

Multilingualism or publication exclusively in English?

The central importance of multilingualism for science, the example of the philosophy of knowledge

Abstract

Language and mathematics are the most important tools of scientists. If one considers language alone as an instrument of science, then two peculiarities stand out: first, there is a huge number of languages; and second, scientists all over the world tend to publish only in English, today's *lingua franca*.

In the following, I would like to show two things. Firstly, multilingualism increases the performance of language as an instrument of science. Secondly, multilingualism contributes to the reliability of the results because these are simultaneously reproduced in another language. Therefore, it is useful to publish in at least one more language besides English. These theses are developed using the example of a problem from the philosophy of knowledge, based on the distinction made by Gilbert Ryle between "knowing that" and "knowing how".

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Further publication on the topic:

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"Methodenstreit" and Political Science: Methodological Science War at the Beginning of the 21st Century between the scientific Establishment and phronetic Perestroikans.

(lauer.biz/methodenstreit/index-en.htm).

[Relationship between politics and science: a complementary model of political consulting](#), in: [The European](#).



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1 Introduction

In the following, I would like to show that multilingualism increases the performance of language as an instrument of science and that multilingualism contributes to the reliability of the results because the results are simultaneously reproduced in another language. Therefore, it is useful to publish in at least one more language besides English. Publication in English is indisputably indispensable today.

Multilingualism has two advantages when discussing scientific problems. Firstly, linguistic pseudo-problems are avoided; and secondly, the discussion of scientific problems in different languages contributes to faster and, above all, more appropriate problem solving.

These theses are elaborated using the example of the philosophy of knowledge, namely the distinction made by Gilbert Ryle between “knowing that” and “knowing how”.

2 Knowing that (*Wissen*) versus knowing how (*Können*)

The distinction made by Gilbert Ryle (2009 [1949]) between “knowing that” and “knowing how” is still very influential. This distinction is adopted literally in German, although the German terms “*Wissen*” and “*Können*” are much more appropriate.

In Ryle’s distinction, practical knowledge and practical skill are equated. However, this is merely based on ambiguous statements in English, as Kurt Baier, Gilbert Ryle’s translator, rightly points out. The use of the English words “knowing how” and “knowing that” does not lead to more precise explanations, but to linguistic confusion. The German translation shows that these terms are extremely imprecise and therefore do not in any way lead to a clarification of the logical geography of knowledge, as Ryle believed (2009 [1949]).

Baier writes in a comment: “The translator could not find an equivalent German counterpart for the phrase ‘Knowing how – knowing that’ used in the English title of this chapter. Ryle wants to say that ‘being able to do something’ means the same as ‘knowing how to do it’. In German, however, you cannot use any of the two expressions similar to the English ‘knowing how’. The first of these expressions, ‘knowing how to do something’ [*Wissen, wie man etwas macht*] does not mean the same as ‘being able to do something’ [*etwas machen können*]. Someone may know how to change a

car tire (and is even able to describe or show it to someone else), but without being able to do it himself, perhaps because he is not strong or skillful enough or because he has bad eyesight. 'Knowing how ...' [*Wissen wie ...*] is a form of theoretical knowledge, not the same as the English 'Knowing how to do ...'. The second similar German expression '*Er weiß zu ...*' ['He knows how ...'] is also inappropriate because it cannot generally be used in place of '*können*' ['can']. You can possibly say of someone: 'He knows how to flatter you', but you will hardly want to ask the question of whether someone can drive with the words: 'Does he know how to drive?' [*Wei er zu chauffieren?*] In German, one does not use the expression "Wissen/know" in such contexts, but "Können/can", so "can you drive", not "do you know to drive". Not a knowledge of driving is asked for, but a practical ability to drive.]

The translator therefore had to be content with reproducing the English couple 'Knowing how – knowing that' with the German couple *Können – Wissen*, which, unlike the English couple, does not provide linguistic confirmation of Ryle's thesis 'being able to do something' is a kind of practical knowledge" (note from Kurt Baier, the translator of Ryle's work, in Ryle 1969 [1949]: 26, my translations, the comments in square brackets were inserted by me).

Kurt Baier provides a successful example of how linguistic analysis can be used to solve philosophical problems, i.e., by tracing them back to linguistic confusions (Wittgenstein 1984 [1953], Lauer 2017).

3. Forms of knowledge

Kurt Baier's comments led me to a fundamental rethinking of the importance of multilingualism. The practical consequence was that I chose to work bilingually, in this case too when discussing different forms of knowledge. The distinctions between the various forms of knowledge were worked out by discussing them in two languages, German and English, at the same time. The final formulations had to be convincing in both languages, so they underwent a number of changes.

Before the different forms of knowledge are shown in the second chart, the difference between knowledge and practice is discussed in the first chart. For reasons of space, only the results can be displayed here in the form of charts. The more detailed discussion took place elsewhere (Lauer 2017 and 2021).

Chart 1: Knowledge (theory) versus praxis (action)

<p>1. Knowledge (theory): Sphere of cognition and knowledge</p>	<p><i>A scientist is always a theorist</i>, whether he asserts empirical propositions regarding political reality with an empirical methodology or whether he legitimizes standardizations or regulations using a practical methodology. In the first case, the scientist generates <i>empirical knowledge</i>, in the second <i>practical knowledge</i>.</p> <p>There are <i>no</i> applied sciences, but only practical sciences and scientifically trained <i>practitioners</i> who apply knowledge, and <i>scientists</i> who generate knowledge.</p>
<p>2. Praxis (action): Sphere of action</p>	<p><i>A practitioner</i> (citizen, politician, official, administrator, entrepreneur) changes (political) reality, whether he refers to scientifically based <i>empirical</i> and <i>practical knowledge</i> and <i>makes rational decisions</i>, or makes subjective <i>gut decisions</i>.</p> <p>Theory and praxis are considered as <i>complementary</i> and not hierarchical. Equivalence between the two, as is usual in the Bacon program, is also rejected.</p>
<p>Source: Lauer 2017: 60, and on the Internet in English, www.lauer.biz/methodenstreit/en-schaubilder-methodenstreit.htm#Chart_10, and in German, www.lauer.biz/methodenstreit/en-schaubilder-methodenstreit.htm#Chart_11.</p>	

