

CHAPTER SEVEN

Source Theory and the Philosophy of Language

Language as a subsystem

Language is a compartmentalized subsystem within every culture. Large traditions may often include a few or even many languages as subsystems. It should be noted, however, that language is a peculiar type of subsystem. In the previous chapter we examined law, which is a typical subsystem: Western legal systems are transmitted by the sources of WRS, Jewish law by the sources of the system of Judaism, Christian law from those of Christianity, Muslim law from those of Islam, etc. Not so is the case with language. The sources of languages are neither the basic cognitive tools nor any holy scripture. Consequently, Western languages are not particularly more rational than others, and the languages used by the monotheist religions are not particularly “religious”. In this sense, the characterization of language as subsystem is rather problematic, and I definitely do not wish to cover up this difficulty. The reason for which I still consider language as a type of subsystem is because it develops within a **culture**, and cultures, at least in some aspect of their existence, can be described as **cultural systems** in the sense attached to this term in this book. In this context, the languages are built through data transmitted by the agents who operate those cultural systems.

In all the natural languages, the primary source of this subsystem is the cumulative factor which we called “the cultural community” and named *h*. By saying this, I am not necessarily committing myself to Wittgenstein’s private language argument (Wittgenstein 1953, §§244–271), which argues that such a language is impossible. Rather, I am contending that if such a language is possible, it requires a separate and different analysis. The following analysis relates to natural languages which clearly all exist as subsystems within multi-personal

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cultures. The subsystem of language should be considered as a compartmentalized one because it has a very limited role of determining the **meaning** relations among different types of data, usually auditory or visual, in the larger system. The former are words or collections of words (“expressions”) and the latter are objects or designata. The relation between them – meaning – has been the focus of many debates, some stressing its representational function, and others its emotive and activating one. Some philosophers have claimed that a word has a meaning only if it denotes a particular object in the “external” world, while others contend that some words (e.g. prepositions) do not have such referents, and acquire their meaning only through use, often in the context of larger units such as sentences. Some claim that a word’s context is often crucial for understanding its meaning. In any case, meaning is a relation in which verbal objects (words, expressions, sentences) are attached to objects in the world (“things”, “states of things”), and – which is more important for us – it is source *h* that almost always determines which words will mean what. Source *h* is also responsible for any changes in this linkage.

In this process, source *h* works almost completely independently of all the other sources of the system. This is clear because the great majority of links between words and the world are arbitrary. There is nothing “dogish” in the sound of the syllable “dog” or in the view of the three letters d-o-g. This arbitrariness applies to all of the systems: there is nothing “rational” in this link in WRS, just as there is nothing “religious” in this link in MRS. Even onomatopoeias – rare phenomena anyway – do not provide sufficient reasons for the naming of their objects, both because different sounds could be attached to those objects with equally convincing “reasons” and because they do not work in the case of written words. There might be some rationality in the rule that an adjective related to a noun appears in proximity to that noun, but there is no particular rationale in putting it right after the noun, as in Latin, or right before it, as in English, or sometimes before and sometimes after, as in French. These three languages are all subsystems within cultures that all heavily contributed to the development of WRS. In short, languages are based on arbitrary rules embraced by the community. This makes language a form of convention, in the sense attached to this term by Lewis (1969) and Marmor (2009). The subsystem of language therefore works independently of the other sources of the system and is compartmentalized to its limited role. The fulfillment of this role, however, is crucial for the proper functioning of the cultural system as a living system, since any living system consists of testimonies, which are transmitted in a language.

The fact that a certain word has a meaning relation to a certain object, or the fact that a certain expression (or sentence) means that such and such action is required or expected of the listener will be called **meaning data**. Except for very rare cases, meaning data reflect the meaning relations determined by *h*. Meaning data are usually transmitted by secondary sources: In early childhood,

our parents teach us the meanings of words, and in later stages our teachers and books assume this function. The media and other means of public communication also play a role in this process.

There is something unique in the subsystem of language: Most of our secondary sources use language to transmit the data of the primary sources. In the earliest stages of language learning, this cannot work, since the child does not have even the most basic vocabulary. “One needs pincers to make pincers” (*Tzevat bitzevat ‘asuyah*), as the Mishnah says (M. Avot 5, 6). The exact way in which this process takes place is the business of developmental psychologists, who indeed give it much attention, and will not be addressed here. What is important for our discussion is the fact that such non-linguistic testimony data can and do exist.

The philosophy of language has become one of the major areas of modern philosophy. I intend to discuss only a few of the issues that have been raised in this area. I claim that philosophers of language have created an atmosphere of mystification about the relation between words and the objects they denote. I believe that Source Theory can help eliminate this mystification with its claim that objects, as well as the words denoting them and the sentences referring to them, are all the results of the same act: transmission of data by sources. Different sources transmit the data, while witnesses – generally from the system user’s community – transmit the words that refer to them. Since language is part of every cultural system, the fact that a certain word pertains to a certain object is a datum about the way the cultural community uses the word.

