2022 ECSPM SYMPOSIUM

Constructs of language, language policies, and the production of knowledge in European Higher Education

The Multilingual Challenge for the Production of Scientific Knowledge

Anne-Claude Berthoud

Université de Lausanne

Reflections and actions

- based on findings and recommandations developed by the "Langues et science" working group of the Conseil Européen pour les Langues /European Language Council (CEL/ELC), addressing the current debates on the benefits and risks in using a single language in the world of higher education and research;

- resulting from national and international research projects, in particular the European DYLAN Project (Language Dynamics and Managment of Diversity) *www.dylan-project.org*, projects which set out to show in what way and under what conditions multilingualism can be an advantage for companies, European institutions and higher education.

Aims

Offer evidence-based arguments for the development of alternative multilingual solutions that will:

- integrate English and other languages, and

- promote the quality of scientific and scholarly knowledge -

both in construction and in transmission of knowledge.

Benefits and risks of a single language

Benefits

- English has facilitated an extraordinary advance in science.

- It is regarded as a condition of any knowledge that seeks to be universal.

Risks

- English can also lead to an impoverishment of knowledge.

- There are risks that it will lead to the development of a monoculture of knowledge and science, because language practices play a part in shaping knowledge and skills.

Multilingual practices

- Multilingual practices offer an antidote to the squeezing out of different academic and scientific cultures.

- They guarantee the diversity of perspectives, and therefore the quality of knowledge, in terms of its richness and density.

Uniformity or universality of knowledge?

- Uniformity means standardisation, conformity, pursuit of the same – the result of a production mentality.

- Universality takes account of diversity, praises difference and is based on a reasoning mentality (Jullien 2004).

- In this sense, monolingualism is a condition for uniformity of knowledge, whereas multilingualism is a condition for universality of knowledge.

« Languages draw science… »

J-M Lévy-Leblond: chap. « La langue tire la science » , *La pierre de touche,* Gallimard, 1996

« … la domination quasi monopolistique d'une langue, quelle qu'elle soit, inhibe le jeu des mots et des idées, souvent stimulé par les traductions, passages et échanges d'une langue à l'autre, qui peuvent permettre d'assouplir et d'affiner l'expression de la pensée » (p. 24)

« *… the hegemonic domination of a language, whatever it is, inhibits the play of words and ideas, often fostered by translations, transfers and code switching, which can make it possible to soften and refine the expression of thought* ».

Multilingual practices
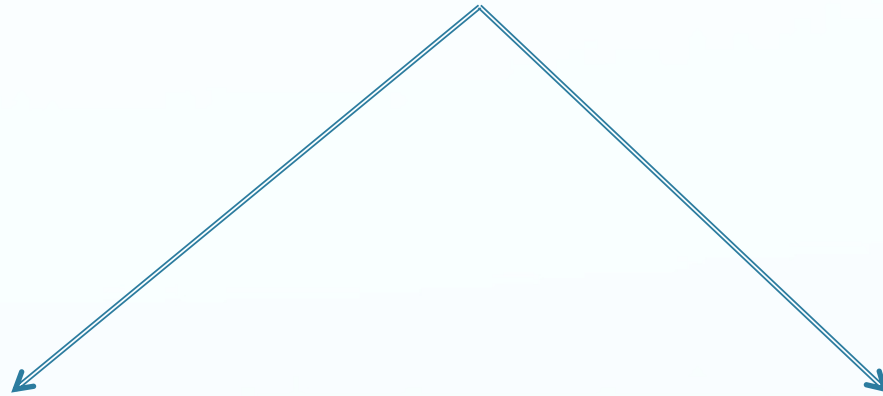
a revealer   an enhancer

Multilingual practices as a revealer

- Multilingual practices serve as a ***revealer*** of the linguistic dimension of knowledge, because they produce a clash between various ways of interpreting reality through language and communication.

- They show us language as symbolic mediation, disclosing to us what is generally implicit or inaccessible in our own language, and magnifying the linguistic dimension of knowledge.

