Writing systems and print to digital capitalism: an interview with Florian Coulmas

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Abstract. *This article presents an in-depth interview with scholar Florian Coulmas on the evolution of writing systems and the transition from print to digital capitalism. Coulmas offers a historical and critical analysis of how writing and technology have transformed society, from Gutenberg's printing press to the digital age, while addressing topics such as print capitalism, the relationship between technology and language, and the impact of digitalization on minority languages. Also examined are the social implications of artificial intelligence in writing and the changing role of languages in the digital space. In the final section the interviewers reflect on the dynamic nature of language in the context of digitalization and the challenges for contemporary sociology when language and sociolinguistics come face to face with artificial intelligence.*

Keywords: *Writing systems; print capitalism; digital capitalism; artificial intelligence; sociology of language.*

De los sistemas de escritura y la imprenta al capitalismo digital: entrevista con Florian Coulmas

Resumen. *Este artículo presenta una entrevista en profundidad con el académico Florian Coulmas sobre la evolución de los sistemas de escritura y la transición del capitalismo de imprenta al capitalismo digital. Coulmas ofrece un análisis histórico y crítico de cómo la escritura y la tecnología han transformado la sociedad, desde la imprenta de Gutenberg hasta la era digital, abordando temas como el capitalismo de imprenta, la relación entre tecnología y lenguaje, y el impacto de la digitalización en las lenguas minoritarias. También se examinan las implicaciones sociales de la inteligencia artificial en la escritura y el papel cambiante de los idiomas en el espacio digital. En la sección final, los entrevistadores reflexionan sobre la naturaleza dinámica del lenguaje en el contexto de la digitalización y los desafíos que enfrenta la sociología contemporánea cuando el lenguaje y la sociolingüística se enfrentan a la inteligencia artificial.*

Palabras clave: *Sistemas de escritura; capitalismo de imprenta; capitalismo digital; inteligencia artificial; sociología del lenguaje.*

1. Introduction

To anticipate the future, we need to look back and make sense of the past. With this in mind, we interviewed Professor Florian Coulmas, one of the most influential scholars in the field of language and society in recent decades, for an instructive and engaging conversation on writing systems and the transition from print to digital capitalism. Coulmas is highly regarded for his extensive research on writing systems, multilingualism, and the sociolinguistics of Japanese society. He has held several prominent academic positions, including Director of the German Institute for Japanese Studies in Tokyo from 2004 to 2014. He is currently a Senior Professor of Japanese Society and Sociolinguistics at the University of Duisburg-Essen in Germany.

Florian Coulmas's interdisciplinary approach links linguistics with sociology, economics, anthropology and Japanese studies, which makes his work influential across multiple fields. His contributions have significantly advanced our understanding of the relationships between language, society, economy, and identity. His most significant publications include *Language and Economy* (1992), in which he examines the complex relationship between linguistic practices and economic factors while exploring how language influences economic behavior and policy. In *Writing Systems: An Introduction to Their Linguistic Analysis* (2003), Coulmas offers a comprehensive analysis of the world's writing systems from a linguistic perspective that is of interest for a broad range of social scientists. His book *Sociolinguistics: The Study of Speakers' Choices* (2005) investigates how language choices are shaped by social contexts and cultural norms. *Writing and Society: An Introduction* (2013) explores the role of writing in social development and cultural transformation. In *An Introduction to Multilingualism: Language in a Changing World* (2018), Coulmas discusses the dynamics of multilingual societies and the implications of linguistic diversity in an era of globalization. A review of his latest book, *Language, Writing, and Mobility* (2022a), can be found in this special issue.

This interview with Florian Coulmas was held during the 5th REAL (Economics, Policy Analysis, and Language Research group) Symposium held at Universitat Rovira i Virgili in Tarragona (Spain) in June 2024. Throughout his prolific academic career, Coulmas has – among other research interests – extensively explored the issue of writing, providing invaluable insights into the evolving landscape of language and writing. As a reference for our interview, we chose his article "Writing Regime Change: A Research Agenda" (2022b). Some of our questions were based on the ideas he expressed in this article but we also added some personal inquiries of our own to our list of questions.

