

Heinz Georg Held

Translatability. The function of scientific translation

When I got the kind invitation to speak at the Euro Science Open Forum, I was somehow surprised by the provoking alternative in the title of this session, “universal language *or* polyglot discourse”, followed by a question mark. I must admit that I am very fond of polyglot discourses just because the diversity of languages – which in the humanities is regarded as a most creative element of human culture – is the main object of my own research. On the other hand I am very glad that we have a common language because otherwise our actual communication would be very difficult. Common language defines, in a certain sense, a social community, even if this community includes very different people or even people with very different cultural backgrounds, e.g. the Greek *koine* and the Latin language which have influenced all European languages and the whole Western epistemological system, the Arabian language that had been spoken for centuries in most parts of the Mediterranean area and the Middle East, or Persian having been the *lingua franca* of central Asia throughout the Middle Ages. In this historical perspective it is indeed significant that in the 20th century English – the language of trade and commerce – has become the universal language of science.

Instead, the term “universal” has still another meaning, and another dimension. “Universal language” not only means a common language spoken all over the world, but also a language which is capable to represent in adequate terms the universal knowledge of all known things all over the world. From a linguistic point of view the logical relation between things and words, between “real facts” and their

representation is a very delicate problem which has been discussed since the beginning of science, and seems to have never been resolved; yet in the past, and in all different epistemological systems, there have always been strong tendencies to establish a universal linguistic order of things, accompanied by differing “polyglot” discourses which add and complete and thus correct and modify the system, in certain cases even changing the scientific *paradigmata*. In this double sense which connects “polyglot” and “universal” to a linguistic as well as to an epistemological structure, every community - and every communication - of science depend on both, universal language *and* polyglot discourse: not as two irreconcilable opposites but as two complementary processes, as a kind of linguistic interaction which is mediated by what I would like to call “translatability”. The term focuses on the linguistic dimension of all scientific research. *Translatability* is a quality of a scientific text that allows to move and translate it into different directions and in different ways.

In these few minutes I can only hint at few essential types of translation. Firstly, translation in its conventional meaning: from one language into another; secondly, translation in a metaphorical sense: from highly specialised discourse into a less specialised, general cultural and political discourse; thirdly, translation as a terminological, and in the same way rhetorical, process: from scientific research into scientific discourse. The *mutual translatability* of these three kinds of translations is a necessary condition of any democratic discussion on the open *forum* in the republic of letters and science.

1. Translation in its usual meaning - from one language into another - seems to regard mainly non-scientific or popularised scientific literature and thus to be aimed

at non-specialist-readers who are at least partly ignorant of the actual scientific discourse and who cannot, or – for other reasons will not read - the original text. Today every scientist is to be expected to write in English and, of course, to read English texts, even if not directly connected to his or her own discipline. But there is scientific discourse also in other languages, German astrophysicists, for example, still speak German talking to each other, and in German language rather frequently used terms like Big Bang, Quarks, Black Holes evoke other associations than in English. Translation, in this case, means integrating scientific discoveries into an already existing polyglot discourse. In this way scientific translations can directly influence the public and political debate. Therefore, it would be desirable to establish ethical principles for translators and editors (just as it would suit for journalists) which obliged them to acknowledge not only marketing strategies, but also the responsibility for the correctness of their publications.

2. Directly connected to this problem is another type of translation which transforms a highly specialised into a less specialised discourse. Its target group is defined by the intellectual level and the extend of popularisation to which these translations are intended to be brought: colleagues of other disciplines, or other members of the scientific community who could be stimulated by those translated information, or a broad public which is expected to discuss means and results of scientific research in order to influence political and economic decisions. Therefore the scientist, being his or her own translator, has to accept the status of a *zoon politikon* in the Aristotelian sense: translatability also refers to the dynamic role of a political being that has to participate in public debate and therefore should be given

the opportunity to do so, not in talk- or reality-shows, but in “translated” discussion uniting the different competencies of the whole republic of science. Also in this case, translatability seems to imply social responsibility.

3. Translation of scientific research into scientific discourse means the representation of practical scientific work – i.e. the trial-and-error-machinery: observations, experiments, analysis, statistics etc. – in a discursive context with its own logical and rhetorical rules. Even the presumed objective status of scientific knowledge can be discussed only in linguistic terms. This form of translation includes all aspects of scientific argumentation, the problem of adequate description and illustration, the order of information, the use of metaphors and the creation of new terms which could get important meaning in further scientific thinking etc., and last but not least the techniques of communicating scientific results to a wider public, introducing scientific into the general cultural discourse, reconnecting it to the context of the first and second type of translation.

There are still other types of scientific translation, e.g. translation from the history of science into actual scientific discourse, translation into another media, or vice versa: from visual presentation into text, and of course, the most important and most difficult translation regarding the relation between language and cognitive acts which is a most interesting borderline between humanities and scientific research. It seems evident that any kind of thinking has a linguistic structure which also widely determines individual as well as collective selections of reality and its interpretation. A scientific phenomenon comes to existence when it can be scientifically discussed,

in other words: when its polyglot features can be translated into a universal language and thus be communicated to the general *forum*. Translatability does not necessarily refer to exact or objective knowledge but to a transparent process of discussion. It is that linguistic structure that connects science to the *polis* of a scientific *res publica* translating and transforming polyglot discourses into universal language, retranslating universal terms into polyglot discourses. If it is an “open forum” – at least we should expect this from a democratic society of letters and science – universal language does not exclude or suppress other languages nor different linguistic approaches towards science, but on the contrary includes the variety and complexity of “translatable” polyglot discourses as a necessary creative element of its epistemological system.

The concept of translatability is also to be applied to the polyglot discourses of Science and Humanities. The utopian concept of a “republic of letters and science” comes out of the Age of Enlightenment; it can be considered a social experiment as well as a specific European experience. The main idea was to concentrate intellectual energies for a further development of knowledge and culture, and it was common sense that an open discussion of scientists of all disciplines would contribute to the general process of civilisation which was expected to be not only a scientific and technical, but also a political and social progress of all mankind. In spite of this utopian model the national scientific societies, founded in the 17th and 18th century (at least partly) on monarch principles, were mainly characterised by national interests and pragmatic decisions which also reflected the crisis and the radical change of the whole epistemological system during this period; it is significant that

the activities of these new communities are mainly responsible for the substitution of Latin as the universal language of science by the singular national languages, but also for the separations of natural sciences and humanities. The idea, however, of a republic of science *and* letters has never lost its attraction. Euro Science which comes out of the same tradition renewing the idea of an *international* European scientific society could become a forum to re-integrate the – translated, of course – dialogue between Science and Humanities.