones usually play. If we come across a new piece of music, we must decide whether it has enough similarities with the established type to be called a symphony without being misleading. It would be misleading to begin to refer to ABBA's music as symphonies. There are many other things it resembles more.

What is true of linguistic expressions is also true of pictures and other works which have been invested with meaning. In all areas of the pictorial arts there are established traditions which one must be familiar with in order to be able to appreciate them. This also applies to photography, something we tend to overlook in our culture, flooded with images as it is. People who have never seen a photograph, or some similar image, cannot determine what it is. They are faced with something even more indecipherable than I am when I look at an X-ray image of a human inner organ. Understanding concerns what we may call meaning-bearing works or works which are invested with meaning. Texts are the kind of meaning-bearing works that have traditionally been in the focus of hermeneutics. But images and actions are also meaning-bearing works. Actions are something we either understand or do not understand. Just as with pictures and linguistic utterances, an understanding of actions requires knowledge of an established repertoire of examples; cases that clearly group under the heading of the type of action in question, and cases that clearly fall outside that grouping.

When we understand actions, texts, verbal utterances, pictures and other meaning-bearing works, it presupposes that

we are familiar with set traditions that are characterized by a repertoire of examples and counter-examples. All understanding requires a specific kind of competence, viz. that you have a command of enough of the repertoire of established paradigms to be able to act adequately on your own. As members of the cultural community we have acquired a large number of competencies of this kind, something that most of us are not in the habit of reflecting upon. Our conceptual competence, visual literacy and action competence belong to the area of tacit, unarticulated knowledge, i.e. knowledge in the form of experience, familiarity and skills as opposed to verbalized knowledge, knowledge expressed in words and sentences. The examples play a key role in all knowledge of this kind. They are essential prerequisites for our ability to understand and act.

Factual understanding

The obstacles to understanding presented by a complicated style are ripples on the surface. The obstacles presented by a lack of familiarity with, for example, the linguistic expressions used in scientific contexts, are indications of the crucial obstacles; obstacles that derive from a lack of familiarity with the activities and traditions of which a text or verbal presentation or action are a part. To understand the expressions used in football or other sports, one must know how football is played. The only way to learn about a penalty is to learn enough about football to understand what a penalty is; for example, by going to some football matches with someone who knows about the game, and be given a knowledgeable commentary on what is happening on the field. The same applies to all areas of human endeavour. To understand what is happening in an area of activity, we must learn about that area from experts. We have to be taken through it to the point that, as spectators, we can

follow what is happening, or that we can understand enough to be able to take part ourselves. Clearly, it would be unreasonable to require of all spectators that they know as much as the players. You don't have to be a cow to notice that the milk is sour, as Peterson-Berger, the composer and music critic, responded to a singer's complaint about a derogatory review.

Like all other traditions of action, scientific practices are based on examples – models for the continued performance of the activity. These models change over time. It is usually a matter of a gradual replacement of parts of the collection of exemplary models, but sometimes there are dramatic transitions ('scientific revolutions'). In a complicated activity of the kind exemplified by scientific work in a particular tradition, there are a large number of prerequisites, assumptions and modes of action a person must learn before being able to take part in the work in that area. Large parts of the prerequisites are not expressed in words. They are transmitted through the daily work in, for example, a research institution, a research group or a project. When the practitioners of science write for one another, they can take all the tacit requirements as given. Just as in most families and work groups, so in scientific contexts there are expressions that are more or less shorthand and situational which function effectively and well for the initiated, but which are more or less incomprehensible to an outsider who has not been involved in the events they refer to and has not been trained in the special use of language that has evolved in the group. To understand research reports, one must become familiar with the subject in the same way as with bridge, chess and all other specialized activities.