The interviewers were researchers in sociology and translation studies, respectively, interested in the social reality that language lies at the core of our identity and society, and that the way language is shaped by technology affects us all. Florian Coulmas's work on the study of writing systems and their relationship with economic development has served as the basis for our current research. In turn, we hope it will also be of interest and benefit to our readers. At the end of the interview we make several reflections that we consider relevant in light of our current lines of research.

2. The interview

Interviewer[1]: Professor Coulmas, your academic journey has been extensive and diverse, spanning various fields within sociolinguistics and the sociology of language, especially. Can you share some key milestones or turning points in your career that have significantly influenced your focus of research? Some key ideas in the evolution of your career?

Florian Coulmas: When I reflect on my experiences, one event stands out that occurred before my academic career even began, yet its impact is evident in retrospect. I was traveling all over Asia and that was at the beginning of my university studies, which had been kind of interrupted by the 1968 student movement[2]. Instead of spending my time in seminar rooms, I decided to explore the world. I traveled across Asia for over six months and eventually found myself in Hong Kong. This was during the Cultural Revolution, a significant socio-political movement in China[3] that also had a profound impact on Hong Kong, then still a British colony. There were banners, posters all over the city, everywhere. And I couldn't read a single one. I was completely illiterate and that made my thoughts move in various directions. The first thing I remember is that it made me aware of the incredible importance of writing in everyday life. None of us can imagine a life without writing. Being unable to read gives you a sense of the great importance of writing in our civilization. Another thing was that part of my family background is rooted in Greece. And for Greeks, it is a matter of course that the Greek alphabet is the epitome of human cultural development. And when I saw that other systems, in particular Chinese, seemed to function just as well, that

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1 The interview was designed and conducted jointly by the co-authors, who will be collectively referred to as the "interviewer".
2 This is a reference to a series of social and political unrests around the world. For more information, please consult https://en.wikipedia.org/wiki/Protests_of_1968.
3 For more information, please consult https://www.britannica.com/event/Cultural-Revolution.

made me think of how prejudiced this view on alphabetic writing was. And then there came a third aspect into play when I returned to the university and started studying sociology on the one hand and linguistics on the other. I was taught that linguistics is about speech and that writing is just an imperfect representation of spoken language. That was one of the axioms of structural linguistics. And in a way, writing was completely dismissed from the curriculum. There was not a single course about the relationship between speech and writing. If writing is a representation of speech, how so? Over the years, I came to realize that writing enables many different uses of language that are not possible in speech. There are many things we can do in writing but we cannot do in speech. And should that not be part of the study of language? That's a little bit absurd, I think. I eventually decided to write textbooks focused on writing and language.

Interviewer: But most linguistics studies, at least undergraduate degrees, are based on writing itself. Therefore, is there a mismatch between research and the academic studies on linguistics?

Florian Coulmas: In the 19th century, the study of language was entirely focused on written documents. However, a new perspective emerged, known as structural linguistics. The most prominent representative of this school of thought was Ferdinand de Saussure, who, along with his followers, redefined the study of writing as philology. So, philology focuses on written documents, both literary and everyday texts. In contrast, linguistics should study speech and pronunciation rather than the written form, so at the core of linguistics are phonology and phonetics. Until that time not too much attention was being paid to the fact that spoken language has a structure which had to be discovered by linguists. So, for some time, linguists ignored writing as at least equally important [as speech]. It is of course true that the human species spoke long before they wrote. And in this sense, you might want to argue that language is originally speech. But things evolve and there is undoubtedly no invention in human history more important than writing.

Interviewer: Let's now discuss the term "print capitalism", as we are very interested in it. How did print capitalism begin and what were its major effects on society and communication?

