Cinema Co-production, Film Distribution in Multiple Languages and Inequality in the Global Language System:

A Call for Robust Public Data

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Language has proven to be an important factor in film performance models, film finance considerations, and festival program selections. This essay uses multi-year global data sets (UN and supplementary databases) to analyse the relationship between the languages in which a film is produced and offered to cinemagoers on the one hand, and the co-production activities and dynamics which engender these patterns on the other hand. While European Commission policies, underlining the peculiar "linguistic polity" of the European Union, have been influential in the making of multilingual cinema productions motivated by subsidy rules, taxation and grant schemes, the pattern is rather global, reflecting uptake of cinematic product in many "territories" and the mobilization of film across national and regional language divides. The analysis shows that Europeanization has much wider implications beyond Europeans' cultural consumption and identity construction, with Europe's co-production policies casting a wider net of cultural resistance to Global Hollywood and its majority of English-language blockbusters as well as attending to language preservation in the European neighborhood in addition to Europe, where local and regional heritage policies are well instituted. The study examines the results against Abram de Swaan's theory of the Global Language System, examining the Q-value theory to the language patterns emerging from film productions with multiple languages, which must be assessed in its relation to cultural consumption that may not follow from formal schooling and habitus formation.

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INTRODUCTION: THE DOMINANCE OF ENGLISH IN WORLD CINEMA

The cost of making a film means that, even if subsidized or sponsored, it must usually find large audiences to generate a profit. Falling prices of camera hardware and editing software have not eased the pressure, as low-budget films must now compete with the no-budget films shot by gifted amateurs and video shared for free. Digital and video piracy (UIS 2009; Hern 2021), and negligible streaming royalties (Dalton and Associated Press 2023), add to the challenge of keeping revenue above cost. Even Hollywood struggles to break even on its box-office and streaming receipts within the US: often only the addition of international sales makes American-made films profitable (Marvasti and Canterbery 2005). But the export of English-language films intensifies the competition for filmmakers in other languages. Even when these are spoken internationally, none matches the global reach of English, which has become "hyper-central" in terms of the proportion of humanity that can engage with it (de Swaan 2013) and the dispersion of cultures that find affinity with audiovisual work expressed in it.

A survey of feature films conducted in 2005–2006 (UIS 2009) found that in the majority of the responding countries (n = 75) the top ten admissions were for film originating in the US. Although "local" languages were used for feature films in most of the African, Asian and Arab countries that had responded, 36% of the films were produced in English, which remains the most widespread language used. According to a cited study of the films exhibited in Nigerian cinemas (1997–2003), English was the primary language of production, accounting for 44% of films, followed by Yoruba (31%), Hausa (24%) and Igbo (1%).

For films shot in languages other than English, export—if achieved at all—is largely limited to countries that are economically and geographically proximate to each other. In 2005–2006, most foreign films in Switzerland were from France, Germany and the United Kingdom; in Malaysia, most were from Australia and China. The origin of foreign films was often related to language, such as in Austria, where most foreign films were from Germany, and in Morocco, where Egypt was the main source. The limitation of films' travel distance in Europe, as well as in lower-income regions, suggests that both cultural proximity and restrictions to commercial distribution play a part (UIS 2009). In 2013, the most popular feature films were by the US majors, while "the distribution of feature films beyond the borders of the countries that produce them is a serious problem in regions such as Europe and Latin America" (UIS and Albornoz 2016, 13). Whether due to cultural or market barriers, the "gravity model"—that successfully predicts most global goods and services trade flows falling rapidly with geographical distance (Tubadji and Webber 2023)—appears to apply with particular force to non-English film.