On the basis of these claims I intend to propose a semantic theory for words and sentences, but I begin the discussion with the issue of naming individual objects, partly because I want to start out with an existing theory that is somewhat similar to Source Theory. This is Kripke’s naming theory, which I use as a basis for discussing other aspects of language.

Naming individual objects

The issue of how to determine the identity of objects was raised by some important philosophers, but was brought to attention of many mainly by Saul Kripke in his lectures, which later became his book, *Naming and Necessity*. Kripke discusses only the identity of individual objects, but his theory is applicable, *mutatis mutandis*, to general terms as well (Kripke also expanded his theory to “natural kinds”). Kripke presents two main theories. The first one, whose ancestors are Frege (1952a, b) and Russell (1956), considers names a shortened form of definite descriptions – that is, the collection of general properties attributed to an object. If these properties change (which raises the question of what properties are at issue), then the object loses its identity. Kripke presents the theory’s problems at length, finally rejecting it. Instead he proposes another

theory, which was originated by Mill but developed mainly by Kripke himself, and has come to be known as the “causal-historical theory”. He formulates the essential points of his theory as follows:

Someone, let's say, a baby, is born; his parents call him by a certain name. They talk about him to their friends. Other people meet him. Through various sorts of talk the name is spread from link to link as if by a chain. A speaker who is on the far end of this chain, who has heard about, say, Richard Feynman, in the marketplace or elsewhere, may be referring to Richard Feynman even though he can't remember from whom he first heard of Feynman or from whom he ever heard of Feynman. He knows that Feynman was a famous physicist. A certain passage of communication reaching ultimately to the man himself does reach the speaker. He then is referring to Feynman even though he can't identify him uniquely. He doesn't know what a Feynman diagram is, he doesn't know what the Feynman theory of pair production and annihilation is. Not only that: he'd have trouble distinguishing between Gell-Mann and Feynman. So he doesn't have to know these things, but, instead, a chain of communication going back to Feynman himself has been established by virtue of his membership in a community which passed the name on from link to link, not by a ceremony that he makes in private in his study: “By ‘Feynman’ I shall mean the man who did such and such and such and such.”

... A rough statement of a theory might be the following: An initial “baptism” takes place. Here the object may be named by ostension, or the reference of the name may be fixed by a description. When the name is “passed from link to link,” the receiver of the name must, I think, intend when he learns it to use it with the same reference as the man from whom he heard it (Kripke 1980: 91–92, 96).

Kripke does not offer a theoretical or symbolic development of this “chain of communication”, but it is clear that Source Theory, as well as the Source Calculus underlying it, fits Kripke's theory very closely. In source-theoretic terms, each of the “links” Kripke mentions is a source of the testimony type, which is adopted, like all testimony, in a mediated manner (that is, the basic cognitive tools transmit the property, in this case of being named so-and-so). The “community” that Kripke mentions, of which the individual under discussion is a member, is precisely our cultural community, which we denote by *h*. The source model of this subsystem also includes a hierarchy rule, which states that if the datum at stake is of the type of naming datum (that is, data transmitting the name attached to an object), then *h* has supremacy over all other sources in the system. Thus system users believe that the name of any object is the one that was transmitted to them by their cultural community.

However, Kripke comes to some very far-reaching conclusions – namely, that the name of an object is its rigid designator, which fixes its identity in all possible worlds. It seems to me that Kripke is mistaken here, and I will try to show why. To make the ideas concrete, I will present a simple, prosaic episode based on Kripke’s description, and then try to deduce its implications.

A baby is born. His parents have not yet named him. Actually, they are not sure about the name they want to give him. In the meantime, they call him “the baby” – a “name” given to billions of newborns in similar conditions. They can recognize him easily in the hospital and can recount quite a few facts about him: when he was born, to whom, at what weight, how he looks (“just like his grandmother!” of course), what his health condition is, and the like. Furthermore, they can report these data for each and every day of “the baby”’s young life. A week passes and they decide to call the baby “David”.

Now let’s analyze what has happened here. In Kripke’s terms the “baptism” stage occurred when the young parents decided on the baby’s name. At this point, David acquired a name and this name, according to Kripke, is his rigid designator in all possible worlds. In terms of Source Theory, on the other hand, there were several stages to this process. At the first stage, right after the baby’s birth, the new parents’ senses (together with some other basic cognitive tools) transmitted data about the baby: the fact that he was born to this particular woman, the time and place of that birth, his weight at birth, his external properties, his health condition (as reported by the doctors and nurses), and the like. They also identified him as their first/second/third... child. In the following days, they received more data about his development and other data that could help them recognize him. Only at a later stage did they give him an official name.

Now suppose that the young parents had not given him his name a week after he was born, but had kept learning more and more data about him. In this case, all these data would be ascribed to “the baby”. His identity as the person initially recognized through such-and-such features could therefore be fixed without naming him (in fact, Kripke himself gave an excellent example of this sort of case, as “the man who corrupted Hadleyburg” [ibid, p. 24], but did not confront it with the theory he himself presented later on). Even when they would eventually give him his name, this datum would not be different in its logical status from all the other data that they had accumulated along the way. Even if, for some reason, they one day decided to change his name and call him Jonathan, the fact that he was named David a week after his birth would remain one of the data in his biography. This would not change anything about the identity of the child, because it was fixed before any name was given to him, and without any connection to it.

