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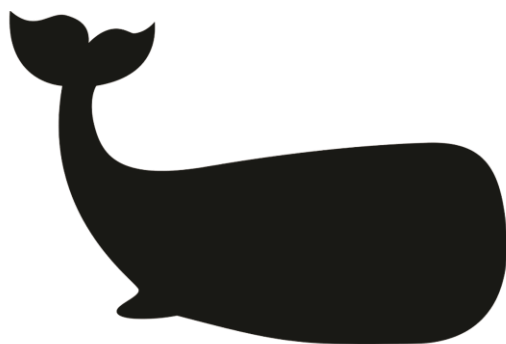
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Piotr Gąsiorowski

MORE THAN A CATCHWORD: TAKING  
LINGUISTIC DIVERSITY SERIOUSLY



WAIL [weɪl]

WA Inaugural Lectures  
2024



# WAIL [weil]

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Professor Piotr Gašiorowski delivering the WA inaugural lecture 2024



## **More than a catchword: Taking linguistic diversity seriously**

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## 1. Introduction

The Mission Statement of the AMU Faculty of English<sup>1</sup> contains a list of values and principles including the following one:

- **Multilingualism and multiculturality**

We are keenly sensitive to questions of linguistic and cultural identity, protection of minority and endangered languages, and care for a diversified global linguistic landscape. Our actions are built on the premise that today's world is multicultural and multilingual.

But why should we care for diversity in the first place? Would it not be more convenient to abandon it and use one global language? I am not aware of any systematic studies of popular attitudes towards this question, but as informal observation suggests, many people regard it as more or less inevitable, and perhaps even desirable, that global communication should promote linguistic uniformity, eventually making communication barriers disappear and causing language communities merge worldwide. From a linguistic perspective, that would mean a mass extinction of geographically or socially constrained languages, leaving only one or a few lucky survivors – the lingua francas of the future global village.

Is there any reason why we should consider this view to be wrong? Several possibilities could be contemplated.

First, diversity (alongside equity and inclusion) is one of the main buzzwords in discussions about contemporary society. It is right and proper (or, in more cynical terms, trendy and politically correct) to favour all aspects of cultural pluralism, including multilingualism. And if everybody praises

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<sup>1</sup> It can be found at <https://anglistyka.amu.edu.pl/en/home/strategy-of-the-faculty-of-english-2024-2030> (accessed 1 July 2025).

diversity, so should we. However, it would be useful to justify the importance of linguistic diversity independently of the whims of intellectual fashion, lest we be accused of advocating it out of pure conformism.

It may be argued that diversity is aesthetically satisfying and awe-inspiring – or, in plain English, beautiful and magnificent.<sup>2</sup> We may also appeal to a moral intuition: diversity is intrinsically better than uniformity. Invoking subjective experience raises a couple of questions. Should we just listen to an inner voice that tells us that there is grandeur and goodness in diversity, or try to offer a rational justification for our intuition? Note, by the way, that the appreciation of diversity is by no means universal. In many societies minority languages and non-standard varieties (including regional dialects) are regarded as undesirable threats to the sense of collective identity.

Linguists – with the possible exception of prescriptivists – generally tend to value diversity for reasons that could be considered selfish. The existence of numerous varieties means the preservation of important data for linguistic studies. Whole areas of study, such as language typology, dialectology, or historical and comparative linguistics, would be critically affected by the loss of information resulting from language death.

But – apart from the intuitive feeling that we do the right thing when we protect language diversity – is there any concrete, objective advantage conferred by it; something that benefits not only the linguists in whose interest it is to have something to study, but also language users and the societies of which they are members? I intend to demonstrate that this is indeed the case, but first we need to consider what type of system language is and what role, beyond the mere transmission of information, it plays in our lives.

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<sup>2</sup> See also Baum & Owe 2024 and the authors' claim that diversity is "intrinsically valuable".

## 2. Complex adaptive systems

The notion of “complex adaptive system” was introduced in 1968 by the American sociologist Walter F. Buckley. His original intention was to formulate a model of cultural evolution by comparing its mechanisms and dynamics to those of biological evolution. But the concept itself has evolved and found a much wider range of applications. Social systems are only a special case of something fundamentally important and central to an interdisciplinary field of study called complexity science.

