

LINGUISTIC POPULISM IN INDIA (DISCUSSION DOCUMENT)

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ABSTRACT. Sanskrit can be a great language for science and administration in India: everyone uses its words, it favours no one, it embodies much of India's civilisation, and its word-building readies it for today's needs. Instead, Hindi was chosen as official language in a populist move favouring the largest linguistic group and dis-favouring the South and Northeast of India.

Each state imposes its own language. Indian governments have for 70 years given majority speakers unearned privilege but little else: all science, technology and higher studies are done in English. The politics has been only about power. In most subjects, no Indian language has been developed to a level fit for higher study.

Language skills have declined across the board. People no longer learn languages neighbouring their own; they talk to people from neighbouring states using the bad Hindi they learn for Government jobs. Many call Hindi the "national" language (it isn't). Othering is widespread. People sing Hindi songs in "national" competitions where their pronunciation is mocked. Hindi films get laughs by simply showing a caricatured "South Indian". Tarun Vijay of the BJP in 2017: "If we (Indians) were racist, why would we ... live with South Indians? We have blacks ... all around us".

Globalisation brought high-paying jobs requiring technical skills and English; Hindi and state languages lost their status. But now even the poor want English-medium schools. Since most teachers can scarcely speak English, their schools will teach bad English and little content, exacerbating India's education problems.

One could instead teach children in their first language, giving them a strong foundation in their culture (and their often hoary literary traditions) and in English as a foreign language. Will India pause its rush to disaster and implement this or other solutions?

Skidmore [1] says that "Populism appeals to the masses, and against elites. To the extent that any successful democracy must respond to popular desires, democracies must incorporate some elements of populism. Nevertheless, for continued success a democratic polity also must ensure widespread education ...". India has taken many populist steps, and largely failed to educate its people [2].

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India's language policies have produced popular movements against the policies themselves and the "outsiders" they create. The linguistic landscape is sketched in the Appendix on the state of India's languages and education. The main policies relevant here are the constitutionally mandated use of Hindi and English for Union business, the three-language formula in education (local language, Hindi and English), and the 1956 administrative division of India into linguistic states. Globalisation has enormously increased the importance of English. It is now everybody's aspiration that their children should speak English.

Sanskrit, a missed opportunity. Upon its independence, Indonesia, like India, was faced with many languages but none understood everywhere [3]. As a national language, it chose not to use Javanese, spoken by more than 48% of the population, to avoid discriminating against the rest. It chose Malay, a foreign language that was the sailors' lingua franca, and invented words for administration and science. The result is Bahasa, hugely successful as Indonesia's national language .

India used no such rational procedure. It is hard to find the history of how Hindi became an official language of the Indian Union (the other is English). Aspects appear in [4, 5]. Hindi is spoken by 44% (disputed) of the population, concentrated in the central and north-central regions: exactly the features that ruled Javanese out in Indonesia. Hindi is also a lingua franca, though not in south or north-east India. But a lingua franca is a bazaar language, not a complete one.

Sanskrit had fallen on bad days by 1947: "hardly one percent of Indians could read and write [it] ... it was only a ... memorising and reciting language, but not a language of regular reading and writing. In no house in India was/is [it] a kitchen language[5]." Similar statements could have been made about Latin in Europe, and yet it was the language of scientific and philosophical communication, and bound Europe together. Sanskrit had been for centuries India's equivalent of Latin, and was the language of "Hindu" (including materialist), Buddhist and Jain philosophies, and of science, poetry and drama.

India could have made all regional languages official, as in Europe [6], with Sanskrit and English (the only languages spoken everywhere, if by minorities) as national languages for special uses: a) Sanskrit, revived (like Hebrew [7]) but with simplified grammar, for science and administration (not for kitchen or daily use), tapping into its enormous vocabulary and word-building abilities, and b) English for international use. Instead, India chose Hindi, and has paid with "the balkanisation of the South" [8], utter dependence on English, and loss of contact with her past, locked in classical texts that few can read [9].

1. POPULIST REACTIONS TO GOVERNMENT POLICY

1.1. Anti-Hindi movements in the southern states. These movements have been strongest in Tamil Nadu and started as early as 1937 [10]. They have occasionally turned violent, and several deaths have resulted from police firings. But one result has been that Tamil Nadu has carved out its own path, based mainly on Tamil and English as the languages taught and used as media of instruction. Another is that English will remain indefinitely as a Union language.