According to a story that I once heard (I cannot vouch for its truth, but even if it’s imaginary it could well have happened), Yemenite Jews used to believe that when the Angel of Death goes out on his lethal journey, he identifies

intended victims by their name (apparently they had read *Naming and Necessity*...). Therefore a family which had suffered several cases of infant deaths would avoid giving the newborn a name, calling him simply "Al-Walad" ("the boy"), so that the Angel of Death would have trouble identifying him. When the boy was eight days old, he had to be circumcised according to Jewish law, and the circumcision is customarily accompanied by naming the child (this is the Jewish equivalent of baptism). When the ritual circumcisor asked the parents what to name the child, they said "Al-Walad"; and this became his name. In such a case, does the child not have an identity? If we say that the circumcision ceremony established that his name was Al-Walad, then we can ask what his status was until the eighth day. Did he not have an identity before that? During that first week, would it not have been possible to ask what would have happened to him in other possible worlds? Would a definite description such as "the youngest son of the Tzan'ani family" not have established his identity sufficiently? Kripke's theory seems too rigid in light of these questions. All this shows us that there are two different types of "baptism". The first one is the person's first acquaintance with the object, when the latter is transmitted to the former as a datum and becomes a part of his/her individual system. The second is the one that Kripke discussed, that is, the data that transmits the name of the object, which represents its identity from the standpoint of the cultural system.

In this way, the problem of identity is solved almost automatically. The philosophical literature is full of sentences of the sort of "Samuel Clemens is Mark Twain". In general, such sentences are presented to demonstrate the impossibility of substituting identical objects for one another, since the sentence in the example is different from the sentence "Mark Twain is Mark Twain". While the first sentence tells us something new, the second one is a mere tautology. One of the solutions suggested for this problem makes use of Frege's distinction between sense and reference, claiming that the identity is one of reference but not of sense. Although Frege's distinction is indeed an important one, Source Theory eliminates the problem from the outset. In Source Theory the name "Samuel Clemens" is essentially an abbreviation of "the object that sources a, b, and c (his parents, the registrar of births, and his early acquaintances, for example) called 'Samuel Clemens'", while "Mark Twain" is an abbreviation of "the object that sources d, e, and f (he himself, his publisher and the community of bibliophiles, for example) called 'Mark Twain'". The identity sentence thus tells us something new because it does not involve two identical data. Moreover, even when the identifications come from the same sources, as is the case with Frege's famous sentence "The morning star is the evening star", different transmissions are involved.

Let us take one step further. Although naming an object is an accepted social practice in all the societies we know about, it is definitely a culture-dependent pattern and not a necessity. We can imagine another possible world, or even merely another society, in which people do not have names but are identified

by their occupations and places of residence, and are enumerated in order of age if there is more than one person with the same occupation in the same place. For example, one person might be the oldest carpenter in Pinsk, while another might be the second oldest shoemaker in Minsk. Children who have not yet acquired an occupation are identified in this world according to their parents and their order of birth, so that one child might be the oldest son of the oldest carpenter in Pinsk, while another might be the youngest daughter of the school principal in Minsk. Even if this system is more complicated than giving a person a short, simple name, it is still possible.

How would questions of the sort posed by Kripke be answered in this world? We could ask whether the oldest carpenter in Pinsk would be the same person if he had not been a carpenter, or whether he would be the same person if he was the youngest carpenter in Pinsk. The answer to these questions would be definitely “Yes”, because in a society of this type it would be obvious that the term “the oldest carpenter in Pinsk” is intended only to determine the person’s identity (as the person who is known as the oldest carpenter in Pinsk in the real world) but not to determine his necessary qualities. Even though the term functions as a sort of name, it is undoubtedly a definite description. Would anyone claim that under such conditions the person’s identity is not fixed? In general, since we have come to the conclusion that the very act of naming is a socio-cultural act, how could metaphysical issues of necessity and possibility depend on it?

The concepts of objects (I will refer mainly to individual objects) that we have in our minds are constantly changing. Let us focus for the moment on a particular person – myself, in the example – and imagine that all the details that were transmitted to me about the object are preserved in their entirety. In such a situation, at every stage, the concept includes more and more data that have accumulated about this object. These data have two aspects: external and internal. In the above example, the parents’ concept of the baby at t_1 is different from their concept of him at t_2 , after they acquired more data about him. At each stage at which some source is operating in regard to the object under discussion, my concept of that object becomes richer. This concept is therefore continually growing.