A complex adaptive system consists of a large number of entities called “agents”. Agents interact with the environment in which they exist – they collect information and their actions depend on the stimuli they receive. They also interact with one another. Such local interactions may add up to a network-like global system which is more than a sum of its components and whose performance, characterised by spontaneously emerging self-organisation (in the form of large-scale patterns, hierarchically arranged subsystems, feedback loops, etc.), cannot be understood by reducing it to local causes and effects.

Complex adaptive systems are by nature nonlinear and chaotic in the mathematical sense of the word: even very small changes in their initial conditions may have high-magnitude consequences – a phenomenon known as the butterfly effect. If agents have a limited lifespan but are capable of self-replication (with occasional modifications that affect their interaction with the environment), the system becomes a historical entity. Apart from self-organisation and dynamic self-regulation, it acquires a capacity for change over time and adaptive evolution. At least some of the changes it undergoes are not random but allow the system to maximise its viability in a changing environment.

It turns out that complex adaptive systems are more successful if they are at the same time sufficiently ordered and sufficiently messy. Steering a middle course between order and chaos gives them enough flexibility to adapt to a changing environment, and enough resilience to external perturbations.

Rigidly ordered systems are not so good at adaptation, while chaotic systems with too much internal freedom may overreact to momentary perturbations with runaway cascades of events which threaten the system's stability.

The part of the universe we live in is inhabited by a multitude of complex adaptive systems. To survive in the long run, they exploit flows of free energy to create and sustain their emergent order. They become part of one another's environment and often require access to the same resources. This has twofold consequences. On the one hand, competition between complex adaptive system is widespread. On the other, competition is not just a matter of "kill or get killed". Systems sharing the same niche, instead of striving to eliminate their competitors, may find it more profitable to cooperate with them. Such collaboration may lead to a self-organised pattern of interactions between coexisting systems, consisting in an exchange of services and task specialisation, thanks to which the systems mutually benefit from one another's actions. In other words, a higher-order system emerges, adding a new level to pre-existing complexity. The efficiency of the larger "supersystem" increases in comparison with what its components could achieve on their own.

It should not come as a surprise that many of the classic examples of complex adaptive systems come from biology. In a well-known book published in 1995, *The major transitions in evolution*, the theoretical biologists John Maynard Smith and Eörs Szathmáry<sup>3</sup> present a number of "evolutionary transitions" that according to them were the major milestones in the history of life on earth. Each of them involved the emergence of a "system of systems", as described above. For example, multicellular organisms are not clonal colonies of identical unicellular entities. They arose as increasingly complex systems of differentiated and specialised cells, with new emergent features such as elaborate internal architecture functional organisation.

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<sup>3</sup> See Maynard Smith & Szathmáry 1995a and the summary in Maynard Smith & Szathmáry 1995b

The first transition discussed in Maynard Smith and Szathmáry 1995 (a, b) is that from primitive molecular replicators to complex populations of molecules localised in compartments which help them to interact – that is, the beginning of cellular life. The last, eighth transition (which took place some four billion years later) is that from primate societies to human societies, accompanied by the emergence of language and the dominance of cultural over biological evolution in modern humans. If the authors can be faulted for anything, it is that they fail to emphasise an important fact: “superorganisms” and “supersystems” do not originate only during rare bursts of complexification happening once in a few hundred million years. Such transitions are what life is all about. Complex adaptive systems emerge all the time.

The transition from unicellularity to sophisticated multicellularity was not a single event, but a recurrent process. It happened several times independently – in the ancestors of plants, brown algae, fungi, and animals. Many other evolutionary lineages, from cyanobacteria and “social” myxobacteria to slime moulds (Fig. 1), have developed “variations on the theme” – signal pathways, altruistically cooperating agents, coordinated behaviour, and the use of collective intelligence to solve problems. Independent transitions from solitary individuals to colonies and from amorphous swarms to highly structured societies must have occurred hundreds if not thousands of times. Some important transitions not mentioned by the authors, for example from a distributed network of neurons to a central nervous system, have also taken place in multiple animal lineages: according to phylogenetic models, complex brains have evolved independently at least nine times (Moroz 2012).