The recent attempt by Amit Shah, the President of the BJP (the ruling party in the central government) to once again sneak Hindi in to the role of national language aroused strong reactions [11], and a retreat by Shah to a claim that he was only suggesting that Hindi should be the second language. His new position can be attacked too, asking why Hindi should be everybody's second language.

While Tamil Nadu is the main centre of opposition to the role of Hindi as de-facto or de-jour national language, other southern states have always had simmering oppositions in the middle of sullen or resigned acceptance, while life goes on as usual using the local language. The recent removal of Hindi signs from the Bangalore Metro [12] is one example of successful opposition to unnecessary Hindi presence.

1.2. Racism against South Indians in the North. The primary hold the North has over the South is: "we don't have to learn your funny languages; you have to learn ours, which is the norm". There is little other claim to superiority in the North. Indeed, the South usually has better civic order, education and economic success. A self-consoling joke in the South used to be "UP (the northern state of Uttar Pradesh) produces nothing, but it produces every Prime Minister".

This power imbalance produces racism, a term many will protest, though it is the correct one to use, as any South Indian who has lived in the North can attest. The mitigating factor is that this racism comes only occasionally to the fore, and is usually mild in expression.

But the "othering" is constant. In the North, all south Indians are "Madrasis", their languages are all the same and sound funny, as does southern music, and they only ever eat an iconic few dishes. The southerner's Hindi accent is mocked. Successful southerners are admired but with a reservation of some kind, e.g., their cleverness is "cunning". For decades, Hindi films brought on screen a "southerner" with "typical" dress and accent to guarantee immediate laughs.

All these experiences parallel those of immigrants in the West, and those of provincial people in the centres of power.

1.2.1. *More on racism.* We can debate how racism relates to linguistic power balance, but it seems clear that they can reinforce each other.

Racism is widespread in South Asia, and has taken deadly form. It enabled the 1971 genocide [13] against the Bangladesh population by the Pakistan Army. The separation of Bangladesh from West Pakistan was of course itself a pure linguistic popular movement. The Bangladeshis refused to accept the imposition of Urdu as national language and wanted Bangla to have equal status.

The specifically anti-South Indian racism, usually a dirty secret in polite circles, was revealed spectacularly in a Freudian slip by Tarun Vijay, a BJP ideologue: "If we (Indians) were racist, why would we have the entire south? Which is you know... completely Tamil, you know Kerala, you know Karnataka and Andhra. Why do we live with them? We have blacks, black people all around us" [14]. At one stroke, Vijay let several cats out of the bag: South Indians are not Indian, they are black, and they live in India on sufferance.

1.3. **Over-centralisation and low language standards.** It used to be a matter of pride for, say, classical music practitioners and fans to be able to speak neighbouring languages, both because the songs may come from those, and because other fans speak them. Learning neighbouring languages also strengthens one's own. The three language policy means that bad English and worse Hindi now have to be used to talk to the neighbours. By choosing communication with the centre over that with neighbours, this policy has actively lowered linguistic competence and cultural standards.

1.4. **Linguistic consolidation in the north.** The three language formula applied in the North as well, and pious hopes were expressed that north Indian children would study a south Indian languages in addition to Hindi and English. But there is no reason why they should. There is no money to be made by learning a southern language, and nor can they be tempted by the cultural riches of the south, since they are never exposed to these riches and do not expect to like them.

A price paid by non-Hindi speaking northerners is that they have largely surrendered their entertainment to Hindi. Once proud traditions of Marathi theatre, for example, are much less prominent now in the days of glossy Hindi films and serials. This is therefore a peculiar corner where the south does better. There are substantial film and TV industries in each of the major south Indian languages.

Wealthy northerners could even "emigrate" to the South and largely count on money and the politeness of their new neighbours to keep speaking Hindi and never learn the local language. This behaviour

continues even now, with the southern states doing better from globalisation than the north. Working class northerners coming to the south to find work still expect to get by in Hindi.

1.5. Popular belief that Hindi is the national language. This seems to stem from a few factors. One is that the other Indian languages are explicitly labelled “regional” in the Constitution, and are indeed that. Which implicitly makes Hindi “national”, even though it too is regional, except that its region is a large chunk of central and north-central India. It also works as a lingua franca in much of India, except in South India and in the North-east. Finally, Hindi films are shown everywhere in India, though they have strong competition from southern language films in South India.