The concepts used are of decisive importance for what takes place in a particular area of activity. Concepts are normally expressed in language, but a single expression may, as we all know from our own experience, represent different concepts

(the phenomenon of multiple meanings). In scientific contexts new words are often introduced to make it quite clear that new concepts are being used. (But it may also be that science is just marking time – doing nothing more than giving new names to old things.) Another situation is this: an existing concept is given a special meaning, either by expressly stating the fact, or without any notification. Shifts in meaning of this kind take place all the time in all areas of life, including scientific research. Multiple meanings of this kind are treacherous. The outsider sees well-known words and phrases and assumes they are to be understood in certain ways, while in fact they have been given a different sense in new contexts. I myself, for example, sometimes use the word *practice* in a special way. *Practice* is a word in current use in English. We speak of the practice of a dentist, we talk about someone being far too theoretical in his orientation and having no contact with practice, we talk about what is normal practice in a particular area and so on. I use the word in this way too. But in some situations I use the word in a more refined sense. All rule-following actions belong to practices in this special sense of the word. To perform an action in a competent way presupposes familiarity with one or more practices in the sense of series of examples.

This happens all the time in most areas of activity. It is at this level, the level of conceptual understanding, that the crucial problems of understanding occur. At the level of conceptual understanding, it is as much a question of an understanding of reality as an understanding of language. Through our concepts, reality is structured for us in certain ways. New concepts mean new ways of perceiving reality. When I look at what is under a the bonnet of a car, I quite literally do not see what a trained motor mechanic sees. I do not possess the necessary conceptual tools. When I first arrived in the Sudan, I experienced what we now call culture shock. Later, when I had

become acquainted with that concept, I was able to understand my own reactions far better. Things fell into place.

Values and ways of looking at reality are inherent parts of our concepts. This too is something learned over time through the process of becoming familiar with the concepts that characterise an area of activity. Statements that may appear to be objective, neutral descriptions may in fact be expressions of special interests and set values. We may call such statements *covert evaluations*. In the literature on production technology from Taylor to the present day there are numerous examples of covert evaluations, to name just one of many areas of example. Taylor presented his principles of company management as scientific. He presents company management as the party that is always right in conflicts between management and employees, provided management actually follows the scientific principles of company management in the proper way. The literature on production technology deals with standards and values as technical problems. The vocabulary used derives from mathematics and the natural sciences. Efficiency measurements are produced. Indicators are used as if they were pure factual relationships. Standards, values, the perspectives of the parties involved and special interests are infused into the language itself. In such cases, the only effective criticism of one's opponent is a criticism of the concepts he uses.

I once found an excellent example of this kind of criticism in a memorandum from the Swedish Federation of Social Insurance Offices (*Försäkringskasseförbundet*) regarding a report from the National Audit Bureau. Let me conclude these reflections on the conditions of understanding with a brief discussion of this example.

The letter that accompanied the memorandum from the Swedish Federation of Social Insurance Offices (January 31, 1979) contains the following paragraph:

> The report concerns the social insurance offices, the Federation of Social Insurance Offices and the National Social Insurance Board to an equal degree. The Board of the Federation of Social Insurance Offices therefore finds it natural to comment on and, in some respects add to the report of the National Audit Bureau. These comments are of considerable importance, because the report's observations are the result of a far too unilateral central bureaucratic review of the circumstances examined. It is likely that this is, at least in part, due to the National Audit Bureau regrettably failing to examine the supervisory activities from the perspective of the executive apparatus – the social insurance offices.

In the view of the Swedish Federation of Social Insurance Offices, the National Social Insurance Board had neglected to consider two factors which should be considered as very important; namely the impact of public influence at the local and regional levels, and the demand for decentralisation arising from the Swedish Co-Determination in the Workplace Act. The discrepancies between the values and normative stances ('perspectives') of the two parties involved are expressed in the language itself, in the concepts that are used. The National Social Insurance Board complained about lower productivity in the years covered by the audit. But, in the view of the Swedish Federation of Social Insurance Offices, the terms the National Social Insurance Board used to discuss productivity are misleading. Important aspects of the work were not considered at all. To highlight the aspects of reality that the Swedish Federation of Social Insurance Offices considered important in this context, the Federation made a distinction between productivity and efficiency. The Federation defined productivity as 'the number of transactions of a given type performed with a given resource in a given time'. 'In contrast, the definition of efficiency (the Federation continued) was based on the intended effect of a given activity. Indisputably, the overarch-

