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What is an isogloss?

Abstract

This short contribution discusses the term and concept of *isogloss*: the space where a linguistic phenomenon exists or, by metonymic extension, the line that separates a particular linguistic phenomenon from another. Although the concept is currently used as an established and canonical term in linguistics, it is reasonable to explore its scope and the real sense that it carries, as well as to consider its origins and potential ambiguity in use. The main issue with the concept is that it seems to be theoretically necessary yet at the same time is not empirically attestable, which runs contrary to essential epistemological principles. We will seek to show that a) there is no contradiction between the existence of isoglosses as discrete units and the continuity of phenomena on the empirical level, b) the supposed end of the era of the diatopic anchorage of language in times of modern migration is a myth, c) that isoglosses should not be considered as established lines but rather as projections resulting from processes of individual constructions of spaces, and finally, d) that a central task of dialectology and of historical linguistics consists of the identification of the multi-layered superposition of different isoglosses that reflects the complex history of a language or variety.

Keywords

Isogloss, linguistic continuum, dialects, boundaries, dialectometry.

Resumen

Esta breve contribución discute el término y el concepto de *isoglosa*: un cierto espacio donde existe un fenómeno lingüístico o, en una extensión metonímica, la línea que separa un fenómeno lingüístico particular de otro. Aunque este concepto se utiliza actualmente como término establecido y canónico en la lingüística, tiene sentido preguntarse por su alcance y su significado real, además de analizar su origen y de señalar cierta ambigüedad en su uso. El principal problema del concepto es que parece ser teóricamente necesario y al mismo tiempo empíricamente no demostrable, algo que contradice principios epistemológicos esenciales. Demostraremos que a) no hay contradicción entre la existencia de isoglosas como unidades

discretas y la continuidad de los fenómenos en el plano empírico, b) el supuesto fin de la era del anclaje diatópico de la lengua en tiempos de la migración moderna es un mito, c) que las isoglosas no deben considerarse como líneas establecidas sino más bien como proyecciones que resultan indirectamente de procesos de construcción individual de espacios y, por último, d) que una tarea central de la dialectología y de la lingüística histórica consiste en la identificación de la superposición en múltiples capas de diferentes isoglosas que refleja la compleja historia de una lengua o variedad.

Palabras clave

Isoglosa, continuo lingüístico, dialectos, fronteras, dialectometría.

1. Preliminary remarks

The question in the title of this contribution could be seen as befitting an introduction to basic linguistics. Indeed, for any seasoned expert in linguistics it sounds superfluous: everyone knows what an isogloss is, how it is defined, and how the concept can usefully be applied in practical language description. I believe, however, that in all branches of scientific knowledge basic concepts should be revisited from time to time, and that it is always necessary to have in mind what they really mean and to appreciate the objects from which they are derived. A radical constructivist or a deconstructionalist might well say that this is not necessary, since the concepts we use serve to construct realities rather than deriving from them. Against such a circular view, I would argue that behind all concepts are objects and that any reflection on a concept must necessarily go back to the essence of those objects. In this sense, to ask what an isogloss is can mean two things: it can be a purely historical-epistemological question about when, how and by whom a certain scientific concept was defined. But it can also be a philosophical question that asks what the essence of the idea of an isogloss is, its relation to what a language is, and how language and space are related. In this sense, let us look first at the generally accepted definition of isogloss, and then extend the term to the definition of a language as a “system of isoglosses”. What follows will be a critical, step-by-step analysis of some of the main issues related to the concept, after previously taking a brief look at the history of the term. The final section and the conclusions will then argue for the usefulness and necessity of the concept and its implications for a “multi-layered dialectometry”.

2. Defining the term

The term “isogloss” (from Gr. ἴσος *isos*, Engl. ‘same’ and Gr. γλῶσσα *glōssa* ‘tongue’ ‘language’) is commonly defined as an imaginary geographical line that separates two linguistic features. In Romance linguistics, one of the best-known examples is the so-called La Spezia-Rimini line. According to a Romance tradition that has stressed its importance, especially since since Walther von Wartburg (1942), this line separates the Western Romance and the Eastern Romance language varieties (Fig. 1).



Fig. 1: La Spezia-Rimini line (cf. Wartburg 1942)

In fact, the line does not indicate a single dialect feature but several divisions, a “bundle of isoglosses”. Taking a more detailed map (Fig. 2), we can see the concentration of different phonetic and morphologic features that are found on both sides of this line, as well as on another, the “Roma-Ancona” line.



Fig 2: “La Spezia-Rimini line” (above) and “Roma-Ancona line” (below), the latter according to Rohlfs 1937

Such a concentration normally indicates a dialect border with separate dialects falling on either side of the line. The question of dialect boundaries – itself intimately related to the notion of an isogloss – is among the most challenging in dialectology (and, we might say, in linguistics generally), as the Swabian dialectologist Arno Ruoff aptly noted:

‘From the beginning, the question of language boundaries was the most theory-dependant one in all of dialectology.’ (Ruoff 1980: 93).¹

Definitions of the term isogloss vary to a certain degree. Sara Fedalto, in a study of the concept, offers the following one:

[an isogloss is an] ‘ideal line that on a linguistic map or atlas graphically represents all points having the same linguistic phenomenon in common, distinguishing them from those that do not share it’. (Fedalto 1996: 149)²

Fedalto’s definition is rather restricted in nature and refers directly to linguistic maps. When we explain the concept to students, we often become aware of a degree ambiguity since,

¹ “Die Sprachgrenz-Frage war von Anfang an die theoriellastigste in der ganzen Dialektologie [...]”. We use single quotes to indicate the English translations from other languages, reproducing the original versions in double quotes in footnotes. All translations are mine.