A striking example of the assumption of “national language” happens in singing competitions. People singing however beautifully in the “regional” languages are told they must sing in regional competitions, or sing in Hindi to get into the national one. If they choose the latter, they must submit to extensive mockery of their pronunciation and instruction in the Arabic sounds needed for the “Hindi” songs which are often actually in Urdu.

Other striking examples, this time of the centre’s relentless push in favour of Hindi can be seen in the work of the CSTT [15], which finds scientific and technical terms for Hindi, but does almost nothing for other languages. In a country with huge unemployment, can they not employ a few translators for the other Indian languages? Worse are the Oral Rehydration Salt packets needed to protect children from death due to dehydration in cases of diarrhoea. The instructions are printed only in English and Hindi. The children of the speakers of other languages can be left to die, apparently.

1.6. Language based states. In 1956, India was divided into linguistic states. The history is covered in Ramachandra Guha’s book “India after Gandhi” [16]. The relevant chapter is conveniently summarised in class notes for a course based on the book: [17].

Potti Sriramulu. One striking event was that the first linguistic states decision was taken *three days after* Potti Sriramulu, who was fasting until death to support his demand for a Telugu-speaking state, did indeed die of his fast. In a country that usually stops such fasts by some means or other, Sriramulu’s fate perhaps foreshadowed his relative importance and that of his state. He is now largely forgotten. Andhra Pradesh was the first linguistic state created after 1947, but Sriramulu is never mentioned in the annual celebrations of the creation of the various states.

Non-violent ethnic cleansing. The creation of linguistic states predictably made instant outsiders of those whose native languages were not that of their state of residence. Large Telugu-speaking minorities in Orissa and Tamil Nadu slowly disappeared, either ethnically cleansed non-violently out as new outsiders, or by pretence that they were now native Oriya and Tamil speakers. All other language groups have similar tales to tell; see [17].

Violent ethnic cleansing. In some states, language “insiders” have felt emboldened to violently attack “outsiders”, typically on the grounds that the latter are taking jobs from the insiders.[18, 19, 20]. This started at least as early as 1966 with attacks on South Indians in Bombay, and has continued off-and-on in various states against migrant workers and students. Sometimes, the threat is not to chase the migrants away, but to extract protection money from them [21].

Evaluation. Guha himself credits the linguistic states with holding India together by providing a home to each language group, and thus preventing fissiparous linguistic forces from tearing administrative structures apart. This evaluation is questioned in [17].

Just as a common religion failed to prevent Bangladesh breaking away from the then West Pakistan, a common language (Telugu) failed to hold the original Andhra Pradesh together. Telangana has now broken away from it.

Many of these troubles might have been avoided had India listened to Ambedkar. In the matter of states, see [8], famous for the phrase “consolidation of the North and balkanisation of the South”, and for the discussion of separate federations for the North and the South.

1.7. The failure to develop Indian languages. Indian language policies have largely been about what language the central or local government, or local thugs, can impose. With the partial exception of Bengali, Malayalam, and Tamil, no serious large-scale attempts have been made to make Indian languages (abbr. ILS) fit for modern science, technology and business. Indian language policy experts seem not to know that an attractive or useful language (e.g., English) needs no imposition. The popular response to deal with needs not catered for by governments has been to surrender to English in various ways.

The linguistic ills of India are analyzed in [22]. India uses ILS for art, but English for science, producing an IL/English art/science schizophrenia. ILS cover art and emotion, everyday speech, TV, film, news, songs, plays, stories, epics, politics and religion, but not science. Indian English (abbr. IE) covers science, but has no poetry or song.

1.7.1. *Science = English.* Since few speak English, science is largely for the few [23]. English equals higher studies, better job prospects, success and wealth.

Science in ILs? School books, a few college books, and some news items do cover science, technology, engineering, mathematics, medicine, and social sciences (we abbreviate the entire range as STEM) in ILs, with IL technical terms. But for popular and advanced STEM material, English is often the only source, and with wide choice to boot. So even STEM-trained IL speakers see English as the only serious language for STEM topics, and use English technical words for all such matter.