Florian Coulmas: The concept of print capitalism was introduced by Benedict Anderson, a sociologist, in his very influential book, Imagined Communities (1983). Why was printing so important? It represented the first machinery for mass production. So, the printing press marks the beginning of industrialization. From a Eurocentric point of view, the printing press, especially the printing press with movable type, is associated with the name of Johannes Gutenberg and is a

European invention. In fact, the printing press was invented more than a thousand years earlier in China. So why did the printing press in China not trigger the kind of development seen in Europe since the 15th century? I do not claim to have all the answers, but one element could be the different writing systems. You need literally thousands of characters to operate a printing press for Chinese, which makes it a rather cumbersome process. It is a myth that you need just 26 letters for the European printing press, but still the number is much smaller and it is mechanically easier to handle. Other factors include the economic development of the time and the individuals responsible for operating the machinery. But taking Benedict Anderson's concept of "print capitalism", how does capitalism come into play? An important point is that capitalism, or industrialization, involves selling products to the largest possible audience. Initially, this applied to printers rather than authors or poets. Professional printers aimed to sell their printed materials to as broad a clientele as possible. This means they had a vested interest in spreading a particular variety of language. Printers played a major role in establishing European standard languages. If you print something that people 100 kilometers away cannot understand, it is not as useful as having a language that spans a larger territory and population. Thus, print culture, driven by print capitalism, was instrumental in establishing European standard languages and, along with that, national languages.

Interviewer: I'm curious about the connection between printing and mass production. Is this strictly linked to language industries, or is it of interest for the production of any material thing, a car, for example?

Florian Coulmas: The printing press allowed you to reproduce the same product as many times as you wanted. And there was no other machine prior to the printing press that would do that with other products. We're talking about the origins of this process, dating back to the 15th century. Clearly, this transformation didn't happen overnight, but it did introduce a significant change in how language and writing were produced and distributed. Before the advent of the printing press, writing had to be copied by hand in a labor-intensive process that was primarily the domain of a small, highly educated class of clerics. They could copy the Bible by hand, but then how many copies could they realistically produce in their lifetime? That changed entirely with printing because the same product could be reproduced multiple times and then sold. And we have to try to understand the cognitive aspect of this shift: that something considered holy could be reproduced by a machine. So, you could say that printing commodified language, which had not been the case in the pre-printing society. And another aspect is that it privileged big languages.

Interviewer: So did the printing press take languages that were already significant and make them even bigger, or did it promote certain languages based on specific ideologies, causing them to grow in prominence?

Florian Coulmas: It's both. There are political and ideological elements that also come into play. In pre-modern empires, there was very little need for rulers to communicate with the ruled. As we move towards modernity, we observe an increase in literacy and higher levels of education, peu a peu, leading to the idea that rulers should communicate with the ruled. I referred earlier to Benedict Anderson's book where he introduced this idea of print capitalism. And the book is entitled Imagined Communities, which is very important because what it says is that the communities in which print capitalism took root didn't exist – they were created. And what we observe in history, from the 15th century until modernity, is that what we characterize as multilingual empires were gradually replaced by monolingual states. Both do not exist; they are ideological constructs. In pre-modern times, minority languages were no issue because people spoke as they did. They didn't have access to government anyway, and there was little general education. The printing press, if we follow Benedict Anderson and some others, was one very important element of the process that led to higher literacy rates not in many different languages, but typically in one language.

Interviewer: In your articles, you often link print capitalism to the Protestant Reformation. This connection highlights the relationship between religion and capitalism. What role does printing play in this context, particularly regarding the relationship between religion and capitalism? I understand from your perspective that printing enabled the mass production of Bibles and facilitated the widespread dissemination of the ideas of Martin Luther, John Calvin, and other reformers.

Florian Coulmas: Students of religion often use the term "book religion" to describe religions centered around holy texts, which distinguishes them from cults and other ideologies that lack such sacred scriptures. The number of book religions is quite small compared to the vast array of other creeds and mystical systems. Book religions are unique in that they have a reference point in the holy scriptures, and the writing in them is perceived as fixed and unalterable. While this perception isn't entirely accurate, it forms the basis of the ideology linking writing with religion. This connection extends further through the advent of printing, which ties religion to industrialization and, by extension, to the capitalist system. Although this link isn't direct, it exists, particularly in the commercialization of religious texts and scriptures. These texts are powerful tools for shaping societies and often serve as fundamental reference points. For instance, in Islam, every single letter of the Arabic alphabet is holy, and altering them would be sacrilege.