² “linea ideale che su una carta linguistica o atlante rappresenta graficamente tutti i punti aventi in comune il medesimo fenomeno linguistico distinguendoli da quelli che non lo condividono”.

on the one hand, it refers to a dividing line between two dialect phenomena, as in the case of the La Spezia-Rimini line in the figure above, but on the other hand it also refers, in an analogy to *isobars*, to the area covered by one particular linguistic phenomenon. However, these concepts are of course merely two sides of the same coin, and both are linked by metonymy.

3. A brief look at the history of the term

Even a cursory glance at the history of the term tells us that it derives from others used in the natural sciences and based on the same type of word-formation. Previous to the term isogloss, we find *isotherm* and *isobar* that refer to spaces with some characteristic trait determined by contour lines. The origin of the term isobar is frequently attributed to the British meteorologist Alexander Buchan and his work published in the 1860s (see Buchan 1867).

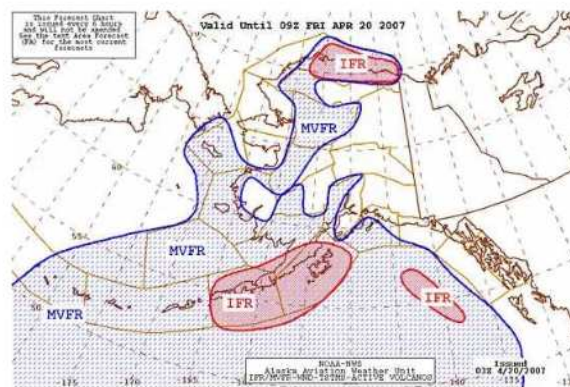


Fig. 3: Isobar map by Alexander Buchan (1862)

However, the iso- terminology in fact has an older history: in 1817 Alexander von Humboldt coined the term *isotherm* and talked about

‘fixed points through which I pass my lines of isotherms or lines of equal heat’ (Humboldt 1817 in: Lubrich / Nerlich 2019, III: 473)³

Before Humboldt, the idea of contour lines to trace spaces with equal values had appeared several times in the history of ideas. Thus, in a river map from 1584 by the Dutch Pieter Bruinsz showed isobaths (cf. Morato-Moreno 2017), areas indicated as being of the same depth, although the term itself is not employed; and in 1701 Edmond Halley presented his map of isogons of magnetic variation (cf. Jardine 1999).

³ “de points fixes par lesquels je fais passer mes lignes isothermes ou lignes d’égale chaleur”.

The introduction of the term into linguistics (see Freudenberg 1966, Händler / Wiegand 1989: 502, Fedalto 1996, Goebel 2004) can be traced back to the Letonian dialectologist August Johann Gottfried Bielenstein, who in a 1892 work on Letonian language boundaries states, with reference to Humboldt's term:

'By analogy with the term isotherm, I have dared to invent the name isoglosses for the lines on this map. It will be easy to understand.' (Bielenstein 1892: 391)⁴

Bielenstein notes that the term has only an approximative value, in the same way that the term isotherm cannot predict the exact limits of plant growth.

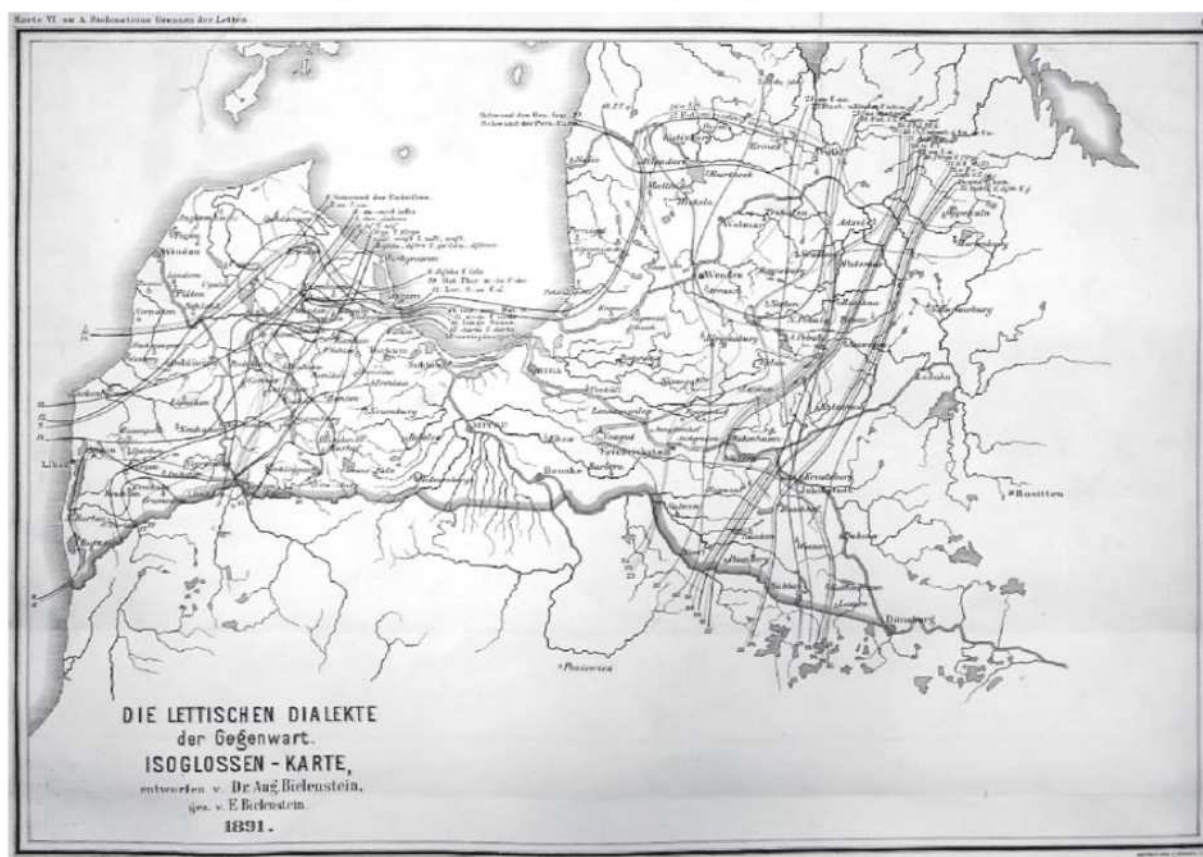


Fig. 4: Isogloss map of Letonian dialects

We should mention in this context that prior to Bielenstein's adaptation of the term, the concept of isoglosses (even if not the term) was clearly present in Wenker's *Sprachatlas des Deutschen Reichs* (see Lameli 2013), and that Wenker is probably the most important figure in pioneering the idea of mapping language areas in dialectology.