Photos: Piotr Gąsiorowski

**Fig. 1.** Four species of slime moulds: *Stemonitis* sp. (top left), *Trichia varia* (top right), *Fuligo septica* (bottom left), and *Lindbladia tubulina* (bottom right). Slime moulds (amoebozoans only distantly related to fungi and animals) have evolved an alternative type of complexity, different from that of true multicellular organisms. They live for most of their life cycle as haploid, single-celled amoebae or flagellates. At one point, however, they mate, and the resulting zygote develops into a mobile, pulsating plasmodium, a structure, which, though unicellular, contains a great number (even millions) of nuclei. Every nucleus contains the same genetic material, but the expression of its genes depends on local regulatory signals and flows of information inside the multinucleate cell. The plasmodium can distinguish top from bottom, it “knows” what kind of substrate it is crawling on, which side the light is coming from, and so on. The nuclei wander about inside the plasmodium and, like tiny processors equipped with genetic instructions, activate different processes in different parts of the cell. The plasmodium produces sophisticated reproductive structures – fruiting bodies filled with spores which are released and dispersed as the fruiting body matures. In laboratory experiments, slime moulds can solve problems like finding the optimal path to food in a maze, which is why their behaviour is of serious interest to artificial intelligence researchers.

Apart from living organisms and their societies, typical examples of complex adaptive systems quoted in the literature include also ecosystems (inhabited by numerous species interacting in complex ways), symbiotic relationships (see below on lichens), and the vertebrate immune system. And of course there are examples of special importance to us: human societies and cultures, languages (as we shall see), the Internet, and other products of the ever-accelerating cultural evolution of *Homo sapiens*.

### 3. Diversity and adaptability

I have mentioned the fact that complex adaptive system work cannot be too rigid. Let us consider the following example from the living world:

The hereditary information contained in DNA contains the recipe for how to survive, have offspring and pass on the same recipe to the next generation. This allows life to continue for thousands, millions and billions of generations. DNA copying (replication) is such an important process that already in the earliest history of life on Earth, sophisticated biochemical mechanisms emerged to ensure its reliability. The enzymes responsible for DNA replication make a mistake approximately once per every 100 million copied nitrogen base pairs of which the DNA strand is composed. Already during replication, self-correction takes place, immediately reversing the vast majority of the mistakes made. Immediately after DNA synthesis, the correct pairing of bases is additionally checked. The combined efficiency of the error detection and repair mechanisms is approximately 99%. If we take this into account, it can be estimated that the DNA-copying machinery makes a mistake only once per every 10 billion base pairs (Drake et al. 1998). This can be figuratively compared to making one typo when copying the contents of all the books in a library containing some twenty thousand volumes.

If the copying machinery were less reliable, deleterious mutations would accumulate more quickly than natural selection is able to eliminate

them. The result of such a process is known as genetic load; it puts populations burdened with it in danger of extinction. But on the other hand, if replication had become absolutely foolproof at the dawn of life, and no mutations had been possible, the earliest prokaryotic organisms would have continued to make perfect copies of themselves as long as the environment in which they lived remained more or less stable. Any change of conditions from hospitable to hostile would have killed them an masse because they would not have been able to change and adapt. Fortunately for life on Earth and for us, a tiny gap remained in the near-perfect system to allow evolution, and today it makes all the difference between, say, bacteria and humans.

Mutations are more often neutral or harmful than beneficial, but without them there would be no adaptive evolution. This observation can be generalised to other complex adaptive systems. In order to operate efficiently and maintain resilience in the face of perturbations and environmental change, any such system needs a continually replenished pool of new variants which can be tested as potential solutions to the challenges the system is confronted with. This is where diversity becomes important.

Many species of mammals (especially large ones) have lost much of their genetic diversity (the “database” of variants maintained in their populations from generation to generation). This may be a consequence of recent population bottlenecks in their history. In many cases human activity is to blame. Humans may reduce populations and deplete their diversity by overhunting, but more commonly they do something less spectacular and less deliberate (but equally harmful): they destroy or degrade natural habitats (e.g. by converting them into farmland or residential areas), fragmenting local populations of animals, making them isolated from one another, and reducing the resources necessary for their survival.