Interviewer: *Let's now move forward with a leap in history. In your 2022 article "Writing regime change: a research agenda", you mentioned that we have transitioned from "corpus" to "flow". Could you explain what you mean by that in the context of our current age?*

Florian Coulmas: In the pre-digital age, in the print era, our approach to language was very different. Take quantitative linguistics, for example. It was largely about conducting surveys on the regional or social distribution of expressions and speech forms, which were based on corpora – collections of texts – and compiling these was very laborious and expensive. Also, minor languages, not always, but very often, were automatically excluded. As a result, we had large corpora of standard languages like Spanish or French, which could be studied in depth. Fieldwork meant writing things down by hand, further limiting what could be included. Today the environment for doing quantitative linguistics is completely different because there is an endless stream, a flow, in abundance of linguistic material that is openly accessible and can be studied. This happens in virtual space, which is so new that many, in particular big data companies, still prefer to view cyberspace as a lawless room where they can operate without restrictions. And we are only slowly catching up and trying to introduce laws that must be observed in cyberspace, just as we have done in traditional social domains. The transition from corpus to flow can also be exemplified through two significant print products: dictionaries and encyclopedias. In the past, a dictionary was created to last forever, often issued by authoritative bodies, such as language academies. For instance, the Italian Accademia della Crusca, followed by the Académie Française, and similar institutions in Spain and Portugal, were all print culture institutions. Their most important work was usually a dictionary, which took years, sometimes decades, to compile and was conceptually meant to remain valid forever. An example is the German dictionary started by the Brothers Grimm, which took over a century to complete. The underlying belief was that language could be fixed, standardized, and preserved for the ages. This is gone now. There is almost no dictionary left that appears in print. The Oxford English Dictionary, one of the most comprehensive, biggest dictionaries in the world, is updated online, in its online edition, almost continuously. This is a completely different take on how we document language. The prime example of encyclopedias is, of course, Wikipedia, which allows daily updates.

Interviewer: *What are the implications of this shift toward a flow state in language and knowledge for us, everyday users? Does it mean that the strict, rigid institutions of the past no longer hold the same authority? When we talk about language, particularly prescriptive approaches, are these institutions still as influential as they once were, or has the increased flexibility allowed for quicker adaptation to changing circumstances?*

Florian Coulmas: Absolutely. In fact, I am currently exploring a research project in that very direction. I am curious about how language academies are responding to the digital turn. Should they simply close their doors and acknowledge that their relevance was tied to a specific period in history that has now passed? I find that unlikely because people tend to stick to what they have. But this raises important questions: How do language regulatory institutions work? Are they collaborating with big data? What implications does this have for education, particularly in elementary schools? There is ongoing debate about whether we should continue to teach spelling, especially when software can handle it so effectively. The dynamics and flow of language are realities we must contend with. This shift has been evident for some time: even before the 1980s, computational linguistics began appearing in academic curricula, and more recently, around the turn of the millennium, media linguistics was established as a subdiscipline, signaling that fundamental changes are underway. I have sought to illustrate this by opposing flow to corpus. Corpus implies a stable body of language that can be studied, which was always somewhat illusory. Yet, this is often how science operates — we create categories, attempt to order phenomena, and study them within those frameworks. However, we are now immersed in a never-ending flow of information and communication, with consequences that are still unfolding. It is challenging to fully grasp the impact of this transformation, much like how people 500 years ago struggled to comprehend the implications of the printing press. The true potential of such revolutionary technologies only becomes apparent over time, as new inventions and uses emerge. I believe it is fair to say that we are living through a similarly transformative period, where new software constantly surprises us and unforeseen challenges arise regularly. We must adapt to this continuous flow of change. The concept of "print capitalism" has been a useful framework for understanding the past, but it is time we started discussing "digital capitalism".

