

many-one mapping from the hearer's situations to those of the speaker.¹⁸ As we shall see, whenever the principle holds, it matches the requirement that translation be of explanatory import.

If the refinement principle is adopted in this form, it and my above argument for it agree with what is usually called the structuralist notion of reduction.¹⁹ The principle is defended by philosophers of science by saying that the reducing theory is, typically, more fundamental than the reduced one in that it describes the world more successfully or more precisely, or is able to make more distinctions than the reduced theory.²⁰ The principle is also involved in the notion of interpretation as this notion is defined in mathematical logic, and its justification is the same.²¹ As will be seen below, another kind of context in which the principle is valid is one in which a hearer's translation is corrective, but he has a number of alternative situations to refer to, due to his ignorance concerning the speaker's situation. In applications where the minimizing transformation is different from the correlation, the latter mapping (and hence the refinement principle) plays a role that is slightly different from the role played by its predecessors in the philosophy of science. We shall also see that minimizing transformations do not only yield applications of the minimization principle but often the material with which the refinement principle is associated.

EXAMPLES AND APPLICATIONS OF LOCAL TRANSLATION

In the examples and applications of Sections 3.1-3 below, utterances are simple natural language expressions, but the conclusions are applicable to more complex utterances and to scientific contexts involving local translations. There are so many different types of translation contexts which may occur in ordinary discourse, that it may not be possible to consider them all. I try to explore, however, by means of an appropriate set of examples and in an orderly way, the relation between translation, correlation, and minimizing transformation, and to show that there is an intensive interplay between these elements. In particular, the translation chosen by a hearer from among all possible translations of an utterance usually determines the nature of the other elements. On the other hand, how the hearer understands the utterance and how he employs principles of interpretation determine the translation. Pragmatic and hermeneutic elements are crucial here, and they determine the logical structure of a translation. In the last section of this chapter, I try to indicate that the theory can be applied to visual art, too, if we accept the idea of pictorial utterances and speech acts and the idea that the distinction between syntax and semantics applies to pictorial representation.

3.1. LOCAL TRANSLATION AND EXPLANATION

It seems, for instance, that Danto's (1981) well-known analysis of the question of how the title of a work of art affects its interpretation provides us with an appropriate theoretical context in which to investigate problems of nonstandard (local) translation in a systematic way. For Danto, "[t]o interpret a work is to offer a theory as to what the work is about . . .," and on the other hand, the title is often intended to structure the work itself: it is a direction for interpretation.¹ Changing

the title may change interpretation and this may transform the work into another work. As we shall see below, semantic transformations associated with translations can be nicely related to transformations of artworks.

As an example, Danto considers the painting *Landscape with the Fall of Icarus* by Pieter Breughel the Elder and examines the question of how its title (and the associated 'theory') may structure the painting, especially in comparison with the structuring that would result if the same picture possessed a different title. As soon as the title is acknowledged and the story of Icarus recalled, the small white spot that can be seen in the foreground of the picture may be identified as the legs of Icarus. The story gives the spectator a theoretical framework which organizes the picture around the white spot. Danto then asks us to imagine that the picture would have a different title, say *Industry on Land and Sea*. This would be appropriate since one can see ships and a plowman in the picture. Then the spot might be understood as representing the legs of a pearl diver or an oysterman; there is nothing in the picture as such with which this would be incompatible. On the contrary, this understanding of the meaning of legs is, I think, even more coherent with this title than to understand them as belonging to, for instance, someone swimming for fun. In any case, if this were the title, the painting would no longer be organized around the legs; thus, for instance, the fact that the plowman pays no attention to the legs is no more deeply significant, as it is in the case of Icarus.

This is just a small part of Danto's instructive discussion of the import of titles. Since it is theoretically oriented, it yields a nontrivial framework for examples that can be used to bring forth the fine-grained character of explanatory translation, i.e., to show how even small contextual and theoretical differences may influence the way in which the syntactic and semantic transformations cooperate.