Whatever the cause of low diversity, the resulting harm is difficult to repair. The cheetah (a handbook example) is an extreme case. About

12 000 years ago it almost went extinct, and although its population has rebounded, generations of inbreeding have left their imprint on the cheetah's genetic pool. Because of diminished gene diversity (which results in poor adaptability) and the accumulation of deleterious mutations (because natural selection does not remove them effectively enough in small populations) the overall health of the species is already at risk: cheetahs suffer from congenital defects, decreased fertility, juvenile mortality, vulnerability to common infections, etc.

Natural ecosystems are typically species-rich and characterised by great internal diversity. The loss of one of their components does not threaten their stability. If one species disappears, another one, playing a similar ecological role, will take over the vacated niche. But what if no potential replacement is available? This may happen in artificially modified systems dominated by a single species, for example in tree monocultures. A forest in which 90% of the trees are Norway spruces can collapse if attacked by a specialised destructive pest which happens to target that particular species (the European spruce bark beetle). It does not help if spruces are grown outside their natural range of occurrence, where the environmental conditions do not match their adaptive peak and their health is suboptimal to begin with. If the destroyed forest is allowed to recover naturally from a bark beetle outbreak, it will grow back more varied and more resilient to further attacks.

#### **4. Lessons from lichens**

Lichens are symbiotic systems including at least two species: a fungus and a photobiont (Spribille *et al.* 2022). The latter may be a green alga or a cyanobacterium – in either case a photosynthesising microorganism. Fungi are usually saprobionts: they externally digest dead organic matter and absorb the nutrients. But if a fungus forms a partnership with a photobiont which can use the energy of sunlight to convert atmospheric carbon dioxide and water into sugars, the system becomes self-

sufficient. The fungus builds a structure called the thallus, in which photobiont cultures are sheltered and protected from desiccation or direct exposure to UV radiation. The symbiotic relationship benefits both partners and is highly specific: a given species of fungus selects a particular species or genus of photobiont and becomes so dependent on it that in the vast majority of cases it cannot survive on its own. If the photobiont is a cyanobacterium, it has another superpower it can share with its host: the ability to fix atmospheric nitrogen and convert it into biologically useful compounds such as ammonia. In some lichens the fungal partner associates both with a green alga (which does most of the photosynthetic activity) and a cyanobacterium (which provides it with bioavailable nitrogen).



Photos: Piotr Gašiorowski

**Fig. 2.** Examples of lichens from Bragança, a town in northeastern Portugal: a mix of *Evernia prunastri*, *Ramalina farinacea*, and *Usnea* sp. on a twig (top left), *Parmotrema perlatum* on bark (bottom left), *Anaptychia ciliaris* on bark (top centre), *Lasallia pustulata* on a rock outcrop (bottom centre), and *Ramalina fraxinea* accompanied by many other species (right). Though found in urban habitats shaped by human activity (such as planted trees in parks or rocks located close

to streets and houses), the lichens are extremely diverse and include several bioindicators – species sensitive to industrial pollution. As visible in the photographs, large foliose (leaf-like) or fruticose (bush-like) flourish in these conditions. Their abundance indicates excellent air quality and a generally healthy environment.

On closer examination, lichens turn out to be still more complex. Beside the two or three obligatory partners they may be inhabited by numerous other species, typically bacteria, algae or microscopic fungi. In fact, every lichen is a small but rich ecosystem, containing also its own fauna. Lichens provide the ideal habitat for many tiny animals, notably tardigrades (water bears), rotifers, nematodes and springtails. A small sample of lichens from a single location may contain dozens of tardigrade species belonging to different genera, families, and even orders. Here is diversity almost literally in a nutshell. But lichens have also co-evolved with larger organisms, especially trees. While an excessive growth of lichens may harm the host tree (lichenised fungi produce metabolites, especially organic acids, which may potentially damage plant tissues), a diverse lichen biota generally indicates a stable and healthy ecosystem. As many species of lichens are sensitive to industrial pollutants (especially nitrogen and sulfur compounds), lichen indicator scores are used to monitor air quality and levels of pollution. If you live in an area in which most trees and rocks look as in Fig. 2, you know you breathe clean air. If they mostly look as in Fig. 3, you know you live in a lichen desert where pollution is a threat not only to local biodiversity but potentially to you as well.