We all know, however, that this is not what happens in real life. The main reason for this is that things are forgotten. In real life we do not always remember from what source we received each datum, or when, where, and in what circumstances we obtained it. At some point, the identity of the object in my mind is “Someone/thing about which my reliable sources transmitted to me such and such data”. A “reliable source” for this purpose is one that has been adopted by my cultural community, whether directly or indirectly. In the case under discussion, these reliable sources seem to belong to my individual system – my senses, my understanding, and the evidence I obtained through these sources – but the reason I believe the data provided by these sources is the fact that they

serve as basic sources of my cultural system, as long as there are no other data that contradict them.

If any particular datum belonging to that concept is rejected, it is because another datum has been added to the mind from a source that is considered more reliable. If I read in the newspaper that my neighbor, who I had believed until then to be named Mark Jones, was convicted in court of being a conman whose real name is John Smith, then the concept of this object in my mind becomes “the person about whom reliable sources transmitted to me that he has properties A-B-C, but the newspaper transmits that the court transmits that he does not have property C (the possessor of the name ‘Mark Jones’) but rather property D”. Here the system acts in an even more complicated way. Now I do not remember which reliable sources transmitted properties A-B-C, but I do remember the degree of reliability that I ascribed to them – high enough so that I would believe their data, but not high enough to continue to believe them when a source with greater status in the hierarchy (the court, as transmitted through the mediation of the newspaper and received by my basic cognitive tools) rejects these data. I thus give the court (as transmitted through the mediation of the newspaper and my basic cognitive tools) a higher position in my source model than the forgotten sources due to which I believed property C in the first place. However, my greater trust in this source is not only a result of my personal source model, it is also accepted in the source model of the general cultural system to which I belong. In general, I tend to forget the sources that transmitted data to me when I can assume that they were transmitted by *h*. System users therefore take it as a rebuttable presumption that the data transmitted by *h* belong to the cultural system and were received from its adopted sources. Therefore they are considered atemporally and impersonally “accepted”. As soon as a particular datum is considered as if it had been transmitted by *h*, the speaking self no longer has to remember from whom or when it was actually received, and so he tends to forget this. This determination of identity, however, does not stem from any metaphysical importance of *h*, but only from its high position in the hierarchy of sources of my personal system, and its importance to my practical life. If, for example, I held a personal source model where *h* did not have a high position in its hierarchy, or did not belong to it at all, then the object would presumably obtain its identity in some other way. Mark Jones, for example, would be identified as “the neighbor across the hall”, which is an important datum in my practical life. We may call this process “tagging”.

This is how things are in people’s personal systems, but they are a little different in a cultural system. Here *h* is necessarily a critically important source by virtue of the fact that a cultural system is a broad collective system. I know very well that I cannot always call Mark Jones “my neighbor” when I am talking to other people, so his name is important here. In the cultural communities in which most of us live, a person’s name is the most useful means of identifying

him – as well as for fixing his reference – since it belongs to the public sphere that is common to everyone. Since *h* is the source with the highest position in the hierarchy for identifying objects in that sphere, the point where *h* transmits a means of identification becomes the crucial point for fixing the object's reference. In this system we can therefore consider the moment when we are told a person's name to be the moment of his "baptism", at least within our personal systems. Nevertheless, even this fixing of the object's reference is not absolute. For example, we might find out that the name by which the person is known is not his real name (as in the case of Jones-Smith), or the person can change his name or adopt a pen name that is better known than his real name. In cases of this sort, as in one's personal system, the name will be redetermined on the basis of the new datum if the source transmitting it is more important than the one that transmitted the previous name. Nevertheless, the final step of the "baptism" is always completed by *h*'s transmission of the datum. These are thus cases of a second "baptism", and more than two are also possible. In fact, these are all acts of tagging, while the word "baptism" is proper only for one of them – the act of naming. The very fact that there can be more than one "baptism" teaches us that none of them really serves as a rigid designator, in the strict sense of the word. The important point is that the later "baptism" is always based upon an earlier one, so that the first one remains the datum that properly fixes the object's reference for the future. But the first "baptism" is the individual person's acquaintance with the object, and so it fixes its identity only for the individual system, so, here again, it cannot serve as a rigid designator in the strict sense of the word. John Smith's parents came to know him when he was born at the hospital, his childhood friends became acquainted with him at school or in the neighborhood, his friends from work know him as an adult and first met him at their common workplace; I know him as my neighbor and first met him when he moved into the apartment across the hall; and so on. All of these persons have, therefore, a different "first baptism" of Smith according to different "baptismal properties". The only power of the object's name is derived from the fact that a person's name is more or less common to most of the community: At some stage we understand that many people know Smith, each of them by different "baptismal properties", but we allow ourselves to assume that all of them call him John Smith. This makes his name the most convenient property for identification, and that is what usually gives the naming the power of a second baptism. But this is just a fact on the communicative ("Gricean", if you will) level, stripped of any metaphysical aspect, and certainly not anything that turns it into a rigid designator in the strong sense of the word.