Chart 2: Knowledge (*Wissen*) versus capability (*Können*)

<p>1. Knowledge, theory</p> <p>Actors: Scientists, such as political scientists, generate empirical and/or practical knowledge – natural scientists empirical knowledge, technical scientists practical knowledge.</p>	<p>Form of knowledge: <i>Analytical knowledge</i> in the form of propositions.</p>	<p><i>Conceptual and logical truths</i> in the form of non-empirical, <i>truth-apt</i> statements.</p>
	<p>Form of knowledge: <i>Empirical knowledge</i> in the form of natural or social science <i>propositions</i> and <i>propositional systems</i>, including statements about standards and rules.</p> <p>Type of science: <i>empirical</i> (theoretical) <i>sciences</i>.</p> <p>Examples: Natural sciences, empirical social sciences.</p> <p>Analytical and empirical knowledge is also <i>sentences knowledge</i>, because both are formulated as <i>sentences</i>.</p>	<p><i>Descriptive knowledge</i> in the form of <i>truth-apt</i> descriptions.</p> <p><i>Explanatory knowledge</i> in the form of <i>truth-apt</i> explanations.</p> <p><i>Predictive knowledge</i> in the form of <i>truth-apt</i> predictions.</p>
	<p>Form of knowledge: <i>Practical knowledge</i> in the form of practical standardizations and regulations</p> <p>Type of science: <i>Practical</i> (normative, pragmatic and technical) <i>sciences</i>.</p> <p>Examples: medical sciences, technical sciences, practical social (political) sciences.</p> <p><i>Practical knowledge</i> consists of three different components:</p> <ul style="list-style-type: none"> ➤ <i>Why</i>, or the normative component, consisting of ethical-moral <i>evaluations</i>, in this case maxims of action ➤ <i>What for</i>, or the pragmatic component, <i>objectives</i> and <i>purposes</i>, in this case action strategies ➤ <i>How</i>, (the technical component, <i>means</i>, here action instruments). 	<p><i>Normative knowledge</i> in the form of maxims of action (<i>Handlungsmaximen</i>) and normative-political judgments that are <i>just</i> or <i>unjust</i>.</p> <p><i>Pragmatic knowledge</i> in the form of action strategies (<i>Handlungsstrategien</i>) and pragmatic judgments consisting of e.g. different methodological approaches to cure a disease. Pragmatic rules are <i>wise</i> or <i>unwise</i>.</p>
		<p><i>Technical knowledge</i> in the form of tools for action (<i>Handlungsinstrumente</i>) and technical judgments, e.g. methods that contain practical technical rules for curing a disease. Technical rules are <i>effective</i> or <i>ineffective</i>.</p>
<p>2. Capability (<i>Können</i>)</p> <p>Actors: Practitioners – citizens, politicians, civil servants, administrators, entrepreneurs can make political decisions.</p>	<p>Practical <i>competence</i> in implementing empirical and practical knowledge, to be able to do something, e.g. the ability of the physician, craftsman, engineer, teacher, manager, politician, scientist to produce outstanding achievements in his or her field.</p> <p>Capability consists of dispositions, competencies, skills in doing something. This is the area covered by the label of <i>implicit, non-propositional knowledge</i>. This is only one part of expertise (know-how), that of practical capability. Ryle's conception of <i>know how</i> include what I understand under practical capability and practical knowledge, <i>know that</i> includes analytical and empirical knowledge.</p>	
<p>Source: Lauer 2017: 60, and on the Internet in English, www.lauer.biz/methodenstreit/en-schaubilder-methodenstreit.htm#Chart_10, and in German, www.lauer.biz/methodenstreit/schaubilder-methodenstreit.htm#10.Schaubild.</p>		

4 Multilingualism and automatic translation systems (ATS)

Today's lingua franca is clearly English, so every scientist should publish his or her texts in English. As shown above, it is worth reproducing the results in other languages. A translation can be facilitated by the technical possibilities. Today, a number of automatic translation systems (ATS) are available on the internet, such as Google Translator (translate.google.de) or DeepL (deepL.com). I have been working with these two for years. A text can be entered quickly, and within seconds one obtains an answer. But that is only the beginning of the work. The results are rarely satisfactory; often one even has to change the source text to obtain reasonably good results. For complex issues, I even use both translation services, comparing the results before the final version is created.

5 Conclusions

The conclusions that have been justified in this paper are recorded below:

5.1 It was assumed that language, along with mathematics, is the most important tools for scientists. Publication in English is absolutely necessary to enable global engagement. However, multilingualism increases the power of language as a tool of science.

5.2 The pseudo-problems in Gilbert Ryle's discussions were uncovered by Kurt Baier during the translation. Linguistic pseudo-problems can therefore be revealed or avoided through multilingualism – that was the first thesis.

5.3 The second thesis was that discussing scientific problems in different languages promotes the reliability of the results because the results are simultaneously reproduced in another language and contributes to faster and, above all, more adequate problem solving.

The distinctions between the different forms of knowledge were worked out by discussing them simultaneously in two languages, German and English. The final formulations had to be convincing in both languages, so there were a lot of changes.

5.4 Multilingualism is the most fundamental prerequisite for multiculturalism, and should therefore be practiced constantly for this reason alone.

6 References

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