⁴ "Ich habe nach Analogie der Isothermen für die Linien auf dieser Karte den Namen Isoglossen zu erfinden gewagt. Man wird ihn leicht verstehen."

A criticism that has been raised repeatedly here is a fundamental difference between *isotherms* and *isobars*, on the one hand, and *isoglosses* on the other: in the case of *isobars* we have arbitrary external criteria – fixed, measurable pressure – and hence we can objectively trace the divisional lines. In the case of *isoglosses* there is no external, definitive point of fixation, but rather an internal view of phenomena that are not objectively attestable in the same way. This is what ultimately leads to many of the “problems” associated with the term in its transposition to language, problems that simply have to do with what human language is: not an external, objectively measurable phenomenon but an internal capacity of human brains (in the sense of Wilhelm von Humboldt’s *energeia*) that produces external phenomena (in the sense of Humboldt’s *ergon*) (Humboldt 1836: LV).

In a paper on the origin of the concept, Hans Goebel (2004) shows that the use of the term was ambiguous from the beginning, and that *three* different senses can be observed. The first and the second refer to the two sides of the same coin that we described above (territories and separating lines). The third one became common in Indo-European and typological studies from the beginning of the 20th century onwards, and refers to a feature shared by two or more languages and thus to areal phenomena such as the nominal determiners we find in Greek and in Romance and Germanic languages, or the common features that define so-called Standard Average European or areas like the *Balkan Sprachbund*.

As Goebel shows, this is also the way in which the Italian linguists and Indo-Europeanists Vittore Pisani and Giacomo Devoto (via Antoine Meillet) used the term. As Pisani’s disciple Bolognesi pointed out (something recently studied by Vincenzo Orioles (2017) and Giovanni Gobber (2023)), Pisani used the concept in order to present his vision of the Indo-European languages:

‘[...] with a historical interpretation of the linguistic development, he considers the ancient Indo-European languages not merely the result of the progressive disintegration of an original or secondary well-determined unit, but also, and above all, as the historical development of the languages and dialects spoken today unequivocally shows, the result of a more complex work of integration due to phenomena that radiated out from one or more centres into several languages and spread over more or less vast areas, constituting those bundles of isoglosses that we are able to reconstruct through our comparisons.’ (Bolognesi 1995: 519-520)⁵

⁵ “[...] con una interpretazione storicistica del divenire linguistico, considera le antiche lingue indoeuropee non il semplice risultato della progressiva disintegrazione di un’originaria o secondaria unità ben determinata, ma anche e soprattutto, come mostra inequivocabilmente lo sviluppo storico delle lingue e dei dialetti oggi parlati, il risultato di una più complessa opera di integrazione dovuta al diffondersi in più lingue di fenomeni che si sono irradiati da

From Pisani, who was not only the founder and leader of the ‘Milanese Linguistic Cercle’ (*Sodalizio Glottologico Milanese*, see Kabatek 2023: 59) but who also had a significant influence on Eugenio Coseriu (as well as becoming his father-in-law), the concept was adopted by Coseriu, not only in his writing on dialectology and linguistic geography, but as a much more general inner term referring to homogeneity rather than to variation: for Coseriu, from his very earliest work, a language is defined, with explicit reference to Pisani, as a *system of isoglosses*. This can be seen, for example, in Coseriu’s 1952 manuscript *Evolución de la lengua española* (‘Evolution of the Spanish Language’)⁶, where he uses the term *isogloss* in several ways:

– In the Indo-Europeanist sense:

‘The Italo-Celtic linguistic unity has been upheld by many scholars during the last century and in our century especially by Meillet and Ribezzo, who have pointed out the numerous common Italo-Celtic isoglosses.’ (Coseriu 1952: 31)⁷

– Referring to a language as a “system of isoglosses”:

‘The Romance languages, the forms under which Latin currently appears, are divided into various dialectal groups, in a series of isoglossal systems, represented almost in each case by a literary language of culture.’ (Coseriu 1952: 12)⁸

– With reference to a language as a “diasystem” with three dimensions of variation:

‘From a purely glottological point of view, every “language” is a conventionally limited system of isoglosses, within which we can distinguish smaller, more compact systems, differentiated in space, time or society.’ (Coseriu 1952: 56)⁹

Coseriu also discusses the concept in his famous and brilliant essay *La geografía lingüística*, ‘Linguistic geography’ (1955), a seminal paper on the principles of dialectology

uno o più centri e si sono diffusi in aree più o meno vaste, costituendo quei fasci di isoglosse che riusciamo a ricostruire attraverso le nostre comparazioni”, translation by Giovanni Gobber.

⁶ The manuscript is being published online by Cristina Bleorțu, Yoselin Henriques and the current author in the current issue of *Energieia*, see also https://coseriu.ch/wp-content/uploads/publications_coseriu/coseriu453b.pdf.

⁷ “La unidad lingüística italo-céltica ha sido sostenida por muchos estudiosos en el siglo pasado y en el nuestro sobre todo por Meillet y por Ribezzo, que han señalado las numerosas isoglosas comunes italo-célticas.”