Interviewer: Perhaps more than ever, language is becoming a commodity. Computers now produce sentences that mimic human language with remarkable accuracy and fluency and companies are selling language and knowledge generated by machines. The ability of machines to write in a way that resembles human communication is both fascinating and disquieting. It raises questions about authenticity, creativity, and the future role of human writers. What do you think about machines being able to write like humans?

Florian Coulmas: It is crucial to remember that what we refer to as "human-like" texts generated by machines are still fundamentally human in origin. These technologies rely entirely on human input – they wouldn't exist or function

without it. While it is true that we cannot fully predict the social outcomes of these technologies, we should not forget the fact that they would not exist without human input. Computers are indeed superior to humans in certain areas, particularly in processing vast amounts of quantitative data. However, what concerns me more are the social consequences rather than the technical ones. If someone's educational level is low, they may struggle to distinguish between fake or nonsensical output from a poorly designed algorithm on one hand and reliable information on the other.

Interviewer: What are your thoughts on the infringement of copyright by these new technologies?

Florian Coulmas: Copyright, from a historical point of view, emerged as a consequence of the printing press. Before the printing press, there was no reason to have copyright protection. The earliest copyrights were created to protect booksellers rather than authors, and then they evolved into protection of intellectual property of language. Now, with the technological change, we are playing a new game. You've probably heard about the Hollywood actors who are protesting because they believe their intellectual property is being misused. And that is not only text, it's their voice, their face, their performance on the screen and so forth. There is no doubt that we need new laws to protect intellectual property. There will be new legislation, no doubt, for actors, musicians, authors, and photographers. These are things that were science fiction a generation ago.

Interviewer: This seems like a form of capitalist appropriation of not just human labor, but of human faces, voices, and more. It feels like part of the broader process of capital accumulation, extending the reach of capitalism into every aspect of human life. It is as if capitalism is now penetrating all spheres of humanity, leaving no part untouched.

Florian Coulmas: While this might be true of some companies like Google, Microsoft and Meta, you cannot say the same about, for example, Wikipedia. Wikipedia is non-profit and it has been tremendously successful. The thing is that big for-profit companies sometimes give us free software, which is just a way to foster customer loyalty. And an important question of course is: who owns a language? Does it make any sense at all to ask this question? Could a language be owned by someone?

Interviewer: For a long time, non-native speakers have expressed frustration, arguing that they struggle to achieve native-like proficiency, which can limit their opportunities, such as in academia where publishing at a native-like proficiency level is often expected. Then, digital technologies emerged, enabling users to appear more proficient in English. However, this technological shift also amplifies the dominance of English, thus further marginalizing smaller languages. Initially, print capitalism made

big languages like English even bigger, and now digital capitalism is doing the same on a much larger scale. So, on the one hand, non-native speakers now have very good tools to improve their English skills. On the other hand, the dominance of English grows, potentially pushing smaller languages further to the margins. How do we make sense of this complex situation?

Florian Coulmas: This is a quite complex issue. Firstly, we must consider power. There is always a link between language and power, whether political or economic. This is true for the world at large and also for, say, neighboring countries. For example, more Czech people study German than the other way around, and that is true for all neighboring countries. Power makes a language attractive. Why, in recent years, has Chinese become part of the curriculum in some African schools? A few decades ago, that would have been extremely surprising. Secondly, digital technology has been pioneered by English-speaking countries and English-speaking people. For instance, not long ago, Spanish names like García or Gómez often appeared without accent marks because Unicode did not initially support those characters. This is no longer so because Unicode now comprises almost 150,000 characters. But this is illustrative of the fact that the development of technology often reflects the perspective of its creators, and it would be naïve to assume that this perspective disappears completely. In the case of English, while it is clearly the dominant digital language, there is a paradox as we are also witnessing more languages in writing today than ever before. Another key point is that English is the only major European language that has never had a regulatory body, unlike French, Spanish, or German. This lack of regulation has implications for the idea of native speaker competence. Some types of software let you select from about 15 different varieties of English, like UK, US, Australian, Canadian, Singlish (Singapore English), Filipino, and more. This flexibility is far greater than in languages with strict regulatory norms. And being a native is a very questionable attribute, which is a product of language ideology. The notion of native speakerhood is increasingly questioned. In the past, it was assumed that a native speaker was someone who spoke a single mother tongue. But today, many people grow up learning multiple languages from an early age, which challenges the idea of native speaker superiority. And being a native speaker does not necessarily mean you can produce high-quality texts. The key variable here is education. Thousands of non-native English speakers write excellent scientific texts because they have received a good education. To conclude, I think that the dominance of English is likely to continue for the foreseeable future but I don't believe that being a native speaker is the critical factor. If anything, it may be becoming less important.