A « lens effect » on linguistic mediation

Linguistic mediation

"The notion of mediation comes from Vygotsky (1986), who shows that knowledge only exists through socially elaborated and acknowledged vehicles. The main tool of symbolic mediation is language, and it is discourse that conveys knowledge, which only acquires substance when it is formulated. The vehicles of this formulation are very often a natural language, but sometimes also a more specialized language (for instance, mathematical "formulae") or patterns. From the point of view of language, these vehicles take on variable forms of discourse, which are more or less expected or acknowledged according to context and stage of reasoning, such as a hypothesis, a theorem, a definition, a lesson and so on. The process of mediation and its vehicles very much depend on the community in which they are deployed" (Berthoud, Gajo, 2016).

Multilingual practices as an enhancer

The clash that multilingual practices produce between various ways of thinking and communicating also serves as an *enhancer* (through 're-mediation') in order to :

- **improve conceptualization** (a cognitive resource);

- **optimize communication** (a communicative resource).

Cognitive impact

- deepening and "fine-tuning" of conceptual understanding,

- revealing hidden or implicit meanings, and "unfamiliarising" supposedly familiar meanings,

- shedding new light on concepts approached from multiple angles.

- **Cognitive creativity**, by broadening access to information,

- providing alternative ways of organizing thought and perceiving the world,

- and more generally, developing potential for creative thinking.

Communicative impact

Multilingual practices

- affect the way in which participants organise their interaction;

- contribute maximising or minimising their participation;

- participate to the construction of leadership;

- affect the ways of negotiating, problem-solving and decision-making.

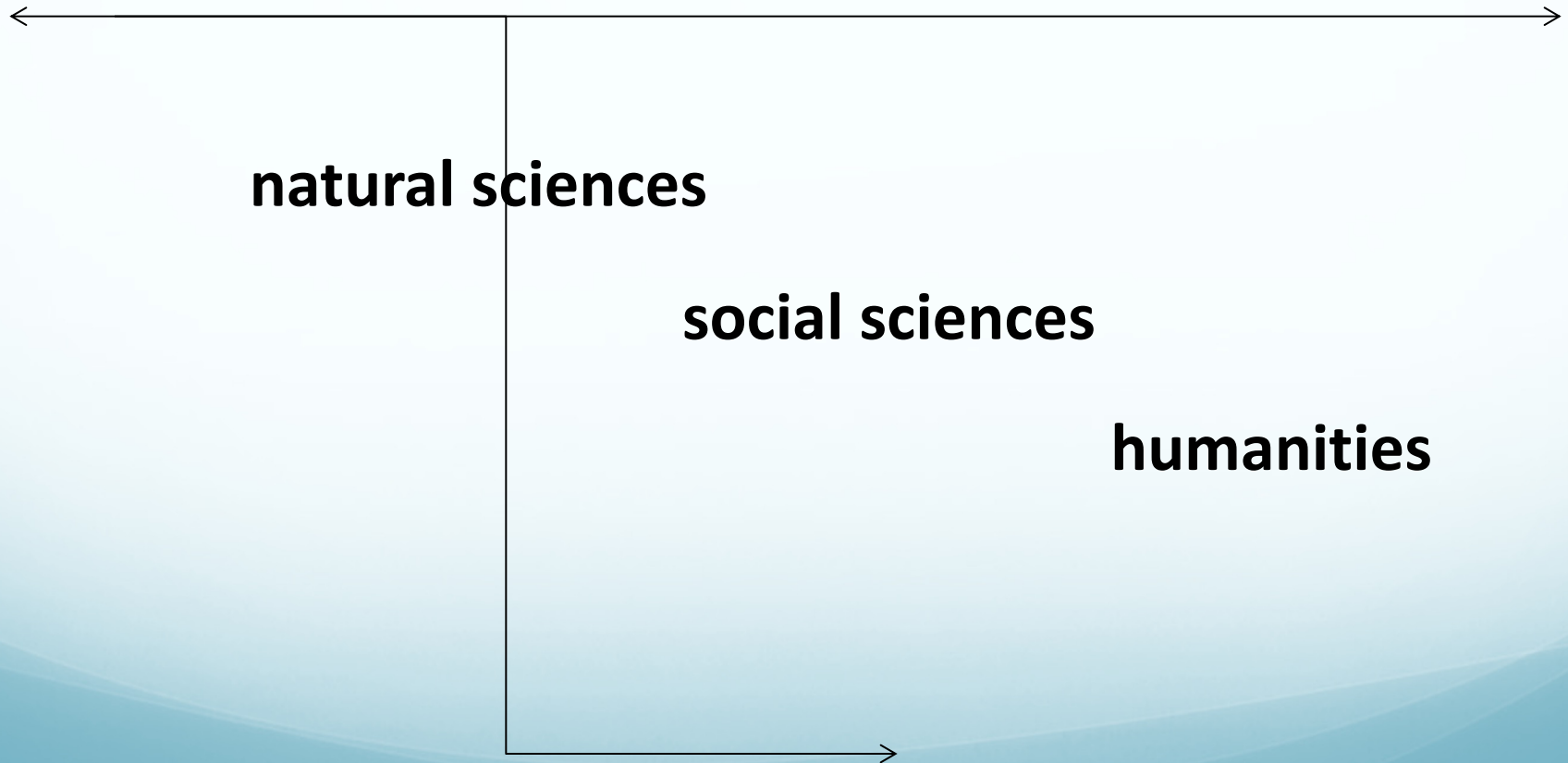# Under what conditions can multilingualism actually be an advantage?