The English words immediately make all STEM issues “foreign” (Sanskrit words do not have this effect). Some students have good L1 (first language) and STEM skills, but avoid higher STEM courses for fear of the English medium these entail [24]. Others enter STEM courses, but struggle there because of English [25]. Even if their lecturers speak L1 to help them, the English terminology is daunting. There are few L1 sources at college level, so they can fail even at their favourite STEM subjects. If they pass, English still threatens their job prospects.

The dominance of English can be seen in any Indian bookshop. By and large, apart from religious books, ‘book’ in India means English book, whether actual English or IE.

1.7.2. *Indian English (IE).* The best IE prose is as good as any English prose in the world. But most Indians never reach that level, and even the best IE speakers live in a half-world, because they get their songs and poetry only from Indian languages. The prosody of the many varieties of IE is largely affected by ILs [26] and locks most IE speakers out of the wealth of English song and poetry.

We can speculate on the effects of this separation of poetry from IE: does it explain some of the plodding imitative nature of Indian education? Or is that the result of the inability to use the ILs, where Indian fantasy flows freely, for science?

1.7.3. *Poor language skills.* With the dominance of English and a money-and-jobs approach to education and skills, children frequently develop poor language skills. In the now threatened L1 medium schools, the children do speak L1 well, but often do not take its literature seriously—it has little to say about modern livelihood, anyway. In the better English-medium schools children speak perhaps good IE, but with little song and poetry, and their L1 skills are often terrible.

1.7.4. *Devaluing L1.* The rush to English is taking absurd forms, with IL speakers making their own language more “English”, by replacing

many common IL words by English ones. These are not imports like “bus”, “radio” or “telephone” which arrived along with the object. Nor are they advanced terms with no IL equivalent; these are unnecessary replacements of basic words. They do not help in learning English (the imports adapt to IL phonology and grammar), but impoverish vocabulary and make IL word games and songs harder.

2. ECONOMIC LIBERALISATION AND GLOBALISATION

Until the 1990’s, the central government had a monopoly on large scale broadcasts, which also imposed Hindi over the country even in the matter of popular entertainment. The country’s Vividh Bharati radio channel broadcast any amount of Hindi film music, but accorded the four South Indian languages 15 minutes each in the evening. The TV was no better, with a few hours of local programming per day. If your language was not covered there, well, bad luck.

The coming of cable TV immediately lifted these limitations, and if you paid the subscription you could have the language channels of your choice. So while this introduced new divisions between the haves and the have-nots, it did release citizens from the government’s grip.

The coming of global software opportunities made technical skills and English very valuable. Aspirational Indians now set their eyes on these opportunities (if not physically abroad, then logically abroad at the end of a broadband connection in Bangalore or Hyderabad), and the value of Hindi and all other Indian languages was reduced. So while the English boot remained on the people’s heads, the Hindi boot was largely lifted.

To sum up, globalisation has largely been a liberalising force in India. But it comes at a heavy price.

2.1. The flight to English. Several oppressed groups have long associated all Indian languages and texts with the oppressors, and seen English as the neutral outsider that does not care about traditional caste or class differences. It also promises huge economic benefits.

Globalisation now adds the further aspiration of high-paying jobs, so even the poorest now want their children educated in the English medium. They do not realise that the English speaking children they see come from homes with English language newspapers and books, and English speaking parents and TV. Since very few teachers in the poorer schools speak English, the results will be devastating [27]. We face the very real prospect of most children in India learning neither language nor content. The much hoped for “youth dividend” will become a massive unemployable youth burden.

In a final insult to the memory of Potti Sriramulu, Telangana and Andhra Pradesh became the first Indian states to move all government schools from Telugu medium to “English medium”. Other states have followed. This in a country where an independent report[2] tells you how frighteningly bad the schools already are.

3. CONCLUSION

We can but hope that India will look at the European model, for example, of working and living in L1, and using English as a foreign language for communication. A separate document, to be published, outlines what such education might look like, with attention paid to good language skills.

APPENDIX A. THE LINGUISTIC LANDSCAPE OF INDIA

The Wikipedia page “Languages with official status in India” says

There is no national language in India. The [Constitution] specifically mentions that, “The official language of the Union shall be Hindi” ... English is used in official purposes such as parliamentary proceedings, judiciary, communications between the Central Government and a State Government. States within India have the ... powers to specify their own official language(s) ... the constitution recognises 22 regional languages. ... The number of native Hindi speakers is about 25% of the total Indian population; however, including dialects of Hindi termed as Hindi languages, the total is around 44% of Indians, mostly accounted from the states falling under the Hindi belt. Other Indian languages are each spoken by around 10% or less of the population.