⁸ “Las lenguas romances, las formas bajo las cuales se presenta actualmente el latín, se dividen en varios grupos dialectales, en una serie de sistemas de isoglosas representados casi en cada caso por una lengua literaria de cultura.”

⁹ “Desde el punto de vista puramente glotológico, toda “lengua” es un sistema de isoglosas limitado convencionalmente y dentro del cual podemos distinguir sistemas menores más compactos, diferenciados en el espacio, en el tiempo o en la sociedad.”

and linguistic geography. Here, he also indicates some of the problems that are associated with the concept itself and with the question of the existence of linguistic borders:

‘Indeed, the existence of dialects does not imply the existence of dialectal boundaries, just as denying these boundaries does not imply affirming the non-existence of dialects. Dialects do not exist before but after the verification of the areas in which the concrete phenomena of speech are recorded: they are not things but abstractions, systems of isoglosses that are structured above the multiformity of speech.’ (Coseriu 1955: 53)¹⁰

It would be a fascinating task to reconstruct in more detail the importance of the term for Coseriu’s theory and its relationship with Pisani. However, I will not venture further into the reconstruction of the history of the term and its significance in 20th century linguistics, but instead will turn to the discussion of a series of problems connected with the term that have arisen so far:

- it has been claimed that there are no real borders or dialect boundaries but only continua;
- it has been claimed that the term isogloss is an anachronistic one since there is no longer a real diatopic foundation for language in our modern times of mobility;
- it has been claimed that isoglosses only exist on the level of a construed abstraction and that they do not correspond to the activities of real speakers.

I will limit the following discussion to these three points, although briefly mentioning certain others.

4. Are there only continua and no categories?

One of the most frequent criticisms to the concept of isogloss is that it is difficult to find clear-cut lines in empirical reality. Even if we cross a line such as the aforementioned La Spezia-Rimini line, it is probable that speakers on both sides, for many reasons, will not exhibit clear differences (and this not only refers to the current situation but was already an issue of discussion at the time the line was originally identified).

¹⁰ “En efecto, la existencia de los dialectos no implica la existencia de límites dialectales, así como negar estos límites no implica afirmar la no existencia de los dialectos. Los dialectos no existen antes sino después de la comprobación de las áreas en las que se registran los fenómenos concretos del hablar: no son cosas sino abstracciones, sistemas de isoglosas que se estructuran por encima de la multiformidad del hablar.” (Coseriu 1955: 53).

The problem of continua and clear-cut categorical distinctions goes far beyond the question of defining isoglosses; it is a general epistemological problem that is relevant in many fields of thought. In linguistics it arises in the theory of language change as well as in the theory of semantics; it is seen in creole studies as well and in the theory of grammar; it arises in variational linguistics as well as in discussions of the apparent conflict between idiolects and languages. In all these cases, the argumentation is always similar:

- there are, on the one hand, those that describe things using clear-cut categories, such as dialectologists who clearly distinguish two different dialects or varieties, or semanticists who clearly distinguish two different meanings;
- and there are, on the other hand, those who are against such a categorical view by citing examples of continuity: where is the dialect border? If you look at the reality, you will only find a continuous evolution.

This seemingly contradictory situation is sometimes accompanied by the notion of progress and evolution in science: there are linguists who claim that categories in an Aristotelian sense are outdated, that they are an invention of linguists, that they have nothing to do with reality, and that linguistics should now recognise the fact that everything is in a state of continuity. The death of Aristotle is thus announced, and whereas he is of course dead, many of his ideas are not.

The reality of continuous evolutions has been claimed, among others, by Hermann Paul. In his *Prinzipien der Sprachgeschichte* he writes:

‘In all fields of linguistic life, a gradual evolution is possible.’ (Paul 1920: 33)¹¹

For him, the idea of a continuum is linked to the concept of “individual languages” and gradual differences between the speech of individuals.

A field in which criticism of clear-cut categories has been explicitly and repeatedly formulated over recent decades is cognitive linguistics. Many cognitive linguists are opposed to the artificial categorisation of structuralism and prefer continua to categories, hence positing the notion of a continuum between lexicon and grammar, and a continuum between different meanings (for criticism, see Kabatek 2012: 83-85).

A concrete application of this idea of continuity is grammaticalization theory. As Company Company (2006) puts it:

¹¹ “Auf allen Gebieten des Sprachlebens ist eine allmählich abgestufte Entwicklung möglich.”

‘The various structuralist approaches, including generativist approaches, can hardly account for the fundamental fact that the essence of languages is their constant imperceptible transformation. Structuralism, in any of its manifestations, emphasised the stability of the linguistic system and consequently greatly developed studies of a synchronic nature, sidestepping a problem central to language, although a difficult one to resolve: how to reconcile the instantaneous and acronymic rigidity of the system with the basic fact that a language is constantly and imperceptibly changing.’ (Company Company 2006: XI)¹²

The author claims that overcoming this view allowed for a resurgence of historical linguistics:

‘Finally, an essential part of this resurgence was undoubtedly making the concept of category more flexible. In these functionalist frameworks, the categories of language are not discrete spaces, but rather unstable, flexible, redefined and are creatively manipulated by speakers. The categories do not have a homogeneous internal composition and, therefore, it is not possible to establish the same characterisation, either syntactically or semantically, for all their members: linguistic forms usually constitute a categorial continuum, both between and within categories, with focal zones, where the lexical entries which are the best representatives of the category are located, and categorial boundaries which are neither clear-cut nor well established, and some lexical entries may even be located in border zones and exhibit the properties of two or more categories.’ (Company 2006: XVII)¹³

Yet within grammaticalization studies there is no unanimity on such a view. In a recent paper, the Danish linguist Kasper Boye (2023) showed that the gradual lexical-grammatical continuum assumed by grammaticalization theory is a myth and that categories must be clearly distinguished, even if behind them there are indeed continua. Between movement and future, for example, there is a clear distinction on the level of meaning, and if I can observe a grammaticalization from one element to another (as in the English *going to* future derived from a periphrasis originally expressing movement, Spanish *ir a hacer algo* ‘to go to do something’,

¹² “Los diversos enfoques estructuralistas, incluidos los acercamientos generativistas, difícilmente pueden dar cuenta del hecho fundamental de que la esencia de las lenguas es su constante transformación imperceptible. El estructuralismo, en cualquiera de sus corrientes, ponía énfasis en la estabilidad del sistema lingüístico y desarrolló enormemente, en consecuencia, estudios de naturaleza sincrónica, soslayando un problema central a la lengua, aunque, en efecto, de difícil solución: cómo conciliar la rigidez instantánea y acrónica del sistema con el hecho básico de que una lengua cambia constante e imperceptiblemente.”