Factors that should particularly be taken into account

- the types of disciplines

- the types of activities

- the different ideologies of multilingualism

- the different values attached to the various languages

The vehicular and constitutive functions of language in a diversity of disciplines
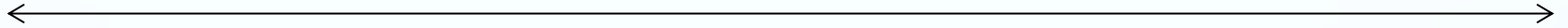
Constitutive and vehicular functions of language in the diversity of methods of scientific work

Vehicular function   **Constitutive function**

← ─── →

specialised dissemination   broad dissemination   construction of knowledge

INFORMATION   **FORMATION**   **IN-FORMATION**

international conferences   *popularisation*   *team work*

Specific ideologies of multilingualism

- A multilingual conception of multilingualism.

- Complementarity between English and other languages.

- Viewing communication strategies not as mutually exclusive, but as a panoply of options to be used in contexts of linguistic diversity.

- Integration of English and other languages: acknowledging the fact that the dominant use of one language may, in fact, hide others.

A multilingual conception of competence

- Competence defined in functional terms of ability to interact in several languages, at various levels of mastery, according to different situations and communication needs.

- A multilingual repertoire as a set of both verbal and non-verbal resources that are jointly mobilised by actors in order to find local solutions to practical problems.

- A toolkit for research and higher education, including at least a high level of competence in L1 and English, as well as partial competence in other languages.

- A toolkit not seen as a sum total of juxtaposed competence, but as integrated competence in several languages.

Complementarity between English and other languages

In higher education and research:

- Find a right balance between monolingual solutions (use of a *lingua academica*) and multilingual ones.

- Adopt two strategies: (a) surfing the worlds of knowledge viewed as a single entity; and (b) exploring these worlds of knowledge viewed as an irreducible plurality.