Photo: Piotr Gąsiorowski

**Fig. 3.** An oak tree in a woodland belt near Poznań, western Poland. Although not exactly a lichen desert, this area is characterised by low species diversity. If present, lichens usually represent a few common pollution-tolerant species, often crustose or powdery, difficult to see with the naked eye. Conspicuous by their near-absence are numerous large lichens with shrubby or leaf-like thalli. Some of them do grow in suburban areas, but their abundance is typically low. By “diversity” we mean not the mere occurrence of many types of entities that make up a complex system, but also their abundance. Rare and endangered species do not contribute significantly to the complexity of the ecosystem and play a minor ecological role at best. As levels of pollution decrease, lichens may return to their former habitats.

Fungi are masters of symbiosis. From the moment plants began to colonise land (half a billion years ago), some groups of fungi formed associations with them (Strullu-Derrien *et al.* 2018). The most familiar form of this cooperation is arbuscular mycorrhiza, without which some two-thirds of terrestrial plants would not be able to survive. But complex adaptive systems consisting of numerous species interacting symbiotically are still more common. What we see as a healthy human

being is also such a system. We would not be able to function normally without a rich microbiota which begins to colonise our bodies withing hours of birth. On an average, a human being hosts almost 40 trillion unicellular microorganisms (mostly bacteria, accompanied by much smaller numbers of archaea and eukaryotes, cf. Sender et al. 2016), and about ten times as many viruses (phages) that infect bacteria. The number of species in this ecosystem is unknown, but certainly runs into thousands. Most of them live in our intestines. Each species has a unique genome, so the human “superorganism”, which also includes all our little companions, potentially has millions of different genes at its disposal (while human DNA, the same in every cell of our body, contains only about 20 thousand genes). Our understanding of the role of the human microbiota is still rudimentary. It is clear, however, that many of the compounds that bacteria can synthesise thanks to their genetic endowment are essential for the proper functioning of – for example – the human immune system, as well as our favourite organ – the brain.

### **5. So what about language?**

It is perhaps time to stop talking about biology and turn to linguistics. The human language faculty (that is, the general ability to become a fluent speaker of at least one language) is a product of biological evolution – an adaptation that helped some members of the genus *Homo* (obviously *H. sapiens*, but possibly including some of our extinct cousins, such as Neanderthals and Denisovans) to build complex societies in which efficient communication, collective planning, and culturally transmitted knowledge played a central role. But specific languages arose thanks to cultural evolution.<sup>4</sup> They have always been acquired through social learning, not inherited with our parents’ DNA. At the

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<sup>4</sup> For a detailed discussion of a cultural evolutionary approach and the coevolution of biology and language, see Dediu et al. 2013).

same time, they are typical complex adaptive systems (Fossali & Lund 2022). The rate of language change is orders of magnitude higher than rates of biological evolution, which allows languages to evolve quickly and adapt to changes in their social, cultural, and natural environment.

Humans (as a biological taxon) are characterised by amazing flexibility and resourcefulness. We are the only primate species that has colonised all habitable continents and can survive anywhere from the rainforests of equatorial Africa to Greenland. We owe our evolutionary success to our social life, and our individual intelligence is amplified by social cooperation and the ability to pool our cognitive resources in collective problem solving. Language, arguably the most complex product of any human culture, plays a fundamental role in our life. Advanced culture, tradition, social learning, collective memory, scholarship, and science would be impossible without language.

Biologically, we are the same species today as we were half a million years ago. Our anatomy has not changed significantly, our brains are roughly the same size, our general intelligence is presumably the same, and we even have reasons to believe that our linguistic abilities have not changed much over that time. But the world we live in is very different from that of the early Palaeolithic foragers. Our cultural evolution, made possible by advanced communication patterns (including, critically, the use of language) has transformed our environment, which is now largely human-made rather than natural. Early inventions and technologies were developed slowly, and for tens of millennia their accumulation was almost imperceptible. But once they reached a critical mass, cultural evolution began to accelerate exponentially, building on its earlier achievements. Writing, enabling humans (some cultures, at any rate) to create permanent records of their languages, was invented just a few thousand years after the rise of the first Neolithic societies. Five thousand years later humanity entered the period of scientific and technological revolution – or rather a whole series of revolutions following one another in quick succession.