When people become famous through their penname or underground name, and these names become better known than their original ones (Molière, Max Stirner, Lewis Carroll, Mark Twain, O. Henry, Lenin, Stalin and George Orwell, to name just a few), we may consider the act of attaching these names as a third "baptism", no less powerful than the second. Furthermore, where famous

people are concerned, their identity may be determined partly by their achievements, if these are considered by *h* to be their especially well-known qualities. Kripke raises this possibility in an example he presents concerning Gödel's identity, suggesting that it was established as "the man to whom the incompleteness of arithmetic is commonly attributed" (Kripke 1980: 88). Although he offers some reservations about this suggestion, he does conclude that it is possible, under the condition that the source *h* (in our terms) is not the factor that fixes Gödel's reference, but rather Gödel's parents, or whoever was first to transmit the datum of his name, somewhere back in an early link of the chain. Personally, I do not see any problem fixing a person's reference on the basis of the present situation, in which the chain of transmission has ended and the transmission of a datum by *h* which attributes an identifying property to Gödel leads to a new "baptism". This, too, should be recognized as a "third baptism" of a different type. This is just an example. We can imagine more complicated examples of "third baptisms", or fourth ones, or more.

I will summarize my conclusions up to this point as follows:

- There is never any one absolute "rigid designator" that fixes the reference of an individual object forever. The concept of an object is dynamic and determined in accordance with the person's memory of the data that have accumulated about the object.
- Among the various data that accumulate about an object, there are some that the system considers more important than others. Their degree of importance stems from both the reliability attributed to the source that transmits them and their usefulness in everyday life. These data are often used as properties by which the object is tagged, and thus become the determiners of the object's reference within that system.
- When an individual system is involved, the most rigid designator of an object is the system activator's first acquaintance with the object, through the object's unique properties as transmitted to her at that event. This may be considered the "first baptism" in that system. Afterwards she can tag them differently and consequently create other determination(s), in accordance with the importance of the data. Since the individual is part of a cultural system, at some stage she adopts the methods of fixing an object's reference that are accepted in her cultural system, as follows:
- When a cultural system is involved, an object's reference is initially fixed by naming it (and in this context we may accept Kripke's thesis). This is a "second baptism" for many of the members of the community already acquainted with the object. There can also be other ways of fixing the object's reference in which different names are attached to the object in place of the initial one. These are all acts of tagging, and in Kripke's terms can be considered third, fourth, or *n*th "baptisms". Thus, if the person becomes famous in the cultural community, then the accomplishments attributed to

that person may also serve to replace his original name. In all these cases the object's reference is fixed in virtue of the fact that these data are transmitted by *h* and are the ones the system considers important for publicly identifying the object.

This theory may be more complex and less elegant than Kripke's, but it seems more convincing. Aside from the fact that it solves some problems evoked by Kripke's theory and improves some parts of it, it also places other parts of the theory in a broader philosophical context – that of Source Theory.

The suggested theory of reference determination gives us a better understanding of why we tend to forget the data about the procedural (or “external”) aspects of the transmission (the exact source, the time, the place, the circumstances) that determined the object's identity: These data are suppressed by the later “baptism”. In parallel, the data about the procedural aspects of the new “baptism” are also quite often forgotten because they are perceived as atemporal and impersonal, since the new “baptism” involves the object's reference in the broader community system, as described above. From this point on, the object's rigid designator is therefore “the object to which source *h* ascribes such-and-such properties”. Even if I later reject one or all of these properties because of data received from truth sources with greater authority in my hierarchy of sources – such as my personal sources – the object's most rigid designator will remain “the object to which *h* ascribes such-and-such properties”. But this designator is not absolutely rigid either. It will remain in place until another designator, more powerful than it, performs another “baptism”.

In light of these remarks, it would be advisable to remove the aura of mystification from the act of naming, especially as it appears in Kripke's theory. From a source-theoretical standpoint, the act of naming is merely an ordinary act of attributing a property to an object by virtue of a datum transmitted by a source, and is thus no different from any other such attribution. What gives it its status as a rigid designator is its capacity to survive in our minds for a long time, which is derived from considerations of importance based mainly on personal and social convenience. Since fixing an object's reference is basically a psychological rather than a logical process, it is hard to see it as making any substantial contribution to the modal discussion of trans-world identity, or to any other metaphysical discussion.

The meanings of words in language

Nowadays many thinkers agree that the issue of meaning occupied philosophers in the last century out of all proportion to its true philosophical importance. And if that were not enough, this occupation produced a considerable

number of scholastic discussions that would not have shamed the most meticulous medieval philosophers (such discussions, quite ironically, often include terms that are meaningless according to their own authors' criteria). However, there is indeed a real problem at the basis of this issue which is worth discussing. We will begin with the issue of naming individuals, as discussed in the previous section, after a few preliminary remarks.

Frege and his followers distinguished between the meaning (reference) of a word and the meaning of a sentence. Frege claimed that the meaning of a word is the object it denotes, while the meaning of a sentence is its truth value (Frege 1952b). In light of our discussion in Appendix I this statement is nonsensical, since we have shown that the difference between a word (or a phrase that is not a sentence) and a sentence is present only in the "psychological" aspects that involve the speaker's hypotheses about the hearer's knowledge and the like. In our view there is thus no place for such a distinction, and so we will discuss the meaning of a **datum**, whatever its linguistic form might be.