This essay probes available data from the audiovisual policy domain (UIS 2009, 2012, 2013; UIS and Albornoz 2016; UIS, Benhamou, and Peltier 2011) to examine filmmakers' response to the unrelenting rise of English in global cinema. It asks whether co-production and other strategies to promote consumption of a film in more than one language can counter natural language erosion, especially where minority (or lesser used) languages are distribution strategy targets. We inspect a raw data set provided by the UNESCO Institute for Statistics (UIS) on national film production by language of film, currently recorded yearly for 2007 up to 2017 and publicly available as spreadsheet at www.uis.unesco.org. Other commonly data sources used in cinema research (e.g., IMDb or the European Audiovisual Observatory) are not considered as they lack sufficient information from which to derive any parameters for language distributions and—as in the case of European Council information—do not correspond with the world language system as a unit of analysis.

WHY ENGLISH “HYPER-CENTRALITY” IS HARD TO SHAKE

Language, as a communication tool, is a prototypical “network good”, its utility increasing to each user as more people use it (Klemperer 2018). The voluntary learning of English across multilingual states such as India and South Africa before and even after they attained majority rule, and of Chinese around Asia today, reflects these network externalities, which have also allowed a small number of multinational channels (e.g., TikTok) to dominate the social media space. Network effects have turned English into a “hyper-central” language (de Swaan 2013), with a significant proportion of humanity forced to learn or at least engage with it because of the associated opportunities for communication, work, trade and travel.

At the same time, national languages remain part of humanity’s cultural wealth (Bair and Wherry 2011, 1). Much information, literature and other cultural production contains (or is contained in) languages specific to one community or region, and not easily translatable into others. It may be necessary to learn these languages to appreciate and absorb the culture they contain (Alexander 2018). The cultural wealth of the local language may be one reason why those who are raised in it choose to stay within it, and not acquire a more widely spoken or global language. Other reasons for staying monolingual, even in a language with comparatively few users, are the cost and time of language acquisition and the number of community members who are already multilingual and can translate for those who are not.

Language groups typically consist of a core of monolingual users and multilingual users. The bridging and brokering functions of multilingual speakers are key to establishing the centrality of a language (de Swaan 2013). As a result, the exchange of texts (culture) between the major and minor language groups proceeds on highly unequal terms (de Swaan 2020). Multilingual agency as one social form of “brokerage” (Stovel, Golub, and Meyersson Milgrom 2011) has received little attention. Backed up by national and colonial policies, which encourage, demotivate or constrain individual and family choices, monolingual competency has typically been promoted, while nationalism still had to develop pathways for brokerage, mainly doing so through specialists as in diplomacy, international trade, and conflict negotiations. Competition among indigenous languages also seems to favor persistence of colonial languages formerly introduced (see also Laitin 1988). Entrepreneurs present individual efforts to bridge into other economic spaces (Tubadji and Webber 2023; Selmier and Oh 2013).

De Swaan (2013) models the global language dynamics by drawing on a language’s communicative potential, assuming people adopt, use and abandon language(s) based on a set of preferences apart from the network propensity of languages to connect speakers. Sociologists of language designate a minority language group where the language in question is specific, relates to a recognizable culture, and has little relevance for everyday usage in that group. The relative lack of ideological, institutional and political structures encourages the relative significance of minority language grouping (Nelde et al. 1996, 1).[1] De Swaan argues that a person picks a language X over another based on the perception that it will add value to her communication repertoire. This so-called communication value Q ("Q-value") is formally derived from the person's perception of the proportion of existing language speakers (prevalence P) as well as the proportion of multilingual speakers, which identifies the centrality of the language (centrality or C). (In this way multilingual speakers are counted twice, both as monolinguals in P and multilinguals in C.)

$$Q_X = P_X C_X$$

Since the Q-value derives from the repertoire of languages held by a speaker, Q measures the language-learning cost that people are willing to incur. When speakers of a language X learn the language Y, both X and Y gain in the numbers of multilingual speakers. But when within one speaker group a certain number of multilinguals exist, the wish to learn that other language may go down (de Swaan 2020, 2013). This perceived lesser worth may be due to diminished competition value (an advantage to speak X in addition to Y) or cost-saving provision of bridging services (such as easy translation tools or low-cost providers). Learning English en masse in China, for example, results in perceived lesser urgency by others to learn Chinese (see footnote 8 in de Swaan 2020, 208), creating less demand for Chinese language instruction.