¹³ “Finalmente, parte esencial de este resurgimiento lo constituyó sin duda la flexibilización del concepto de categoría. Las categorías de la lengua son en estos marcos funcionalistas espacios no discretos, sino inestables, flexibles, redefinibles y manipulables de manera creativa por los hablantes. Las categorías no tienen una conformación interna homogénea y, por lo tanto, no se puede establecer una misma caracterización, ni sintáctica ni semántica, para todos sus integrantes: las formas lingüísticas constituyen por lo regular un *continuum* categorial, tanto entre categorías como al interior de las mismas, con zonas focales, donde se sitúan las entradas léxicas que son mejores representantes de la categoría, y límites categoriales no nítidos ni bien establecidos, e incluso algunas entradas léxicas pueden estar situadas en zonas fronterizas y exhibir las propiedades de dos o más categorías.”

or indeed similar phenomena in many languages) the continuous evolution, and even the existence of specific ambiguous cases, is not in itself in opposition to the clear-cut existence of two categories. Movement and future are metonymically connected, but they can be clearly distinguished, in that something is either movement or future. In a particular case, we may find interpretations that seem to exist between the two, in metonymic, so-called bridging contexts, but this does not invalidate the categories as such.

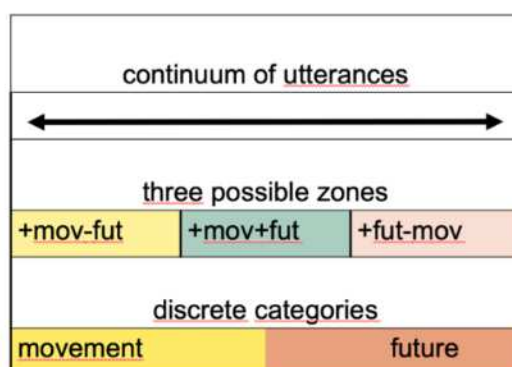


Fig. 5: Continuum of utterances and discrete semantic categories

We must distinguish three levels here:

- first, the continuous level of the facts, in this case the intended meaning of a form in an utterance;
- second, the interpretation of the form, which can be clearly A, clearly B, or unclearly somewhere in between;
- third, the level of categories as discrete units that lead us to associate an utterance with this or that meaning.

Isoglosses are abstract lines that separate discrete units. Even if on the level of the utterances of individuals we find a continuum of facts, these facts are attributed to different categories by dialectologists who, however, do not invent the categories out of the blue but rather try to derive them from the empirical evidence.

5. “Consciousness”

In this context, it is important to mention that again and again there are linguists who deny that the third of the mentioned levels, the level of categories, is relevant for speakers, claiming that it is simply an invention of linguists. Do phonemes exist? Are there in fact any discrete forms? A problematic discussion frequently emerges here in which two ideas collide: the explicit

knowledge that speakers might or not might have of linguistic phenomena, and their intuitive knowledge of how to do things with words.

The question of metalinguistic knowledge and of possible monitoring is something completely different from intuitive knowledge, and this is also fundamental for positing a distinction between the existence of dialects and isoglosses, on the one hand, and the metalinguistic knowledge of speakers and the perceptual dialectology that investigates this knowledge, on the other: once a speaker is able to express the future by means of a go-periphrasis, he or she is able to transmit a categorical distinction to the hearer, this independently of any explicit knowledge of such a distinction.

There is even a long tradition in linguistics that denies the fact that speakers know what they are doing when they speak, that speaking is “unconscious”. One of the most prominent defenders of this idea is the Saussure of the *Cours*:

‘reflection is not involved in linguistic practice; [...] speakers are, to a large extent, unaware of the laws of language’ (Saussure 1916/1984: 106)¹⁴

But this is misleading and must be reformulated, as I have claimed on several occasions (cf. Kabatek 1996).

We must distinguish two different kinds of knowledge, the first of these being the intuitive knowledge common to human activity and fundamental for language. This primary linguistic knowledge is only entirely and perfectly expressed in spontaneous utterances, and all the methods we try to apply in order to elicit utterances rely on another kind of knowledge that converts the speaker, to however small a degree, into a linguist, an observer of her or his own dialect.

The metalinguistic knowledge of a speaker might be a very clear and reliable one, for example when we ask about *Wörter und Sachen* and suppose that the answers will be adequate. However, we know from many studies that, since there is no direct access to the speaker’s primary competence, things might get lost or altered on the way from primary knowledge to metalinguistic explicitness. There is no lack of anecdotes about informants who deny the existence of a form and then use it in the very next sentence. This is of course not generally the case, and it strongly depends on the individual setting, the individual attitude of an informant, and the metalinguistic “culture” we are dealing with.

¹⁴ “la réflexion n’intervient pas dans la pratique d’un idiome; [...] les sujets sont, dans une large mesure, inconscients des lois de la langue”.

Doing fieldwork and experiments is not a natural way of addressing language, and this is something we linguists sometimes forget because for us it has become completely normal. Speakers use language for communication, and native speakers use their language or variety normally without insecurity: there are two axioms that are part of the essence of language and that are often not taken into consideration:

- the axiom of coherence, and
- the axiom of grammaticality.