Frege, Russell and others established a theory of reference, which claims that the meaning of a word (or a name) is an object in the real world (Frege was more moderate on this issue, in his distinction between "sense" and "reference"). Russell claimed that the discussion was about objects that could be empirically known, and accused anyone who did not agree with him of lacking "a robust sense of reality" (Russell 1920: 170). Aside from the problem that this philosophical trend involves a blurring of the boundaries between meaning and truth, it cannot hold from the standpoint of Source Theory. Source Theory does not recognize any principled superiority of the senses over other sources. If we accept the basic notions of the reference theory, the test should be not the relations between the word and the sense datum, but rather the relations between the word and a datum transmitted by any of the basic sources of the system in question. Just as Source Theory does not have a concept of pure truth but only "truth in a system", so it does not have a concept of pure meaning, but only "meaning in a (cultural) system".

The main opposition to the Russell and Frege's theories of reference is the later Wittgenstein's "meaning as use" theory (Wittgenstein 1953). In this view, meaning as external object is not workable, at least not as the only test, because there are many words which do not denote external objects. The meaning of a word is the way it is used in language, which is a "way of life" rather than a mental state, and is determined by following social rules, just as one follows the rules of a game. Wittgenstein also claims that the meanings of words in language are not fixed.

If we reformulate the controversy in terms of Source Theory, we find that it is limited to some very fine points, and may even disappear completely. The only assumption we need here is that language is a subsystem of the cultural system, activated by the individual. Russell bases meaning on truth, and truth is itself determined by the system's sources, so that the meaning of a word (as

well as that of a sentence) is the object transmitted by the basic sources of the very same system. As with what was said above regarding proper names, this meaning is created by the fact that someone, some time in the past, determined that a particular object should have a particular name, and this meaning is transmitted from one speaker to another until it becomes the property of the community – which is the source *h*. When a person is born into a cultural system, he receives the meaning of the word from the sources who teach it to him, i.e., who transmit to him its meaning according to *h*. Since *h* is composed of many speakers, and many additional data about the object were added to the original data over the years, while some of the original data may have been forgotten, their meaning in spoken language is not fixed. Russell was very much aware of this, and the logical positivists even more so.

The later Wittgenstein speaks about obeying social rules, but even these rules are nothing but data, and the society in question is nothing but *h*. The data transmitted by *h* do not necessarily determine meaning, but rather methods of use. And when they do determine meaning, this meaning is not fixed.

Since Russell too is aware that objects are not fixed in natural language, it turns out that the only difference between Russell and Wittgenstein, in terms of Source Theory, is the question of whether *h* determines meaning through establishing a connection between a word and an object or through establishing the way a word is used without any necessary connection with an object.

It seems that the later Wittgenstein ignored Frege's remarks about the nature of concepts. In Frege's view, concepts are not the product of language; they are associated with the "physics" rather than the "psychology" of things. Accordingly, concepts are the general boundaries according to which various individual objects in the world are divided, and since objects are divided into such groups in actuality – without any connection to the way they are perceived – then these boundaries are "real". Language, conversely, is the expression of the human aspiration to create words suitable for the everyday needs of most of its speakers. Sometimes words embody the aspiration to reach the utopian, pure, sharp boundaries of the concepts, but sometimes they do not; and even when they do embody this aspiration, it is obviously pointless: If every attempt to define a word analytically makes use of more general words, and so on, then how can the most general words be defined? Plato tried to answer this question by looking for the "primary elements" (Plato 1997, p. 223, [Theaetetus, Steph. p. 201]) or the "most important (i.e. supreme) kinds" (Plato 1997, p. 275, 277 [Sophist, Steph. p. 253c, 254d]) of reality, which he took to be undefinable. But if the only way to understand words precisely is by analytic definition, those "primary" undefinable terms cannot be understood; and if they cannot be understood, neither can all the terms that are defined by them; thus, in a *reductio ad absurdum*, nothing is understandable (compare Wittgenstein 1953: 46). However, the linguistic difficulty in defining the primary elements or even understanding them in *language* does not negate the claim of Plato and his

followers that the *world* is indeed divided in this basic way, whether or not we are able to express it in words.

Moreover, even if we give up the quest for “primary elements,” we know that every general concept reflects a division of the world. If we imagine the world as the totality of all objects, it is possible to divide it in a variety of ways. Each division into two leaves us with some objects on one side of the boundary and other objects on the other side, whatever that boundary might be. Our ability to discover the line where the “boundary” lies – that is, the borders of the concept as opposed to what is not inside these borders – may be limited, but it is this aspiration that underlies the philosophical and scientific aspiration for exactness. Indeed, this very attempt may sometimes change the contours of the boundary, and there are also additional factors, especially cultural processes that affect natural language, that constantly change this contour, but none of this necessitates the conclusion that such a contour does not exist.