New technologies for moving artists and artwork around the world, along with reproductions of their work, have resulted in culture—and with it, language—becoming globally more accessible to consumers independent of socioeconomic status. While some artists can survive as "big fish" in the small pond of their native language, this is increasingly a low-profit option, despite being low-cost and low-risk (de Swaan 2020, 210). Local-language artists face competitive pressure from imports that may appeal to the same audience, even if embedded in a different culture and language, with the competition increasing as more of their audience responds to pressure to get familiarized with the more "supercentral" foreign languages such as Arabic, Russian or Swahili (de Swaan 2013). Artists can turn this threat into an opportunity by starting to work in a more widely spoken language or redesigning their work to be more translatable and cross-culturally appealing.

Competition has intensified because the most successful producers of artwork in the larger and more linguistically unified countries can often still recover

1 An example told by Vanhaelemeesch (2021, 171): "In most Central American countries, there is a large and diverse presence of indigenous peoples whose ancestry predates the Spanish colonization of the Americas. In Guatemala alone, there are 23 officially recognised languages spoken, but all educational programmes are held in Spanish, limiting the possibilities for people who live outside the urban centres."

their costs, and make a profit, just by selling to their domestic market. They can then make additional profit from any sales to foreign markets, even if these are "dumped" at a price below cost, as has become typical for TV series (de Swaan 2020; Chalaby 2016). When producers of artwork in linguistically smaller markets respond by going outward, making their products more exportable, the international competition becomes even more intense. Independent cinema (Perren 2012) is one example of the problem text creators of small language communities have. Artists must choose between creating for a limited domestic audience, with competition initially low but potentially rising due to foreign imports, or trying to gain attention by creating for those in a larger or major language. They can "be a big fish in a small pond or a small fish in a big pond" (de Swaan 2020, 210). "Big fish" text creators tend to do well where centrality C is lower and P very high.

The production decisions of filmmakers and cinema distributors are shaped by knowing that consumers have made "sunk cost" investments in the capacity to receive a particular language; and that, overall, social institutions help maintain those competencies, since consumers have invested to this extent in the cultural norms and assumptions associated with that language. In an original study of early foreign engagement with China (Selmier and Oh 2013), the authors show that "pidgin" forms of the language were adequate for commodity trade, whereas fuller language acquisition was needed for the investment of larger sums of capital, which required an ability to understand contracts and the social norms underlying them. The "hyper-centrality" of English today is reinforced by its association with diverse cultures: investment in English "buys" access to a wider cultural range than most other languages (Mair 2013; de Swaan 2020).

Real-world developments add challenges to the theorizing of the Global Language System (de Swaan 2020; Vogel 1995), as the control of language competency training today shifts away from national education policies toward the digital economy and artificial intelligence (AI). This greatly eases translations, albeit not without weakening the bond to the exclusivity of a national language and its adjacent cultural markets, which is also intermediated by position in the world language system and the dynamic global economy. Translation (for books see Heilbron 1999) can be regarded as a measure of domestic retaliation against foreign imports, and as trade-promoting when successfully spreading text as export away from where it has been produced. Text creators can also be or become multilingual or acquire translation of their product. Increasingly low-cost or no-cost technology often expands both text creators' ability to expand attention for their products and their dependency on translators and a foreign-language market corner in the destination country. Cultural exchanges broadly encourage the tendency for producers and consumers to learn the major language, as do smaller-community language users.