The “Hindi belt” cited there is central and northern India.

The complexities of the Indian linguistic landscape are illustrated by the several controversies hidden in that neutral sounding factual statement. Ganesh Devy [28], who oversaw the People’s Linguistic Survey of India [29] of 2011-2012 criticizes the Indian Census of 2011 [30], which took 7 years to complete and was released in 2018. As quoted in Deutsche Welle’s report [31]:

“The census has subsumed many languages in Hindi. This includes Bhojpuri, which is spoken by more than 50 million people. Bhojpuri is not Hindi; it is a different language.

"You can't doubt the intelligence of more than 50 million people who say their mother tongue is Bhojpuri, not Hindi.

"Many other languages spoken in the states of Rajasthan, Haryana, Arunachal Pradesh, Chhattisgarh, Himachal Pradesh and Uttarakhand, with millions of speakers, were also categorized as Hindi to inflate the figures".

Why did the authors of an official Government report want to inflate the number of Hindi speakers? Another issue is also alluded to in the same Deutsche Welle report: "In contrast to common perception, India does not have a "national language." The common perception that India's national language is Hindi is generated by the label "regional" attached to every Indian language except Hindi, which then becomes "national", even though it too is a regional language, except with a larger region. This author would suggest that it is time to make all 23 languages official at the Union level. The interpreters and translators needed will provide welcome employment. That model works just fine for the European Union.

This leaves out Indian English (IE), in many ways the most important Indian language. It is described at the end of Section 2.1.

REFERENCES

- [1] Max J. Skidmore. Populism and its perils: language and politics. *Annales Universitatis Mariae Curie-Sklodowska Lublin - Polonia*, XXII(1), 2015.
- [2] ASER. Annual Status of Education Report, 2017. www.asercentre.org.
- [3] S. Paauw. One land, one nation, one language: An analysis of Indonesia's national language policy. *University of Rochester Working Papers in the Language Sciences*, 5(1):2-16, 2009.
- [4] Murli Manohar Joshi. Ambedkar wanted Sanskrit as national language. *Times of India*, 24 April 2016. <https://timesofindia.indiatimes.com/india/Ambedkar-wanted-Sanskrit-as-national-language-Murli-Manohar-Joshi/articleshow/51971974.cms>.
- [5] Kancha Ilaiah. Why Ambedkar supported Sanskrit as national language: A response to Murli Manohar Joshi. *The News Minute*, 27 April 2016. www.thenewsminute.com/article/why-ambedkar-supported-sanskrit-national-language-response-murli-manohar-joshi-42273.
- [6] Wikipedia. Languages of the European Union, 2019. https://en.wikipedia.org/wiki/Languages_of_the_European_Union.
- [7] Wikipedia. Revival of the Hebrew language, 2019. https://en.wikipedia.org/wiki/Revival_of_the_Hebrew_language.
- [8] B. R. Ambedkar. On the Re-organisation of States. In *Writings and Speeches, Vol. I*. Education Department, Government of Maharashtra, 1989.
- [9] Sheldon Pollock. Crisis in the Classics. *Social Research*, 78(1):21-48, 2011. India's World, a special issue. www.socres.org.
- [10] Wikipedia. Anti-Hindi agitations of Tamil Nadu, 2019. https://en.wikipedia.org/wiki/Anti-Hindi_agitations_of_Tamil_Nadu.