Assume first that someone looking at Breughel's painting thinks that the white spot in the painting in front of him represents legs and then utters the following sentence:

(3.1.1) The legs belong to a pearl diver or an oysterman.²

Assume furthermore, that by uttering this sentence the speaker asserts what he seems to assert, that is, that the legs in the painting in front of him belong to a pearl diver or an oysterman. Then, if a hearer

wants to translate the utterance into French in the standard sense of translation, and if he is competent enough in French and English and believes that the speaker makes that assertion, his translation is likely to refer to the same (kind of) situation, and hence no semantic transformation is needed. The meaning is preserved. It can of course be argued that there nevertheless are tiny differences that, in fact, render a semantic transformation necessary; for instance, in the speaker's culture the way of understanding situations where paintings occur may be different from the way provided by the hearer's culture, or paintings in the two cultures may be perceived differently, or divers may have slightly different meanings in the two cultures. More generally, the role played by paintings in the speaker's culture is different from that in the hearer's. If there are cultural and connotative differences even in simple cases like this one, there hardly can be many opportunities for meaning-preserving translations. Be this as it may, in what follows I study examples that clearly, and for various reasons, call for semantic transformations.

It is sometimes argued that criteria for correct (meaning-preserving) translations between two languages are similar to criteria for the correctness of paraphrases within a given language.³ It is equally obvious that what we have said about translations in the nonstandard sense is indifferent with respect to whether the expressions considered belong to two different languages or to a single language. In either case, it is essential to have an interplay between a (syntactic) translation and a semantic transformation in such a manner that a possible meaning or reference change becomes understood. Therefore, it will not make any difference if we in what follows mainly consider utterances belonging to a single (natural) language. Influential cultural differences may occur, moreover, between groups or persons representing a single natural language in the same way as such occur between representatives of different languages. To unify terminology, I shall therefore mostly use the word 'translation', even though I am going to consider paraphrases and other syntactic transformations within a single language.

We are now ready to discuss different kinds of explanatory translation to which an utterance of (3.1.1) may lead. If the hearer knows that the legs belong to Icarus, his most straightforward corrective and nonstandard translation of (3.1.1) would of course be

(3.1.2) The legs belong to Icarus.

The manner in which the hearer's situation (that is, h), in which (3.1.2) is true, is associated with the speaker's one (s) is evidently sensitive to context, specifically to the way in which the hearer constructs his explanation. Let us suppose, for example, that the hearer knows that the falsity of the assertion is due to the speaker's ignorance of the story of Icarus, and, furthermore, that the hearer himself has never seen the painting, though he has been told that there is such a spot that represents the legs of Icarus. Then the hearer, in trying to explain the erroneous claim of the speaker, may choose a number of situations in which (3.1.2) is true, that is, he may choose a number of situations from his own situations that are as close as possible to, and hence easily transformable into, the speaker's situations in which the spots represent the legs of a pearl diver or an oysterman. They are, e.g., situations in which the legs in the painting look (to the hearer) like the legs of a pearl diver or an oysterman.

It can be directly seen that the minimization and refinement principles hold here. Since in the actual situations (that is, a) (3.1.2) is true as well,⁴ they coincide with some of the hearer's situations, and the respective diagram is as in Figure 3.1.1, below, where σ is (3.1.1) and θ is (3.1.2). Therefore, an application of the minimization principle (i.e., the minimizing transformation) does not lead outside the actual situations, unlike in some other examples that follow. As I explained above, the plurality of situations (in particular, the hearer's situations), and hence the role of the refinement principle, is ignored here for typographical reasons:

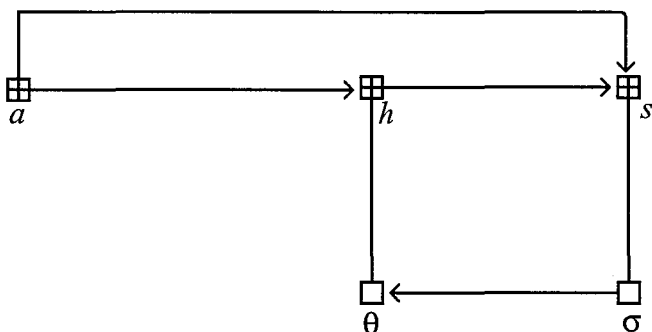


Figure 3.1.1