De Swaan highlights the self-reinforcing advantages a larger language confers on its users, referring to "the profits of occupying a particular place in the system that is not of their own making" as a position rent (de Swaan 2020, 211). We may restate this as a natural resource rent, a premium comparable to that enjoyed by owners of prime quality land. He sees "linguistic justice" as the sum of efforts and policies to compensate "the inequities of the World Language System" (de Swaan 2020, 211), while stressing the paradoxical situation of English: the more languages are diversified, as in Southeast and South Asia, South Africa, Nigeria, and India, the more English will be spoken (Mair 2013; Swaan 2020). Simultaneously, variety in smaller-language communities remains, with people not discarding their home language while learning English and joining its global speaker community. Threats to their collective cultural capital come from speakers' inability to decode their own language, which most affects indigenous communities. Unlike so-called minority groups—such as Frisians in Europe (Williams 2002)—indigenous groups face problems from orally transmitted knowledge and financial resource strain which they need to overcome to rescue language as intergenerational cultural wealth (de Swaan 2020, 212).

Policy research analysis on Europe's diversity policy almost three decades ago identified "language prestige" as a motivational force,[2] finding that "the vast majority of language groups suffer not only from a lack of support [by state and/or civil society] but sometimes from open hostility to their existence and activities". Demographic size rarely acts as a shield from language use erosion, which can even affect severely "some of Europe's largest language groups" (Nelde et al. 1996, 8). The report found success where language groups carved out economic niches such as local tourism, rather than general market integration in the EU, as commanded by Union accession policy (Nelde et al. 1996, 8).

SURVIVAL STRATEGIES FOR NON-ENGLISH FILM

Turning to cinema, there is political resistance to the decline of minority languages, especially when their speakers associate displacement by a majority language with loss of autonomy to majority rule. This resistance is stiffened by language being the vehicle, and storage unit, for much of the culture and tradition that binds a community. Governments respond to these pressures by subsidizing the production and replication of literature and film in minority languages and promoting vehicles such as film festivals to support the cause (Elsaesser 2005; Falicov 2016; De Valck 2007; Bisschoff 2009). State subsidy is now a principal survival strategy for non-English language film, the costs of which are often repaid by the preservation of cultural value, with the added political appeal of gaining support from strategically important linguistic

2 The Euromosaic Report includes only European autochthonous language groups, i.e. groups laying claim to a territorial base that links language and society. This excludes, for example, languages like Romani and Hebrew (Nelde et al. 1996, 14).

minorities. A film showing in Urdu as well as Hindi, for example, may be adding value to the language perception per se but also to its speakers—if the effect is long-lasting, or if it keeps expanding, as when Urdu became the standard additional language to any Hindi-language film. In India, where states support film industries associated with minority language groups, only 2% of films are shot in English (UIS and Albornoz 2016) despite its being widely spoken. India produced 1,724 films in 2013, a growth of 66% since 2005 and understood as a reemergence of regional film production for several language markets. In Nigeria, Yoruba and Hausa are supported through the film industry and its popular video format (Austen and Saul 2010).

Beyond subsidy, the "multilingual" film uses audio content in several languages or dialects (Chan 2008).[3] This is highlighted by the 2005–2006 data on film production (UIS 2009) with information on 38 countries, identifying 44 distinct languages. More than one-half of these countries indicated more than one language of film production (range of languages 1–6). Among these, only half of the films identified in the survey were truly multilingual, as distinct from multi-language production for distribution and consumption in several languages. UIS data includes, in its "multilingual" count, films made in countries where more than one language is widely spoken. This may exaggerate the number of authentically multilingual films intended for, or capable of, international distribution.