ing objective of the public insurance system should be to create a feeling of security in each and every person covered by the scheme. This feeling is generated not only by a payment, once it has been approved, being made with the utmost dispatch. Recipients, when they are not sure of their rights, must also have access to the appropriate information and be offered assistance in a manner that creates a feeling of caring and of trust in the decisions taken and information provided. ... It is impossible to place improvements in these respects in relation to trends in administrative costs.'

In this example, the Federation of Social Insurance Offices managed to put their finger very clearly on one of the tacit preconditions for the criticism levelled by the National Audit Bureau – a perception of the objectives of the social insurance offices' activities that was far too narrow and one-sided. By pinpointing the terms that express what the Federation regards as a far too limited perspective, it succeeded in clearly identifying the values underlying the apparently objective conclusions about poor productivity in the social insurance offices.

This is the level at which the crucial problems of understanding lie – the level where the concepts, types and examples that shape our reality are to be found.

References

It is a pleasure for me to recommend Ingela Josefsson's little introduction to what she calls Intelligibility Research: 'Om begriplighetsforskning' , in I. Josefson (ed.), *Språk och erfarenhet,* Stockholm 1985. That is also where I found the references to the books discussed at the beginning of this chapter: C.H. Björnsson, *Läsbarhet*, Stockholm 1968; Britt-Louise Gunnarson, *Lagtexters begriplighet. En språkfunktionell studie av medbestämmandelagen*, Stockholm 1982; Christer Platzack, *Språket och läsbarheten*, Lund 1973.

The course material discussed later on in the chapter includes the book *Datorn – ett studie- och informationsmaterial om datoranvändningen i försäkringskassorna*, Försäkringsanställdas förbund och Brevskolan, 1978.

For a more extensive account of the two traditions in the social insurance field in Sweden, see Thomas Fürth, 'Socialförsäkringens framväxt', in *ALLFA-utredningen. Fallstudie inom PAAS- projektet – en arbetsrapport*, Arbetslivscentrum 1979:14.

The critic who didn't agree with Thomas Fürth was Sture Wallmon. His comments are included in Bo Göranzon (ed.), *Datautvecklingens filosofi. Tyst kunskap och ny teknik*, Stockholm 1983.

On covert evaluations: Tore Nordenstam, *Värderingar och paradigm vid datasystemutveckling. Exemplet ALLFA-utredningen*, Arbetslivscentrum 1980:27. Electronic version available at http://torenordenstam.se

Gun Malmgren, 'Harmoni eller kunskapsutveckling. (Om några vuxnas litteraturläsning)', in Ingela Josefson (ed.), *Språk och erfarenhet*, Stockholm 1985.

The hermeneutic bibliography mentioned in the section *Art and Experience* is Norbert Heinrichs, *Bibliographie der Hermeneutik*, 1968 and 1972.

The first quote from Gadamer in the section *Art and Experience* is from *Philosophical Apprenticeships*, The MIT Press, Cambridge, Massachusetts, 1985, p. 40. The German original can be found in Hans-Georg Gadamer, *Philosophische Lehrjahre*, Frankfurt am Main 1977, p. 102.

The Gadamer quotes towards the end of the section *Art and Experience* are from *Truth and Method*, 2nd ed. , London 1979, p. 101. (First published in German in 1960.)

Gadamer on traditions in the theatre: see *Truth and Method* (1979), p. 106. (*Wahrheit und Methode*, 1st ed., 1960, p. 113.)

On F.W. Taylor and production technology, see Chapter 11 below.

How language is embedded in activities and situations is the main theme of Ludwig Wittgenstein's *Philosophical Investigations* (1953 and later editions).