Interviewer: So, from what you are saying I understand that there is diversity in unity in the digital space nowadays. We can still promote and protect low-resource languages in the digital space while we use and empower English.

Florian Coulmas: As I mentioned earlier, digitization has led to more languages appearing in written form than ever before. However, it is worth questioning whether this will actually help endangered languages survive. Some believe that endangered languages have more prestige in writing, which can potentially help their survival. But there is a significant challenge here, which is that without a substantial body of literature, the utility of these languages remains limited. Sure, they can be used for casual exchanges, but when it comes to professional use or building a career, a rich literary tradition is essential. And young people are unlikely to continue using their native languages purely for the sake of tradition. If a language does not offer economic opportunities or practical utility, they will likely shift to a language that does. That is one aspect of it, but there is also the element of "coolness". High-school students use English because it is cool.

Interviewer: How has the digital turn impacted the work of language sociologists? Should sociologists shift their research focus to address these new developments, or should they continue pursuing their previous areas of study?

Florian Coulmas: Some questions that sociologists of language have been asking for decades will remain. For example, discrimination is a classic topic in sociology. How and why do people discriminate against others? And what role does language play in this? Language plays a significant role, as even small deviations in speech can be enough to mock or ridicule speakers of different dialects or varieties. How this dynamic unfolds in cyberspace remains to be fully understood, so it is a problem that still requires investigation. Another key issue is the concept of the national language, which is largely a product of print culture and the nation-state. Today, we see that the idea of the nation itself is under pressure, particularly in major cities like Paris, Amsterdam, London, and Barcelona, where hundreds of languages are spoken. Do these multilingual environments challenge the dominance of the national language from within? Migration will undoubtedly continue, even as right-wing forces attempt to stem the tide. The dynamics between new and old minority languages and national languages will remain a significant topic for the sociology of language, but digital tools give it a new aspect to be investigated. So, I think, to put it briefly, many of the questions of sociology of language will remain but will have to be asked in the context of an entirely new situation, that is, a new social domain, cyberspace.

Interviewer: In your 2022 article, you ended with the word "imprimatur". Specifically, you asked, "Imprimatur – do we have a word yet for what this means in the absence of printing?" Could you elaborate on this?

Florian Coulmas: Anyone can write anything without any authorization, and many people do not even review what they have written before sending it out into cyberspace. It was meant ironically, but pointing to an important shift in attitudes to written language.

3. Authors' remarks

Some say that change is the only constant. This seems especially true when it comes to human history. Constant change and adaptation to new realities are what make humans resilient and capable of thriving in diverse and evolving environments. Our ability to innovate, learn, and adjust to shifting circumstances has been a key factor in our survival and success throughout history. Some also say that we are now witnessing the Fourth Industrial Revolution, arguably the most transformative to date, where Artificial Intelligence (driven by Large Language Models within computerized neuronal networks) has promised to take the lead in a significant portion of human activities.