A more common route to new audiences appears to be the "multi-language" film, which may be shot in only one language but is designed for markets abroad. Translation may be achieved by technological means such as re-recording, dubbing or subtitling; or by film-making techniques such as visual effects and simplified dialogue, all of which facilitate understanding by foreign-language audiences. But these approaches often strip the film of its more linguistically sophisticated and culturally specific elements—frustrating the aim of using film to preserve a region's cultural uniqueness, and promote its understanding by an international audience. In fact, writers and filmmakers in most non-English languages seeking international sales have to keep their "language intensity" low, so that viewers can get value from the film with minimal knowledge of its language. They may also have to limit their "culture intensity", focusing on norms and styles that are most easily understood by other cultures. This drives the use of cartoons, visual imagery, or simple scripts that can be translated or subtitled easily, when a product is intended for export, at times becoming a new global cultural phenomenon. Makers of films and other products in English can afford to be more "language intensive" and appropriative from different cultures, because of the number of people worldwide who have invested in English's "hyper-centrality". This raises the question whether cinema co-production can stem the inequality in the global language system.

3 As confusingly used in UIS technical papers and as addressed in this essay.

CO-PRODUCTION: A EUROPEAN FORMAT AFFECTING THE LANGUAGE SYSTEM

International co-production (Council of Europe 1992), linking production teams and locations in more than one country, can be an effective way of extending a film's appeal (Lim 2006; Yan and Yu 2021). As well as combining talent from different countries on the production side, before and behind the camera, it can extend the range of visual and cultural influences that may draw an audience in. Co-production, including both trade bloc initiatives and national promotion schemes (e.g., for Japan see Shackleton 2007; UNIJAPAN 2009), may also enable distributors to break through cultural trade barriers, when governments impose quotas or local content requirements on imported film (Hong and Sun 1999; Parc 2020). A study by Kanzler in 2008 (cited in UIS and Albornoz 2016, 10–11) suggests a number of results regarding European co-productions (2001–2007): that their release is on average in twice as many markets as the national counterparts, that their revenue is on average 2.78 times higher than for those counterparts and that the "international market provides 41% of co-production revenue compared to 15% for national production" (UIS and Albornoz 2016, 11). This final figure implies that more profit is made abroad, or that co-productions are not primarily for the national audience to consume, representing an export good that attains prestige only abroad (Wu 2007).

Survey results (UIS 2009) reveal that international co-production of films is mainly a phenomenon involving big producers in developed countries, particularly the EU. In 2006 France, Germany, Italy and Spain were the biggest coproducers of films, with rates ranging from 47% to 78% of annual feature film production, contrasting with China's co-production rate of 14%. This can be explained in part by cooperation agreements (Council of Europe 1992). The European Convention on Cinematographic Co-production encourages the development of European coproduced film.[4] Europe's major policy instrument and fund (Eurimages 2021) distributes soft loans and subsidies for international co-productions as well as subsidies that also include the promotion of exhibition, targeting mainly features and independent filmmaking through cooperation agreements with various festivals and film markets, while also promoting gender equality in the film industry (Loist and Prommer 2019).[5]

The aforementioned convention formulates the broader terms for regulating and overseeing the conduct of business regarding bilateral and multilateral co-production based on the Council's goal to "achieve greater unity" between the Member States, to "safeguard and promote the ideals and principles which

4 Film is a "work of any length or medium, in particular cinematographic works of fiction, cartoons and documentaries" (Council of Europe 1992).

5 The Eurimages fund's overseers are the 39 national representatives on the Board of Management; the top feature producing countries (France, Germany, and Italy) are permanent members on the highest executive committee.

form their common heritage", defending freedom of creation and freedom of expression as well as "cultural diversity of the European countries" as one of the goals of the European Cultural Convention (CETS 220 1992, 2017, 1). This path appears as different from domestic policies in many multilingual countries in the Global South, where historically consumption in several languages is necessary to balance communal interests and to reach speakers. The same goes for region-spanning languages, e.g. Egypt's central role in Arabic-spoken cinema. In Europe, co-production policy also aims to reduce the influence of English-spoken blockbuster cinema product (Stringer 2003) which nonetheless enjoys robust success (de Grazia 2005).

