The Axiomatics of Microsciences and Macrosciences

Confusing application levels may be avoided by introducing convenient terms. It is not sufficient to separate science as a field of **academic studies** and **basic research** but we have to distinguish it as **systematic science** and insist on referring to applied research as **applied technology**. Wherever it is possible to coin new terms, systematic sciences should be termed '-logies' (ethnology, sociology) while applied technologies labelled as '-nomies' (agronomy, economy). In linguistics this would imply to accept pairs as 'linguology' and 'linguonomy', with little chance against traditional coinage. Therefore it seems more convenient to insist on distinguishing pairs as 'external' and 'internal linguistics' or 'macro-linguistics' and 'micro-linguistics' even if the latter are intersecting areas common to both academic and applied studies.

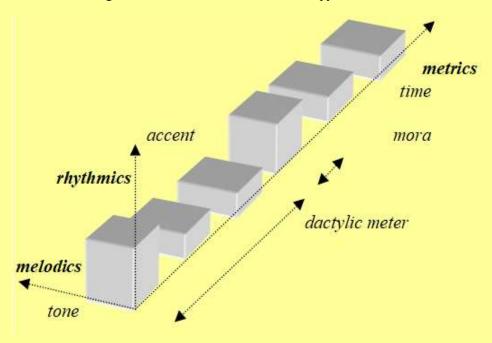


Table 9 The three basic sub-disciplines of versology

Most applied disciplines are based on **micro-sciences** that deal with a formal study of phenomena in their temporal consequence (*Nacheinander*), spatial coexistence (*Nebeneinainder*) and inner hierarchy (*Übereinander*). When enquiring into prosody, we must add tone (pitch, frequency) and accent (intensity). The formal theory of verse, rhyme and meters is traditionally called **versology** and its apparatus may serve as a convenient illustration of the inner constitution of **micro-poetics**. On Table 9 it is represented an abstract coordinate space with three axes arranging the poetic utterance according to time, tone and accent. Versology is traditionally said to consist of 'prosody', 'intonation' or 'metrics' but on Table 9 its axes compose three respective sub-disciplines, metrics (time), melodics (tone) and rhythmics (accent).

Micro-sciences serve for a formal study of individual phenomena but their systematic typology can be established only by **macrosciences** enquiring into different systems of versification, different families of nations and languages. Also macro-sciences study phenomena in time, space and intensity but these are usually understood in a broader sense as world history, world geography and social hierarchy. Table 10 plots the area of **macro-linguistics** as a Cartesian 3-dimensional co-ordinate space with three axes. The first is defined by historical grammar (linguistic diachrony) as a study of sound change on principles of 'pure chronology' and hence is called **chronolinguistics**. The second concerns linguistic geography and the distribution of linguistic isoglosses and as such it is referred to as **geolinguistics**. The two must be completed by **sociolinguistics** enquiring into social dialects and different ethnic layers in populations.

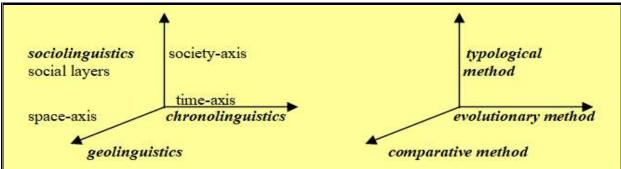


Table 10 The theoretical space of 'macro-linguistics' and its methods

Table 10 demonstrates an inner correspondence between applications and methods displayed in Table 7. Scientific methods are not a question of individual taste but one of the very nature of the object studied. Microsciences tend to apply formal, functional, structural and descriptive methods and when involved in applied research they focus on practical, prescriptive and normative aspects. Systematic research concentrates on macrosciences and uses the micro-scientific apparatus for typological purposes. It cannot disclose deeper laws in outer reality without historical, comparative, typological and sociological procedures. Any poem, language or domestic animal forms an organic functional whole but their inner type cannot be understood from one specimen only. Their constitution resembles that of a mongrel dog whose morphology exhibits a mixture of several canine races. A vet will resign from scrutinising its descent but a systematic scientist cannot avoid it. Individual reality is a mixture of mixtures and only a long-time comparative research may disclose what is essential and what is accidental about an individual representative of a categorical species. His knowledge does not content itself with **phenostructures** as accidental apparent wholes but has to go into **genostructures** disclosing pure genetic types, i.e. essential wholes that paved the road of phylogenetic evolution.

Extract from P. Bělíček: *Ad reformandum universitatem: Towards a Reform of Modern University Studies*. London - Berlin - Prague 2008, p. 19-20.