Biological evolution is still as slow as it has always been. It has not prepared us for any of the things we have to do in the modern world, like living in cities, using mechanical transport, doing a job for a living, buying food rather than hunting and gathering, using the internet, and being subjected to a permanent information stress. Our needs are completely different from those of our Palaeolithic ancestors. But we can still culturally adapt to the accelerating changes because of our learning and communication skills. Needless to say, the role of language remains central to our social life, and languages need to be sufficiently flexible to catch up with the complex needs of their users.

Languages are complex systems, and so language change is also a complicated business. We do not normally design or engineer the languages we use; we acquire them from our social environment in our childhood, and develop our linguistic skills throughout our lives by interacting with other members of the same speech community. Language change is very much about the functional attuning of language structures at many levels at the same time. Speakers experiment with the use of linguistic innovations individually, but in order to spread and become fixed, an innovation has to win the acceptance of at least a significant proportion of language users. In other words, language changes are emergent phenomena beyond anyone's individual control.

## **6. The uses of language**

Language is not just a system for sending and receiving messages. It has a variety of important secondary functions: cognitive, affective, socio-symbolic, and others. Not only do we speak aloud to others (or write to them), but we also speak internally to ourselves and often organise our thoughts as potential utterances before we have a chance to express them. A language is a vehicle for local literary traditions, folklore, and cultural memory, a means by which culture is maintained and preserved.

It is also a manifestation of national, social and group identity and loyalty, and a tool for acculturation. Anyone who has ever learnt a foreign language knows that advanced proficiency in it assumes at least some familiarity with its “social ecology” and cultural tropes. One cannot learn a language properly without at least a partial understanding of its cultural setting and the life and traditions of its native users. It is literally true that by learning a language we gain an insight into how a culture different from our own sees and interprets the world. Multilingualism broadens the mind.

Linguistic identity is an important aspect of general human identity. Being a native speaker of a language makes us a member of a speech community in which we usually feel more comfortable and communicate more confidently than we do as adoptive members of other such communities. Note, however, that linguistic identity may be less clearly defined and more relative in some cultures. For example, in some parts of the world (such as the borderlands between Colombia and Brazil in the central Northwest Amazon) the local indigenous cultures practise linguistic exogamy. Their members are identified as speakers of a “father tongue” (inherited patrilineally), but when they marry, they have to find a partner with a different father tongue. A typical local settlement is a longhouse (*maloca*) housing several nuclear families. The husbands are usually close relatives speaking the same father tongue, but their wives come from other settlements and represent a variety of different father tongues. Children are brought up in a mixed linguistic environment, and although they formally inherit their father tongue as a badge of identity, they acquire in parallel their mother’s primary language, and often other languages as well. Individual languages do not occupy discrete territories. The whole region is characterised by stable multilingualism: most of its inhabitants are fluent speakers of at least 3-5 languages (out of more than twenty, belonging to three different families). The Tukano language plays the role of the region’s lingua franca, but it does not replace the local heritage languages and cannot do so for cultural

reasons. As one of the indigenous inhabitants of the Vaupés Department of Colombia told an anthropologist, “If we all were Tukano speakers, where would we get our women?” (Jackson 1989: 62).

A language develops locally, adapts to the local conditions, reflects the culture and the environment in which it functions, and – by way of feedback – shapes the perception and cognition of its users by providing them with mental labels and categories. Much of what we can express in one language is so culture-specific that it becomes lost in translation if we try to say it in another. For example, Polish has vernacular names for a large variety of wild mushrooms (with a lot of regional variation). Of course, they do not necessarily match biological species and their scientific names in a one-to-one fashion. They reflect culturally transmitted “folk mycology” – popular knowledge sufficient to identify many types of edible mushrooms and distinguish them from inedible or poisonous ones. Children learn to identify and name mushrooms as they learn to collect them. This rich terminology has no equivalent in languages of cultures that have abandoned the tradition of mushroom picking. Similar examples of “hermetic” vocabulary referring to local specificity (whether cultural or natural) can be quoted from any language.