One activity that promises to be severely impacted by Artificial Intelligence is writing. The widespread use of the term Large Language Models to describe machines that are able to manage or produce "natural" language is intriguing to scientists who have always associated natural language with human production. In a development that has been interpreted as potentially the end for many professions whose members are responsible for producing language, such as writers, translators and journalists, computers are now capable of generating texts that are both highly fluent and coherent. Of course, this prophecy is unlikely to be fulfilled anytime soon: when OpenAI released ChatGPT in November 2022, it was followed by a plethora of similar tools but none of those professions has yet disappeared. What seems likely is that in the future we will increasingly rely on computers to produce writing – with all the social and economic consequences that will follow. Perhaps the introduction of Artificial Intelligence in writing is yet another stepping stone in the development of human history – a kind of evolution – much like the invention of the printing press in the 15th century. No doubt the scribes and monks were not too happy about a machine taking over their job of copying the Bible. You can almost hear them grumble: "Great, a machine to do my job! What's next, a quill that refills itself?" On the other hand, language – and writing in particular – are becoming increasingly commodified,

with big tech companies sealing multimillion-dollar deals to purchase databases of creative texts that are subsequently treated as mere data to be fed into Artificial Intelligence tools that regurgitate content with scant regard for original creativity, context or the intellectual labor of the person who produced them. It appears, therefore, that our apprehension when it comes to writing and Artificial Intelligence will concern authenticity, morality, the exploitation of intellectual property, the commodification of texts and writing, and the possible devaluation of human labor. Some of these challenges have arisen in the past, albeit in a different form, and reflecting on these historical precedents may provide valuable insights into how we should navigate these issues in this new era.

Another concern is the intersection of language and the digital space. Since the popularization of the Internet in the 20th century and the emergence of social media, language and writing have become central to global communication. For some time, English was the most widely used language on the Internet and it is still one of the most important languages for language tools such as ChatGPT, Google Translate, DeepL and Quillbot, which are owned and managed by tech giants. On one hand, English has become deeply embedded in all digital communication but, on the other, smaller languages have become more visible as a consequence of the magnitude of the digital space. The consequences of this duality in future years remains to be seen but the risk is linguistic homogenization, since the prevalence of English threatens to overshadow smaller languages, thereby leading to a loss of linguistic and cultural diversity.

Several ideas can be extracted from the fascinating historical analysis made by Florian Coulmas in this highly insightful and enriching interview. One important takeaway is that "capitalism, or industrialization, involves selling products to the largest possible audience". This enduring truth is perhaps a reminder that in this new era dominated by Artificial Intelligence, the fundamental dynamics of capitalism remain unchanged. In essence, while the tools and methods are in constant evolution, the core motivations of those who are behind technological advancements in language appear to have remained consistent with those that have shaped history since the inception of print. In the modern age, this means owning large databases and selling them to the highest bidder, usually a large tech company, which will then use them to garner even greater profit and influence. Several major issues emerge from this. As Coulmas mentioned, it is probably worthwhile rewriting some of the rules on data protection and copyright if we wish to create some degree of fairness for human labor and authorship in writing in the future. Another issue is the question of low-resource languages in the digital space and, especially, in Generative Artificial Intelligence. As was

mentioned during the interview, a duality now exists whereby large languages, especially English, are predominant but, due to the vastness of the Internet, low-resource languages are becoming increasingly visible. When it comes to Generative Artificial Intelligence tools, low-resource languages do not fare as well as high-resource languages, though attempts are being made to fix this issue. These attempts include cross-lingual in-context learning (X-ICL) methods, which are expected to improve low-resource language output (Lin et al., 2022; Shi et al., 2023; Zhang et al., 2023; Cahyawijaya et al. 2024). Progress appears to be promising and, for the first time in history, some of the most remote languages are just a click away from becoming learnable and analyzable at a distance.

Finally, in the digital age, imprimatur may morph into something like "algorithmic nod" or "platform blessing". Instead of requiring a stamp of approval from a traditional authority, content today gains legitimacy and visibility through subtle endorsements by algorithms or collective thumbs-ups from online communities. In this new era, therefore, imprimatur is less about obtaining formal authorization than about getting the digital "green light".

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