The axiom of coherence is broadly assumed in text linguistics and in pragmatics: speakers try to transmit the sense of a message to their hearers, and these hearers have the confidence to suppose that what speakers say will make sense. If there is something that a hearer does not understand, the normal approach (corresponding to the human and linguistic principle of confidence and empathy) leads hearers to believe in the possibility of understanding what others say; that is, when we do not understand something, our response is not “this is crazy” but to assume that we have not understood well and hence to reanalyse the utterance or ask for clarification.

If the former axiom (of coherence) is generally known in pragmatics, the latter (of grammaticality) is often ignored. Speakers of a dialect will always produce grammatical utterances. Not grammatical in a normative sense, and not grammatical in a sense that there might not be anacolutha, incomplete constructions or repetitions, but grammatical in the sense that they will be constructed according to the rules of the respective language or dialect.

This means that to be asked whether this or that form is “correct” is something unnatural for normal native speakers and hence their answer might or might not reflect real, natural linguistic behaviour. Things are far better with tasks like “how do you say this or that”, but even here the stimulus might have a priming effect, and the answer once again might reflect real linguistic behaviour or not. Hence the enormous advantage of using visual stimuli, in that a visual stimulus is a “normal” task, one which is familiar in everyday conversation and very common, for example, when parents show their children how this or that object can be named linguistically.

6. Is there really a “space-apriori”?

The next problem I would like to discuss is that of a possible conflict between clear-cut borders and mobility. There is, on the one hand, the extreme position that there are clear-cut borders,

stable isoglosses, and the long-term duration of dialect areas; on the other hand, we find the rejection of the idea that in the modern world space continues to be the central variational category. This rejection is sometimes accompanied by observations on mobility, globalisation, the internet and the dissolution of traditional spaces. Dialects, we sometimes hear, are facts from the past that are rapidly being lost. Isoglosses, it is said, have ceased to exist, and if we cross the La Spezia Rimini line today we will hear young Italians speaking more or less standard Italian on both sides with no clear difference. It is interesting to see that these two positions are generally defended by linguists from different empirical backgrounds, with dialectologists engaged in fieldwork tending to believe more in the stability of space than urban sociolinguists or grammarians.

Criticism of the priority of spatial variation over other variational dimensions could lead to the reduction of the three classical Flydal-Coseriu dimensions of variation (Flydal 1951, Coseriu 1980) to only two – diastratic and diaphasic variation – and to consider spatial or diatopic variation as an (empirically rather frequent) case of group-specific variation due to settlement culture (see Halliday 1978, Dufter / Stark 2002, Kabatek 2023). So there would be no “space apriori” (in the sense of Schmidt-Herrgen 2011): only two universal dimensions, one deriving from the fact that languages are social phenomena and associated with groups, and another one that has to do with individual, situationally determined variation. Dialects would simply be group phenomena, and as such a metonymical correlate of settlement cultures. If settlement becomes flexible again and people turn into “modern nomads”, dialects cease to be the primary manifestation of language.

This sounds attractive, but it is problematic in two senses:

- it ignores, often from the urban perspective of rather mobile observers, that underlying individual mobility there is still an enormous stability of settlement and that mobile individuals frequently integrate into new, already established linguistic spaces. Thus, I live in Zurich and I (try to) speak Zurich German, despite being originally from Germany. The existence of varieties remains first and foremost associated with places, and one of our initial questions when we meet someone we don't know is “where are you from”, on the supposition that this is a meaningful question relating also to linguistic identity. The spatial indexicality of language is more than accidental (cf. Tacke 2015: 53ff).

I spend my weekends often in a small village in the Grisons, the Rheto-Romance area of Switzerland, and in that village, which numbers some 100 inhabitants, there currently live eight children. The village was monolingual in Sursilvan Rheto-Romance until 1920, and has

been strongly germanized since then. All the children play on the street in the traditional local language even if their parents are all Germanophone. This is of course due to the particular language policy in force, with a monolingual school, plus the high esteem which Rhetoromance enjoys. But it also illustrates an intrinsic force of humans, that of showing their attachment to a certain place, their locality, through linguistic behaviour.

Finally, we must also consider here the influence of age-grading, that is, a shift from a dialect to the standard language at a certain age and then a (perhaps partial) shift back at a subsequent moment in the individual's life, this probably due to exactly the same need for locality. Age-grading is quite a widespread phenomenon, and serves to underline the fact that dialect loss is not a one-way street.

- another problem is that it also ignores the empirically surprising stability of dialect areas, even in regions where it is supposed that dialects no longer exist (cf. Coseriu 1955: 49). A striking example is Hans Goebel's fascinating comparison of quantitative analyses of Ancient Gallo-Romance scriptae with the dialectometrised data of the *Atlas Linguistique de France* from the beginning of the 20th century that show very similar regions six or seven centuries later (cf. Goebel / Smečka 2017). And the continuity of areas can be extended yet further, as we see in recent work by Marco Robecchi on the *Nouveaux Atlas Linguistiques de la France* and on lexicographic work (Robecchi 2021).

Old borders can persist for very long periods of time, indeed, longer than the expansion or reduction of isolated phenomena might suggest. Jürgen Erich Schmidt showed that certain expanding dialect phenomena retain their expansion at traditional dialect borders. The reason for this probably lies in speakers putting limits on own their adoption of new phenomena from other dialects: elements from dialects considered as "foreign" or "different" are not adopted and isoglosses are not only maintained but even strengthened.

In German-speaking Switzerland, the well-studied phenomenon of l-vocalisation has been expanding for a long time (Haas 1973, Leeman et al. 2014), and some linguists have already claimed that it might go on to conquer one area after another. However, what is interesting here is that, as a phenomenon originating in Berne, it only expands into certain dialectal areas, ones that are in lesser competition with other very visible dialects such as those of Zurich or Basel. Once the phenomenon expands to more salient or stronger dialect borders, it seems to stop expanding, at least for the moment.