- [11] Karal Marx. Stalin to DMK cadre: Gear up for next anti-Hindi agitation. *Times of India*, 2019. timesofindia.indiatimes.com/city/chennai/stalin-to-dmk-cadre-gear-up-for-next-anti-hindi-agitation/articleshow/71145066.cms.
- [12] Nolan Pinto. Pro-Kannada activists get their way, Namma Metro to remove all Hindi signboards. The Kannada Development Authority took it one step forward and said that even announcements cannot be made in Hindi. *India Today*, 26 July 2017. <https://www.indiatoday.in/india/karnataka/story/kannada-hindi-boards-bengaluru-namma-metro-karnataka-rakshana-vedike-1026314-2017-07-26>.
- [13] Wikipedia. 1971 Bangladesh genocide. https://en.wikipedia.org/wiki/1971_Bangladesh_genocide.
- [14] Tarun Vijay. If we were racists, we wouldn't be living with South-Indians. *The Economic Times*, 2017. economictimes.indiatimes.com/articleshow/58065423.cms?from=mdr&utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst.
- [15] CSTT. Commission for Scientific and Technical Terminology, Main Page, 2018. <http://www.cstt.nic.in/index.asp>.
- [16] Ramachandra Guha. *India after Gandhi: The history of the world's largest democracy*. Pan Macmillan, 2017.
- [17] Amardeep Singh. Language-Based States (Guha Chap. 9), 2007. <https://www.lehigh.edu/~amsp/2007/11/language-based-states-guha-chapter-9.html>.
- [18] Dipankar Gupta. Why no one dared to mess with Shiv Sena? *India Today*, 30 Nov 1999. www.indiatoday.in/magazine/special-report/story/20121203-bal-thackeray-death-shiv-sena-harvester-of-fear-760815-1999-11-30.
- [19] Wikipedia. Anti-Bihari sentiment, 2019. https://en.wikipedia.org/wiki/Anti-Bihari_sentiment.
- [20] Pavan K. Varma. Gujarat's forced exodus: If we cannot tolerate migrants from other states it will take India down. *Times of India*, 13 October 2018. <https://timesofindia.indiatimes.com/blogs/toi-edit-page/gujarats-forced-exodus-if-we-cannot-tolerate-migrants-from-other-states-it-will-take-india-down-10132018-10-13>.
- [21] Amit Kumar Chaudhary. Exposed: In Karnataka, self-styled defenders of Kannada pride seek bribes to allow Sunny Leone events. *India Today*, 11 Jan 2018. www.indiatoday.in/india/story/exposed-in-karnataka-self-styled-defenders-of-kannada-pride-see-bribes-to-allow-sunny-leone-10132018-01-11.
- [22] K. V. S. Prasad, Shafqat Mumtaz Virk, Miki Nishioka, and C. A. G. Kaushik. Crowd-sourced Technical Texts can help Revitalise Indian Languages. In *Proceedings of LREC 2018, Workshop WILDRE4*, 2018. lrec-conf.org/workshops/lrec2018/W11/pdf/book_of_proceedings.pdf, pp. 11-16.
- [23] K. Vijay Raghavan. Science education in English is exclusionary: Principal Scientific Adviser (Govt. of India), K. Vijay Raghavan. *The Hindu*, 21 April 2018. <https://www.thehindu.com/sci-tech/science/science-education-in-english-is-exclusionary-new-psa-k-vijayraghavan/article23617103.ece>.
- [24] A. S. K. V. S. Sharma. *Challenges of Communicating Science in Regional Languages: Experiments in Kannada*. Springer, 2017. *Bridging the Communication Gap in Science and Technology*, Pallava Bagla and V. V. Binoy (eds.).

- [25] Vasudha Venugopal and B. Aravind Kumar. Language barrier puts students from Tamil medium in a fix. *The Hindu*, 13 July 2016. www.thehindu.com/features/education/issues/language-barrier-puts-students-from-tamil-medium-in-a-fix/article3336855.ece.
- [26] Pramod Pandey. Indian English Prosody. In Gerhard Leitner, Azirah Hashim, and Hans-Georg Wolf, editors, *Communicating with Asia*. Cambridge University Press, Cambridge, 2015.
- [27] Anjali Mody. Lost for words: Why Tamil Nadu’s shift to English medium instruction is not helping children. *scroll.in*, 17 Aug 2017.
- [28] Wikipedia. G. N. Devy. https://en.wikipedia.org/wiki/G._N._Devy.
- [29] PLSI. People’s Linguistic Survey of India. <https://www.bhasharesearch.org/peoples-linguistic-survey-of-the-india.html>.
- [30] Census-India. Language, 2018. http://censusindia.gov.in/2011Census/Language_MTs.html.
- [31] Vasudevan Sridharan. How does the world’s second most populous nation speak? *Deutsche Welle*, 2018. <https://www.dw.com/en/how-does-the-worlds-second-most-populous-nation-speak/a-44761571>.

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