## **7. The value of linguistic diversity**

If a language is to perform effectively as a complex adaptive system, it needs what all such systems need: a pool of variants and mechanisms for generating novelty and diversity. Confronted with new objects, concepts, processes, fashions etc., speakers constantly look for new words and new ways of expressing their thoughts. They may use a newly coined word, borrow one from a foreign language, extend the meaning of a long-established lexical unit, or develop a new grammatical category if those already in use do not convey their thoughts with sufficient precision. This is not done by design, but rather by trial and error. Linguistic experiments are proposals which the speech community accepts or

rejects not because of anybody's personal preferences, but through a complicated process of social negotiation. Phonology and phonetics are also negotiable. A phonemic contrast with a low functional load may be ignored and eventually abandoned. A pronunciation may spread across social groups just because it is commonly perceived as "prestigious" (characteristic of an accent used by people whose social position is regarded as superior in some sense). However, depending on social attitudes, speakers may tend to *avoid* prestige varieties rather than imitating them. Like any spontaneously evolving complex system, a language finds solutions to its users' problems, but those solutions may be unexpected and are by nature hard to predict. Even if we know typical trajectories of language change, there is always room for surprises.

The purpose of language standardisation is to codify the grammar, vocabulary, spelling and pronunciation of a language, so as to constrain its internal variation, homogenise current usage, conserve some selected features of the literary tradition and slow down the rate of change. Standardised varieties, where they exist, enjoy a privileged status in official language policies, and are promoted by the educational system. If such efforts were completely successful, that is, if any authority had the actual power to regulate a language system, the effect would be definitely harmful: the adaptability of the language would be compromised. Fortunately, language users often ignore official recommendations when they interfere with their communicative needs. They keep generating innovations and experimenting with them.

A linguist's job is to observe, study and describe languages, not to tell their native users (and collective owners) how to use or not to use them. Prescriptivism assumes that language experts know best what the optimal state of a language is and how it should be maintained. They may therefore be officially entrusted with regulating other people's usage. This is not unlike the belief that it is hunters and loggers who keep nature "healthy and under control". Languages, like other complex adaptive systems, work best when they are allowed to evolve spontaneously. No

language has ever undergone degeneration just because there was no official body of experts to control its condition.

Living languages are never uniform. Whether or not a language develops different national varieties (as in the case of English, Spanish, German, Arabic, etc.), it will exhibit at least some dialectal (geographical or social) variation which has its important functions and deserves to be protected rather than discouraged, let alone stigmatised. The same concerns minority and immigrant languages. Human societies and individuals have always been potentially multilingual (our ability to learn a second language is as natural as first-language acquisition). Language contact is an important source of novelty. The vocabulary of most languages contains many historical layers of borrowings, often, as in the case of English, easily outnumbering “native” words.

Before the establishment of national states in Europe, there was no emphasis on nationwide linguistic uniformity. Languages have always mixed, varied, split and diverged, generating variety and benefiting from it. Many modern states, however, are, or consider themselves, monoethnic, monocultural and monolingual. This may lead to linguistic nationalism – an irrational fear of language variation and multilingualism, as if any departure from linguistic unity meant a refusal to demonstrate patriotic loyalty to the state and undermined the stability of the political system. Hence the misguided resistance to granting regional or minority ethnolects official status, also in Poland (where only Kashubian is officially recognised as a regional language). Even linguists, when asked to express their expert opinion, may sidetrack the discussion by raising academic questions such as “Is Silesian/Vilamovian really a separate regional language or a dialect of Polish/German?” This should not be relevant at all, since dialects deserve as much legal protection as languages if their speakers identify with them and express an interest in keeping them alive.