7. Isoglosses, sound laws and levels of analysis

Historically, the idea of isoglosses is closely related to the Neogrammarian idea of sound laws and their inviolability. For Wenker, isoglosses somehow had to exist as diatopic projections of sound laws, and if isoglosses showed stepwise extensions in the geographical linguistic reality, this was comparable to a diatopic projection of the wave-like spread of a diachronic innovation. In both cases we are dealing with a certain projection of language, and in both cases it is as wrong to reject this projection as non-existent as it would be to claim it to be the absolute reality of language rather than as a heuristic instrument (Goebel 2004: 528). Here we can once cite Coseriu's and his masterpiece *Sincronía, diacronía e historia* (1958) with the discussion therein about the inviolability of sound laws. Paradoxically, sound laws are absolutely valid, contrary to all empirical exceptions, just as isoglosses not only exist, contrary to all empirical evidence, but must exist, as has already been argued.

We can observe the synchronous effect of sound laws and their inviolability in language contact. If a German realises English <th> as [s], he or she will probably not say [ˈsɛŋkju] and then in another context [θɪŋk]; rather they will pronounce [s] in both cases. Substitution works systematically and it is discrete. Systematisation is the application of a law (see Weinreich 1953). In spatial projections we basically find just this: one side of the line where, for example, Germ. *Apfel* is said systematically and another one where the usual form is *Apfel* (according to the so-called the “Speyer line”, see Fig. 6).



Fig. 6: The “Speyer line” (Germ. *Apfel-Appel*) and the “Benrath line” (*machen-machen*)

But what is language? Simply a collective projection of a homogeneous phenomenon? Yes and no! The existence of abstract boundaries and laws does not contradict the individual realisation of language and linguistic variation – to reiterate Coseriu's point: ‘dialects’ – as the primary forms of languages – ‘are not things but abstractions, systems of isoglosses that are structured above the multiformity of speech’ (Coseriu 1955: 53, see footnote 10).

As in the case of the individual “sound law”, it is possible that a speaker learns a different pronunciation in isolated forms without systematically applying a different law, or that he or she is sometimes, with effort, able to perform one form and without effort another one.

And this also happens on the geographical projection, where the only reality on which this projection is based are the individual utterances of speakers who are able to perform several varieties (or, at least, elements from several varieties). The same speaker on the north of the *Appel-Apfel* line who might say *Appel* in informal settings might say *Apfel* in a more formal situation, and might even say both forms within the same utterance. This is why traditional dialectological work consists of isolating the syntopic, synstratic and symphatic homogeneous form of the base dialect that is supposed to reflect the “most authentic” diatopic reality, without denying its coexistence with other realities. And this is what the Swiss Louis Gauchat (like the French P. Rousselot before him) had already criticised:

‘To the unity of the whole I oppose the diversity of detail, the individual languages opposed to the dialect’
(Gauchat 1905)¹⁵

In this context, I remember an anecdote that the Galician linguist Rosario Álvarez once told me (and there are many similar anecdotes among dialectologists). In parts of Galicia, /g/ followed by /a, o u/ is pronounced as an aspiration [h] or as a fricative [x] but not as velar voiced stop [g] or approximant [ɣ] as in other Galician, Spanish and Portuguese varieties. Delimitating the border of this phenomenon (called *gheada* in Galician linguistics) is quite tricky since it is a highly stigmatised stereotype in the Labovian sense. Once during fieldwork for the Galician Atlas (*ALGA*), after long sessions of interviews in one of the places in a zone which had still not been assigned a position on one or the other side of the line, the informant had not uttered a single instance of *gheada*; then, on saying goodbye, he said “hasta *luegho*” [asta'lweho]. Instead of ending the session, the fieldworkers then extended the interview, to discover that the *gheada* was used quite systematically in that place but that the informants had avoided it when talking to these strange people from the university who were asking uncommon questions.

8. Layers of isoglosses

¹⁵ “à l’unité de l’ensemble j’oppose la diversité du détail, au dialecte le langage individuel”.

The last point concerns the heterogeneity of isoglosses at the level of linguistic projection. Even if we disregard individuality and “individual language”, we find a surprising amount of heterogeneity. Of course, there are bundles of isoglosses; in extreme cases boundaries of historical languages, and within historical languages clear dialect boundaries. But what we also find are contradictory, co-existing spaces. A dialect space is also the result of a certain hierarchy or prioritisation of competing, discordant isoglosses, which arise from the historical stratification of the dialect area. Thus, dialectally speaking Bavarian Swabia is traditionally Swabian but also overlaps with Bavarian; and Swabia and Baden are both part of the Alemannic area yet perceived as different by their speakers. We see here the great advantage, yet also the dilemma, of dialectometry: on the one hand, the synthesis of dialect data allows for a quantifying summation of individual isoglosses and thus a common view on otherwise isolated data; however, it does not allow for the automatic hierarchisation of the relevance of the individual isoglosses for the (active as well as passive) construction of linguistic spaces by the individuals that inhabit these areas.

The intuition of dialectologists helps here, in that they can determine the relevance of different features if they are well acquainted with the corresponding situations. However, the well-known issue that this implies is ‘a high degree of arbitrariness’¹⁶ (Meyer 1874 apud Ascoli 1876: 386; cf. also Fedalto 1996:153 and Lang 1982: 68-70). On the other hand, the relevance of features can be studied through methods of perceptive dialectology, which has made enormous progress in recent decades (cf. Sauer / Hoffmeister 2022).

As in the case of sound change and the lexicon, where Yakov Malkiel, with allusion to Schuchardt, claimed that each word has a history of its own, it is sometimes the case that the multiple shape of isoglosses and the lack of bundles has led to the claim that the concept of isoglosses is itself useless.