Funding eligibility in Eurimages involves rules on the number and diversity of the coproducing agents, rules defining minimum and maximum contributions of total production cost of a work, rules assigning rights to the coproducers, rules on national employment and national location for production of the work, and financial rules. Co-production status can be granted to works that signal a real "recognition as a national work in the country" and help promote the European identity through co-production. Export trade is regulated as to quota attribution, language of the film and festival participation. Article 14 on languages stipulates that "the competent authority of a Party", which is the overseeing authority for a co-producing party in question, "may demand from the co-producer [...] a final version of the cinematographic work in one of the languages of that Party", while Article 15 on festivals stipulates that co-produced works "shall be shown at international festivals by the Party where the majority co-producer is established, or, in the case of equal financial participation, by the Party which provides the director" (Council of Europe 1992, 5). In 2006, the EU ratified the UNESCO Convention on Cultural Diversity.

In practice, a co-production can have two or more "nationalities" so that tax incentives and other public support can be picked up in more than one country. More recent reports (UIS and Albornoz 2016) confirm activities concentrating on western Europe—with France ranking top, its co-productions involving Belgium, Germany and Italy. Belgium, Ireland and the Netherlands are also co-production leaders despite not having a large production base. Belgium's 2013 co-production share, for example, was 76%, the highest among top coproducers in 2013. Ireland, following with 62%, also likely benefitted from a tax advantage for co-production location.

The growth in films co-produced between Global South and EU countries has remained "modest", even though such films have generally been successful and facilitated EU-market access and increased attendance for co-productions (Vogel 2012; Falicov 2016). The EU has supported external co-productions, e.g., to address the absence of public funds in African countries. As with strategic partnerships and joint ventures in other industries, filmmakers from the Global South are incentivized to enter co-production with EU (or US) filmmakers by the prospect of access to finance, distribution, technology and training that are concentrated in the higher-income countries. But these potential gains may be outweighed by the "heavy administrative burden, possible impediments to the development of African film production companies, the dominant influence of European taste and the homogenisation of production" as observed by Cocq in 2006 (cited in UIS 2009, 5). In the survey, 70% of countries that produced less than 30 films also had a co-production share below 40%, which is likely to relate to the lack of resources to produce film according to traditional industry conventions in the first place.

European co-production policy can be interpreted as an attempt to tax away the extra profit that producers gain by adopting a dominant or "hyper-central" language. The position rent attached to this (de Swaan 2020) can be measured, for example, as the box-office revenue that film-makers in the UK or US can gain by distributing their film to other English-speaking countries outside the respective domestic market. If the costs of production have been fully recovered via domestic sales, any additional revenue from exports counts as economic rent. The scope for foreign sales depends on the extent to which the producing country's language is used or understood abroad. Effectively there will be big rents to US-made films, and Indian films shot in English; much smaller rents to Chinese films shot in Mandarin or Japanese films in Japanese. The incentive for co-productions to break into new languages rises as the centrality of the home language falls.

MEASURING LANGUAGE DIVERSITY IN CINEMA AND ITS LIMITATIONS

Diversity in cinema productions relies on many different factors, including the ability of producers to work with filmmakers and actors from different places, the number of films released and the level of technical standardization. As argued by UNESCO researchers, a strong definition of cultural diversity is needed because the meaning has been "analytically neglected" and in need of "systematic or robust understandings" (UIS, Benhamou, and Peltier 2011, 11). They see diversity in terms of two complementary dimensions, where the first involves the criteria that apply to individuals, such as their choice of genre or filmmaker profile, and the second relates to more material criteria that apply to products, like the nationality of a film. These human and material criteria may be linked, and while some aspects are easily quantifiable, others are more qualitative (UIS, Benhamou, and Peltier 2011). The authors associate diversity in cultural-economic goods with "industrial structures and in the governance of companies" in the creative-cultural industries, concluding that governments should be targeting the growth of SME (small and medium-sized enterprises) directly or indirectly, including subsidies (UIS, Benhamou, and Peltier 2011, 11; on subsidization of film business see the debate in Parc 2020).