In practice, with rare exceptions, dialectal usage is stigmatised as “incorrect” and schools do what they can to limit its intergenerational

transmission. The belief that dialects are distorted versions of the mainstream “educated” variety (elevated to the status of the standard) is anachronistic and unscientific, but nevertheless widespread. Limiting people’s freedom to use their native language or dialect, whether in private or in public, is a breach of linguistic rights, which in turn are a subset of human and civil rights. The European Charter for Regional or Minority Languages<sup>5</sup> in theory promotes and protects the use of such languages, but leaves their definition to the discretion of the authorities of individual states. In addition, the Charter excludes “dialects” from the inventory of protected languages, leaving the door open for terminological manipulation.<sup>6</sup>



<sup>5</sup> See <https://www.coe.int/en/web/european-charter-regional-or-minority-languages-/about-the-charter> (accessed 1 July 2025).

<sup>6</sup> For an eloquent, passionate, and extremely persuasive defence of non-standard, vernacular language varieties, see Trudgill 2016.

**Fig. 4.** In multilingual societies or in multiethnic areas, different languages often function together in the public space. The examples shown here are as follows: (*top left*) A new, bilingual version of the stop sign used in Morocco. The text in the upper part of the sign is in Arabic and reads *qif*; the text in the lower part in Standard Moroccan Tamazight (a Berber language) and reads *bedd* (both words mean ‘stop’). In the wake of the Amazigh (Berber) cultural revival, a standardised variety of Tamazight, written in the Neo-Tifinagh alphabet, became an official language of Morocco in 2011. About 20% of Moroccans are native speakers of one of the several Berber languages of the region, mostly Tashelhiyt. (Public domain.)

(*top right*) A bilingual signpost in the county of Powys, Wales. Although the Welsh language version is symbolically placed above its English equivalent, the position of Welsh in this part of Wales is insecure, as fluent Welsh speakers make up only about 16% of the population of Powys. (Photo: Henry Spooner, CC BY-SA 2.0, Wikipedia.)

(*centre right*) A Polish–Kashubian village name sign in Pomerania, northern Poland. Recognised as an ethnic-minority language since 2005, Kashubian (an endangered West Slavic language closely related to but distinct from Polish) has a normative written variety and a standardised alphabet introduced in 1996. There is also a less commonly used alternative orthography developed in 2018. (Public domain.)

(*bottom*) Street signs in Ottawa, the capital of Canada, are bilingual, and all municipal services are offered in French and English. Both languages have equal co-official status, although Ottawa is predominantly English-speaking. Across the Ottawa River, in the city of Gatineau, French dominates in the public space (street signs are in French only) and is the first language of more than 70% of the population. On the other hand, Gatineau is more bilingual, with over 60% of its inhabitants fluent in both French and English. Symbolic bilingualism does not always go hand in hand with actual bilingualism. (Photo: Piotr Gąsiorowski.)

Linguistic ecosystems are as vulnerable as biological ones. When left alone, they achieve a state of self-sustaining dynamic equilibrium in which individual languages or dialects coexist, interact and influence one

another. Introducing a privileged “prestigious” language into such a system does not increase its diversity. Quite the opposite – it may have a destructive effect. We could compare that to letting an invasive species loose in a hitherto stable natural ecosystem. The newcomer does not participate in the intricate network of interactions and feedback loops that has evolved over millennia. There is nothing to regulate its population and limit its aggressive spread. The local system may collapse before it manages to adapt to the presence of the invader. With this analogy in mind, let us look at the harm inflicted by the languages of the European colonial powers in many parts of the world. In the United States, the indigenous language with the largest number of native speakers is Navajo (about 170 thousand users). The total number of speakers of *all* the remaining indigenous languages (including Hawaiian and the languages of the Alaska Natives) is of the order of 200 thousand.<sup>7</sup> Taken together, the indigenous languages are spoken by 0.1% of the population, and nearly all of them are critically endangered. North America was notable for its great language diversity (in terms of the number of languages and language families) at the time when Europeans began to explore it (Mithun 2005). All that diversity is practically gone.

Similarly to lichen diversity, linguistic diversity allows us to assess the general health of a social ecosystem. If speakers of regional or minority languages really enjoy the rights guaranteed on paper by international treaties, if immigrant languages are respected, if dialects continue to be used and their speakers are not laughed at for speaking incorrectly, and if linguists study languages rather than trying to force their fellow human beings to adhere to artificial norms, we can be reasonably sure that we live in a healthy, well-functioning society.

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<sup>7</sup> See the statistics in Dietrich & Hernandez 2022: 3 (Table 1).

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