We see, however, one of the points of greatest potential in the application of the concept in the non-uniformity of isoglosses in a given space. Each word can in theory have a particular expansion, and so too does each sound phenomenon, each syntactic phenomenon, and each morpheme. Normally we do not find a complete chaos, but rather clusterings of isoglosses. And on many occasions these clusters correlate, at least partly, with levels of linguistic structure; this means that syntactic phenomena may tend to cluster differently from phonic ones and from morphology. Each isogloss and each “family of isoglosses” is a mirror of a historical layer, and by superimposing all these areas we get a picture of the historical background of a language.

¹⁶ “une grande part d’arbitraire”.

Since the different layers indicate different historical moments, they sometimes serve to resolve apparent contradictions in the analyses. So, the old discussion about whether Catalan is more Ibero-Romance or Gallo-Romance, as is well known, depends largely on the linguistic level of analysis chosen, and the result will be different if we consider the lexicon than if we focus on certain grammatical phenomena. As mentioned above, in traditional German dialectology, the Black Forest that separates Baden from Swabia is not a strong border, and dialects on both sides pertain to the same Alemannic zone. If the speakers do not recognise this, it might be because besides lexical and grammatical similarity, there are rhythmic and intonational patterns that differ and that are in part responsible for this non-identification. Peter Gilles (2005), in his challenging studies of regional intonation in Germany, showed that there may be intonationally separate regions within one dialectal area, and these may stem from rather old areal differentiations. To cite another example, Galician and Portuguese have historically almost the same grammar and lexicon, and traditionally most linguists considered Portuguese to be just Galician carried southwards during the Reconquista. Yet the prosodic differences between Lisbon Portuguese and Galician are so striking (the two languages are of a different prosodic type, Portuguese being accent-counting and Galician syllable-counting, cf. Auer 2001) that this leads to a lack of mutual identification by the respective speakers and hence to differences that do not seem to have emerged in recent centuries or without some deeper historical underpinnings. Traditionally, we look at phonetics or at the lexicon or, increasingly in recent times, at syntactic phenomena. But we still lack information on intonational spaces and on other prosodic realities. However, prosody is quite tricky because there can be, for example, multiple layers projected on one single intonational contour. Prosodic areas sometimes reflect very old borders (Macklin-Cordes / Round 2015), but we can also observe prosodic accommodation phenomena in current language contact that instead point to short-term evolutions.

Layers are of course not limited to linguistic phenomena, and the reconstruction of dialect areas and historical layers will not ignore, in the tradition of *Wörter und Sachen* studies, any cultural phenomena that show areas, such as agricultural traditions, food or clothing.

On the linguistic side, spaces of discursive traditions can be added: text traditions, and those of saying specific things in particular situations. Traditions of politeness formulae, traditions of answering the phone, of speaking and of silence. These may or may not be linked to linguistic areas. Certain politeness traditions in Switzerland, for example, go beyond language borders but are typically “Swiss”. Discourse traditions (DT) can shape areas: better said, people shape areas through DTs, and the relationship between their isoglosses and other layers of isoglosses must be explained.

In the best of all worlds, the overall disposal of multi-layered data (different levels of linguistic structure, including prosody, objects, and discourse traditions) would allow for a “multi-layered dialectometry”. Such a dialectometry would be concerned with both the weight and the hierarchy of phenomena, not simply adding them together, and here perception would again come into play. Apart from individual studies on this or that area, this should also allow for progress in areal typology and for the development of hypotheses on possible universal tendencies in the values of the layers, for example, whether intonation or phonotactics indicates normally older areas than the lexicon. Far from being utopian, the near future, with all the technical possibilities at our disposal, is promising in this respect and will open up new horizons in big data dialect studies, including advances in the typological generalisation and interpretation of isoglosses.

9. Conclusions

As we have seen, the concept of isogloss is a central one in linguistics, although it is used with a certain ambiguity due to a series of metonymies. The concept relates to some central problems of dialectology and of linguistics in general: the existence of borders and the coexistence of borders of different kinds.

In trying to identify isoglosses, we do so on an abstract level. Isoglosses exist on the level of the language, yet language can only be adequately explained by individual acts. Individuals essentially want to communicate, and there seems at first glance no reason why they might seek to build linguistic borders.

However, to be human is also to construct an identity, an individual identity different from those of other individuals, and a collective identity different from other collectives. This seems to have been fundamental to human language from the very beginning, and it is challenging in this sense to think about Nicholas Evan’s claim that human language was from the beginning not monolingual but multilingual (Evans 2017): isoglosses probably existed not only after an initial period of a common *Ursprache*, but emerged as part of the subsequent evolution (in a Babelian sense) into the linguistic diversity of different languages. Language diversity is not an accident but part of the essence of our genetically determined being and our predisposition to diversity (Matthews 2003).

This is why we need isoglosses; they are merely the consequences of our building or constructing identities.

The Aristotelian-Humboldtian-Coserian notion of *energeia* is the driving force underlying the building of language diversity. Humans are universally humans and they communicate in individual acts. But humans are not only born into historically determined communities that are different from others, they not only learn how to discover linguistic communication by means of historically existing signs; they also build communicative spaces with limits that they metonymically link to geographical space. The essence of human language is not just to have language, but to speak a concrete language, a historically distinct way of communicating. This areal aspect of language must be seen as part of the *energeia*, as a “Verraumung” – a “creating space” – of language, as an anchoring of linguistic signs in space. Dialectology has never ignored this, in that it focuses precisely on such a difference and sometimes even more on the fact that there are borders, rather than on the fact that there are communities. For dialectologists, it is clear that there must be isoglosses in the sense of linguistic boundaries, and this implicitly includes the other side of the same coin: the existence of systems of isoglosses that are created by linguistic communities. In this way, the concept of isogloss can be seen as not just another notion in linguistics, but as something that encapsulates our essence as being humans that speak languages linked to places.¹⁷

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