Les mondes de la connaissance
sont multiples. On peut surfer
entre ces mondes et les interroger
dans leur diversité.
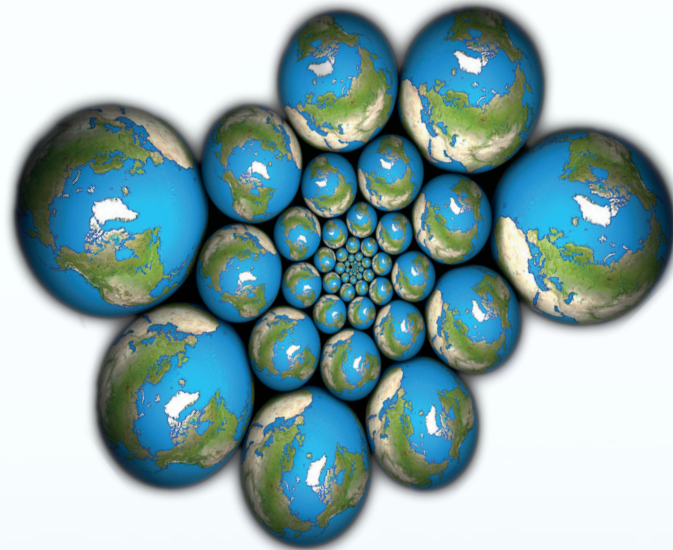
Le plurilinguisme manifeste la
richesse de ces mondes et décode
leur complexité.

A panoply of strategies to be used in contexts of linguistic diversity

Strategies used in an extremely variable, flexible and dynamic way, constantly reassessing and readapting the solutions chosen in the course of an activity

- lingua franca / lingua academica

- code-switching

- lingua receptiva mode

- translation and interpretation

Strategies located on two axes

- One axis compares "monolingual" strategies ("one language only" OLON or "one language at a time" OLAT) with "multilingual" ones – known as ALAST ("all the languages at the same time" or ALAT ("all the languages at all times").

- And the other axis compares the "endolingual" pole (participants share the same language) with the "exolingual" one (participants do not share a common language, with greatly asymmetrical repertoires).

Integration of English and other languages
Towards « thick standardisation »

- When apparent monolingualism conceals other languages.

- Even discourse produced in one language – a lingua academica - may only be superficially monolingual, in the sense that beneath the outward expression of this discourse, the many mental stages of its elaboration have taken place in another, or possibly many other languages.

- This layered elaboration is reflected in linguistic forms that are the traces of multilingual processing, and it can be illustrated with the metaphor of the *mille-feuilles*.

A "mille-feuilles"

A pastry in which the flavour of the top layer of icing very much depends on the underlying layers

The different values attached to the various languages

- What is the impact of the status of a language on the creation of knowledge?

- Especially whether or not a given language is a language of science?

Or should we look at the issues differently?

- Not consider languages as such, but from the point of view of how they are used in scientific practices.

- Consider how languages are brought into contact by speakers in the context of scientific communication.

- Following the hypothesis that conceptual strength results from the dynamics of exchanges, comparisons and transfers, and that, whatever the intrinsic value of the languages involved may be.

With the process of internationalisation of science

To what extent could the demands for the maintenance of and support for minority languages, made by speakers of these languages, be expressed

- not just in the name of an ideal of identity and culture,

  but also in the name of an ideal of knowledge?

- How can languages that do not have the status of languages of science, or do not have it any longer, contribute in the exchange process across languages

  - not only to the transmission of knowledge,

    but also to the **creation** of new knowledge?

THAT IS THE QUESTION

THANK YOU!

Some references

- Berthoud, A.-C., Grin, F., Lüdi, G. (eds.) (*2013). Exploring the Dynamics of Multilingualism. The DYLAN project,* John Benjamins Publishing Company.

- Berthoud, A.-C.& Gajo, L.(2020). *The Multilingual Challenge for the Construction and Transmission of Scientific Knowledge,* John Benjamins Publishing Company.

- European Journal of Language Policy, Voulume 13 (2021), Issue 1, « Les enjeux du plurilinguisme pour les pratiques scientifiques ».

Quotations

- Jullien, F. (2004). *Du mal et du négatif*. Paris : Points, Editions du Seuil.

- Lévy-Leblond, J.-M. (1996). *La pierre de touche : la science à l'épreuve*. Paris : Gallimard.

- Vygotski, L. (1986). *Thought and Language*. Cambridge, MA : MIT Press.