One useful measure appearing in other cultural policy papers (UIS 2012) is that of internal and external language diversity. Internal diversity denotes that the languages of domestic film production mirror the linguistic characteristics of the country, whereas external diversity observes the use of foreign languages in domestic film production. Production and consumption of multilingual (or multi-language) films may indicate both internal and external diversity. This measure concerns attributes of cultural-economic goods rather than linguistic properties, such as for example the notion of the "distance between two languages" (Ginsburgh and Weber 2011) or the proportion of language speaker groups (de Swaan 2013).

These linguistics-focused analyses focus on language diversity, whereas UIS explorations have sought to observe diversity on many dimensions. For example, a 2014 survey of UIS feature film production in 2012 and 2013 (UIS and Albornoz 2016) with data for 97 countries (22% of the data being estimates rather than national-government information) defines audiovisual diversity as diversity in sources (content producers, distributors and the diversity of firms' personnel in the sector), diversity in and of feature film (diverse genre, gender/ethnic diversity of people making the films; diversity of ideas in feature films); and diversity of audience exposure to feature films, "distribution of audiences" and content diversity. As the report notes, "contents should mirror the multiplicity of groups co-existing in a given society [..] and echo the expression of foreign cultures"; they should secure that consumers have audiovisual choices, create and disseminate audiovisual content (UIS and Albornoz 2016, 6).

These discussions direct attention at shortcomings in the data and the conceptual approaches related to the important feature of language in cultural-economic production, including feature co-production. The UIS survey was designed to ensure more comparability "and better quality data in the field of cultural statistics" in the light of changes to film industries in "certain developing countries" (UIS 2009, 1). While raw data have been added, now presenting information on 2007–2017 for a great array of countries, it still remains the most detailed comparative survey of language in film production to date whose potential for research with publicly accessible data remains unlocked. While fuller assessment cannot be given here, a few further observations critical of the range of possible observation and measurement biases that need to be addressed shall be given.

For example, a reported measure of distance (vs linguistic disparity) may be whether the language is spoken in a neighboring country. Finnish is a prime example as it is very dissimilar to Swedish on linguistic diversity measures, such as the Dyen matrix (concept discussion in UIS, Benhamou, and Peltier 2011). Producing films in Swedish, Estonian, and English in addition to 62% in Finnish, films can essentially be exports to neighboring countries, while English may be for the EU market. This may relate to cultural and regional proximity but not to linguistic similarity (UIS and Albornoz 2016). Intriguingly, the notion of the multilingual film may be unsuitable in economic research because in each market where it sells, i.e. competes with other goods, it enters the marketplace as "monolingual" rather than retaining linguistic diversity. To use the same regional example, a Finnish co-production showing in Swedish in Sweden is not competing on the Finnish-language attribute. A film can also succeed in one language and not in another, which is not the same as saying it can succeed in one country but not in another.

Truly multilingual films essentially require a multilingual speaker competence, which makes them unattractive for many film-distribution territories, including the profitable US American theatre screen. US majors "operate in coordinated fashion in foreign markets" which curbs local production and independent distribution, leading to narrowing diversity of feature film, in relation to number of screening slots in the domestic theatres of those countries and the dynamics surrounding pricing and admissions cost (UIS and Albornoz 2016, 13).

Marked shortcomings include the persisting fact that most UIS data still come from the Global North-countries and here also from the core of Europe and Northern America. The 2005–2006 data exemplify this imbalance, showing a coverage rate of 88% for Europe and North America, 54% for Asia and 45% for the Arab world. Inspected at the national level, this shows a "development bias", as data majority comes from more developed countries. Looking across the data supply, the monitoring of the UIS data reflects macro-socioeconomic inequality, the more recent diversity likely resulting from co-production.