Wittgenstein’s claim thus does not undermine the view of the world as divisible into primary kinds, secondary kinds, and so on, but only raises the question of the degree of fit between the this non-verbal metaphysical division and the division of concepts expressed by words in language. Natural language is indeed very dynamic, but this dynamic is closely connected with the state of our knowledge about the objects that language is supposed to represent. Furthermore, as mentioned previously, our concepts about the objects in our minds also change constantly. The fact that they are nonetheless relatively fixed does not mean that they determine absolute boundaries in some metaphysical sense, but only the conventions that are accepted by the cultural community at a particular time. Frege, Russell and the logical positivists can also agree with this. The main difference between them and the later Wittgenstein is on the question of how far we can rid ourselves of natural language and create a “scientific language” that better represents the conceptual division (which is actually metaphysical, even though some of the philosophers under discussion would not use that term). However, the naïve vision of creating a pure scientific language no longer fires the imagination of philosophers. It seems to me that at the present time it is enough to say that scientific language tries to refine the concepts of natural language as much as possible and make them as close as possible to a metaphysical conceptualization, but this process is endless, with a goal that is largely utopian.

In many areas of life the advancement of knowledge leads to changes in our concepts about objects, and thus the changes in the meanings of words reflect our increasing ability to define their boundaries precisely. Clearly, for example, the definition of gold according to Mendeleev’s periodic table allows us to understand the concept of gold more precisely (within WRS). Even people who do not know this definition know, for example, that “fools’ gold” is not gold, and that they have to beware of fakes, as long as they are members of this cultural system to one degree or another. In such cases, we can assume

that the historical process has occurred largely the way Kripke described it. We can imagine that primitive people came upon a bright yellow metal and called it “gold”. In Kripke’s terms, this was its baptism. It is entirely possible that this metal was not even gold, but rather platinum or fools’ gold, but the baptism took place anyway. (Indeed, Kripkean baptism does not necessarily have to be based on a *true* description of the object named! – compare Gettier 1963). Later generations discovered some of its chemical and physical properties and distinguished among different types of bright yellow metals, culminating in Mendeleev’s definitive characterization. At present, no one knows which metal was called “gold” at the dawn of history, and very few (mainly historians of science) know which metals were called “gold” at different points in the development of science. The word “gold” in our language reflects the latest developments of science that have come to the notice of *h*.

This is even more true when we consider what Searle and others call “institutional facts” (in contrast to “brute facts” such as the nature of gold). In these cases, *h* is often not a source that presumes to transmit an outside fact, but the very creator of that fact. In this respect, the fact that a bachelor is an unmarried man is even more secure than the fact that gold is a metal: The latter required a long scientific development to be validated, while the latter was an unshakeable truth ever since *h* coined the term “bachelor”.

In other areas of life we do not even try to reach such precision. For example, the fruits and vegetables that existed a hundred years ago were quite different from the ones with the same names today – now they are grown differently, which changes their taste and shape. Moreover, in the course of the centuries, new species of fruits and vegetables have been developed, with very different shapes and tastes, thus expanding the boundaries of the concept of each fruit or vegetable. We continue, however, to use the same names for them, since the process of change has been gradual and they are used in more or less the same way that they were used in the past. If a historian wants to know what the meaning of “tomato” was in an early twentieth-century text, he would have to find out the boundaries of the concept at that time through the use of evidence, but most language speakers are not the least bit interested in this topic. (To be sure, the meanings of linguistic expressions can sometimes change through deliberate manipulation; such changes are discussed below in Appendix IV.)

It is noteworthy that discussions parallel to those in the philosophy of language have also taken place in the philosophy of law. Here it was Hart (1961, Chapter 7) who noticed, more than any of his predecessors, that the legal terms used by legislators seem to have two circles of meaning: the hard circle, which he called the “core”, and the soft circle, which he called the “penumbra”. In the core, any speaker of the language can determine which objects fall under a legal term, while terms in the penumbra are subject to uncertainty. This area thus has an “open texture”, where interpretation is required. This, says Hart, is where judicial discretion has to be involved. Several scholars (especially

Bix 1996; Marmor 2005) have noticed the connection between this view and that of Wittgenstein, but even in Hart's theory the core area is supposed to be determined not by pure metaphysical concepts, but rather by the accepted use of natural language. Hart did not discuss Wittgenstein's philosophy, but his theory offers some perhaps unintended answers to some of the questions Wittgenstein presented. Hart showed that the fact that linguistic expressions have a penumbra makes their borders less rigid, but does not annihilate them altogether. The fact that gray exists does not negate the existence of black and white; there is black, there is white, and there is also a gray area between them (this idea is largely the theoretical basis of fuzzy logic). Similarly, the fact that the boundaries are constantly moving does not negate the fact that they exist, since the boundaries at t_3 were created by expanding or contracting the boundaries at t_2 , which for their part were created by expanding or contracting the boundaries at t_1 , and so on. In other words, it is the gradual historical evolution that determines the continuum of meaning of linguistic expressions, even though times change.