Among the available data, some entries of countries and languages in which films were produced do not give the number of films, except for a total annual country figure. There are three years of Czech Republic data (171 films in total), one year of Kazakhstan data (11 films), one year of Togo data (16 films), two Mozambique years (54 films), 2 years of Madagascar data (87 films), and two years of Netherlands or Dutch data (174 films) which were not shown by language specifics. The vacant category of "Other languages" is a further obstacle to precise diversity measurement. It potentially conceals events that could add to those "supercentral" and "hyper-central" languages which may help in corroborating assumptions about the tendency for English to prevail not just in the context of cultural diversity policy instruments but also perhaps because of it.

Another major methodological problem is transparency in enumeration of works, preventing effective statistical error calculation. For example, there are no entries for Poland and Germany, which would have had national production during 2007–2017. This does not mean that there are no films produced in Polish or German: in a Belarus-recorded film made in 2009 in German, Polish, and Russian, or in many Austrian and Swiss films in this dataset those languages emerge, albeit as minority effects. Similarly, data from the now large producer China are not included, except for productions in Macao SAR. Hong Kong, with an old and prestigious film industry, is also omitted. While no Afghanistan data are listed, a film made in Great Britain in 2014 is produced in Dari, Afghanistan's major language (local Persian); and there are many others where Dari is included in the multiple-language set.

The simple measures of language diversity in UIS reports are not theory-driven despite the obvious social science interest in cultural diversity and inequality. Cinema language data can therefore not be approached by primarily adding up language counts for a film, as relative impacts from language attributes in their real-world effect through distribution and consumption by speaker groups differ in decisive ways that theory aims to model. With more enhanced data, language diversity could be measured using comparable indicators to those developed in economics for the distance between product categories or the distribution of market shares.

CONCLUSION AND FUTURE RESEARCH

In this essay we introduced the study of cinema language pertaining to its importance to the global language system and to film production, exploring UNESCO's UIS dataset and related staff reports. Beyond the more technical papers there has been scant attention by researchers—despite the importance of language diversity as good protected through cinematic works and its wider role in the survival of languages, and despite its significance as a film factor that drives commercial release strategy and consumption choices. There remains a need to show that public measures such as co-production, as part of "cultural governmentality"-driven agendas (Reckwitz 2017), actually have the intended social consequences such as the prospering of languages and communities that maintain them, and that cultural diversity and expressivity policies are worthwhile taxpayer-money spend on cultural economies like cinema.

With the original theory of the Global Language System (de Swaan 2020) we aim to show that language, proposed as a hyper-collective good, is a network good affording position rents. Only when "other-language proficiency" expands to a point where speakers move toward that other language (or other languages), can the network benefits be challenged (de Swaan 2020, 211). English as "hyper-central" cultural text influences people's language usage and cultural consumption and also serves as status marker, conferring difference in labor markets in non-English speaking language communities.

Today's lesser central languages struggle to survive the domination by "hyper-central" and "supercentral" languages and to maintain intergenerational transmission. Additional erosion of minority languages emerges from the "march" of images as global symbolic brokers of the "iconic turn", able to pass by the boundaries which texts provide by image as an affordance. This "stab in the back" by (other) culture increases through yet another threat, the bundle of programming languages known as "coding", which has made its way into research logics and communal expressions regardless of natural-language differences. Against these, communal efforts to mobilize around traditions of culture and language, and state efforts to assist these according to national policy ideas, may also weaken—unless they may be "enriched" or "museumalized" (Vogel and Shipman 2023; Boltanski and Esquerre 2020).

Co-production studies are difficult to perform empirically due to methodological constraints emanating from data collection efforts that mostly remain incomplete for such a highly complex creative good as cinema. Overall, the UIS reports and exploratory data analysis provide first clues about the inequality that cultural diversity instruments cannot fend off easily. More research and more sophisticated statistical analysis are needed, as are resources for the provision of robust public data to make such analyses worthwhile.

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