This leads to the same conclusion as that presented above. The later Wittgenstein was right in stating that the boundaries of linguistic expressions are not always clear, and even those that are clear are constantly changing, so words do not have fixed, eternal meanings. On many issues, however, everyday language does not aspire to any fixed meaning, and all we need is what is accepted at a given moment in our cultural system. In areas that are not philosophical or scientific, we do not aspire to precision, but only to effective use. When I go to the store to buy tomatoes, I am not interested in any pure – philosophical or scientific – concept of tomatoes, but only in an ingredient for salads. Even here, as mentioned above, the boundary has not shifted on the level of pure concepts. There is a pure concept of a tomato of the old sort, such that the tomatoes of the new sort are outside its boundaries; and there is a broader pure concept of tomatoes that includes both the old and the new sort. These have always been part of the extension of the concept, even before they actually existed. Natural language does not represent the world of pure concepts, but only the constant aspiration to represent them, and even this is true only in the areas in which people aspire to precision, such as philosophy and the sciences. Of course, this is not in Wittgenstein's line, but neither is it in Frege's: Frege spoke of "objective" concepts existing in the external world, and so could consider them pure and rigid; Wittgenstein spoke about concepts as created by language, and therefore saw them as vague and unstable.

As I suggested above, Source Theory helps us to eliminate most of this alleged controversy: for both Frege and the later Wittgenstein, concepts are ways of dividing the world, and there are numerous possible ways of doing so. The question is whether there is a single "right" way, and whether this way is attainable, in view of the fact that we acquire our concepts through our "deficient" ordinary language. Source Theory reminds us that all of our data, whether those of

metaphysics and logic or those of language, whether “right” or “deficient”, come from sources. The right data for the division of the world are those that are transmitted by the basic sources of the ideal system of the activator concerned – in the case of Western philosophers like Frege and Wittgenstein this is the source mechanism of WRS – and the deficient ones are those transmitted by other sources, in our case by *h*, insofar as *h* is not subordinate to the source mechanism of WRS. These sources are parts of the source model of the real system under discussion. The gap between Fregean concepts and Wittgensteinian concepts is just another manifestation of the gap between the real system and the ideal system that is almost taken for granted by Source Theory.

Philosophers and scientists try to use language to represent the world. Since Wittgenstein showed that many linguistic expressions do not play such a role, but are rather action rules for language users, we may take one of the following views: either these expressions somehow help us create the representations, or they do not. If they do, they are parts of the mechanism of representation even though they are not themselves representations; if they do not, then we should try to exclude them in disciplines that strive for precision. The problems involved in this striving for precision do not necessitate the defeatist conclusions of some philosophers (e.g., Rorty 1979), but only imply that we need to increase our efforts to figure out how to achieve precision in spite of the problems.

In the discussion above I addressed only semantic aspects of language, but the gist of my arguments applies, *mutatis mutandis*, to its syntactic and even pragmatic aspects as well. This issue deserves a more extensive discussion, which should be undertaken elsewhere, so I will only name a few points: The laws of syntax are data. They are transmitted to us explicitly only during late childhood and adolescence, in grammar classes at school, for example, but we begin to acquire them at much earlier stages. The sources that transmit them to us are not much different from those who transmit semantic relations, i.e., the community of the speakers of the language, especially those in our close environment. Even if the rules are not formulated explicitly by these sources, as they are presented to us in grammar classes and books, they are nevertheless parts of the content of what is said to us.

This is one of many examples of the fact that the term “transmission” does not refer only to plain and explicit conveyance of the contents but also to other forms, which are more complex and implicit. Even pragmatics, a discipline that explores the more fluid aspects of human language, has been shown in recent scholarship to be based on rules and compositionality which are transmitted in everyday speech. In both realms – syntax and pragmatics – it should be remembered that (unlike what Wittgenstein’s *Investigations* implies) language rules are also kinds of objects, and we identify and acquire them through learning processes that are not far different from those through which we acquire data about word-object relations.

This discussion is not intended to decide controversies in the philosophy of language, but only to show how to apply Source Theory to these problems. Let us now try to formulate our conclusions in terms of Source Theory. The system of pure concepts is the ideal system of a cultural system. The world can be divided up in numberless ways, but the division that system users aspire to achieve is the one transmitted to them by the sources of their cultural system (in the case of WRS, the basic cognitive tools). In contrast, the division reflected by natural language belongs to that cultural system's real system, for which *h* is the principal source. The aspiration to achieve the ideal system is thus the one discussed above – that is, the attempt to bring the real system closer to the ideal one.

Moreover, Source Theory provides a simple explanation for the question of how meaning is possible at all. Since everything takes place within the same system, it is the same system that transmits both the data and the way that other data – linguistic expressions – should be used to represent them, as well as how other linguistic expressions should be used as aids in the act of representation. Linguistic representation is thus no longer mysterious, as it is merely the encounter between the data of sources within the same system, which is possible due to the obvious fact that the sources in a system influence one another mutually.