The Power Language Index

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Hello
Hello and good morning (مرحبا وصباح الخير)
There are \(~6,000\) active languages in the world

But two thousand of them have fewer than a thousand speakers

Earliest signs of human language date back 60-100 thousand years. Oldest written forms of languages traced to the Near East ca. 26\textsuperscript{th} century BC.

Now 7 billion people speak thousands of languages across the world. But just 15 languages account for half of the languages spoken in the world.
Not all languages are equal

Mandarin Chinese counts nearly 1 billion native speakers

If the world “hello” were written in their scripts in proportion to the number of native speakers for 30 prominent languages
Thought experiment: Most useful language

If an alien were to land on the Earth, what language would serve it best?

Assume that the alien has similar ambitions to humans, with a desire to travel, earn a livelihood, communicate with others, consume media, acquire/share knowledge, and perhaps even engage in high-level diplomacy.
Create index to compare efficacy of languages

Opportunities: geography, economy, communication, K&M, diplomacy

Choose an additive representation for a given language (indexed by \( k \in K \))

\[
f_k(s(x)) = a_1 s_{1,k} + a_2 s_{2,k} + \cdots + a_N s_{N,k} = \sum_{i=1}^{i=N} a_i s_{i,k}
\]

where

\[
s_{i,k}(x_{i,k}) = x_{i,k} / x_{i,\text{max}\{K\}} \quad \text{and} \quad \sum_{i=1}^{i=N} a_i = 1 \quad \text{are the weights}
\]

\[
\begin{align*}
    x > 0 \\
    f'(s(x)) > 0 \implies f_k(s(x)) \in [0,1]
\end{align*}
\]
Language enables travel

Number of countries in which language is spoken

Geographic area of the countries in which language is spoken

Overnight international tourists in countries associated with language

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Economy

Language enables economic participation

- GDP and GDP/cap
- Exports (share of world)
- FX market share (2-way)
- SDR composition
Communication

Language enables communication & media/knowledge consumption

Native speakers
L2 speakers*
Language family*
Outbound tourists

مرحباً ويوم جيد للجميع
Media and knowledge
Language enables communication & media/knowledge consumption

Internet content
Feature films*
Elite universities
Academic journals*
Diplomacy

Language enables diplomacy

Just 9 languages are used in high-level international diplomacy!
Results: English is *the* global language

Mandarin Chinese growing in power but remains a distant second

<table>
<thead>
<tr>
<th>Rank</th>
<th>Language</th>
<th>Score</th>
<th>Native</th>
<th>Geography</th>
<th>Economy</th>
<th>Comm.</th>
<th>K&amp;M</th>
<th>Diplomacy</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>English</td>
<td>0.889</td>
<td>446.0</td>
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<td>Mandarin</td>
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<td>3</td>
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<td>6</td>
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<td>7</td>
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<td>13</td>
<td>16</td>
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</table>

*NB: This table does not group the Chinese languages as one and also makes distinct Hindi and Urdu (if Hindi and Urdu were grouped as one language it would surpass Japanese in the ranking)*

- Mapping variables to languages not always straightforward as most indicators are captured at nation-state level
- Many countries have many languages associated with them, and official status of a language within a country is not equivalent to knowledge of a language within it
- The difference between a language and a dialect is not always clear (e.g. Chinese languages/dialects, Hindi and Urdu, etc.)

Source: Power Language Index (Chan, 2016)
Growth of English
British empire and apex Americana made English dominant

What do you call someone who speaks 3+ languages? A polyglot.
What do you call someone who speaks 2 languages? A bilingual?
What do you call someone who speaks just one language? An American (or Brit)

CASE STUDY: SINGAPORE

- English was chosen as an official and the *de facto* working language of Singapore
- Yet none of the population are native English speakers
- English was chosen because it would not favour any of the ethnic communities, plus it is acknowledged as globally important (and there is a history of British legacy)
- Positive herding/network effect (and less negative recent history)
Implications and applications

Why should we care which languages are dominant?

Language is an extension of the power of nation states, esp. soft power and its ability to influence politics.
The global elite is an English-speaking club
Weak English proficiency limiting influence of o/w large countries

Speaking English is a competitive advantage,
yet none of the competitiveness reports consider the language of a country!
Evolution over time

Although English is now dominant it was not always the case.
The Arabic language
A top-10 language but with an uncertain path forward

<table>
<thead>
<tr>
<th>#</th>
<th>Opportunity</th>
<th>Criteria</th>
<th>Value</th>
<th>Score</th>
<th>Rank</th>
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<td>Geography</td>
<td>Area (km²)</td>
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<td>GDP/cap (PPP)</td>
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INDEX

<table>
<thead>
<tr>
<th>Value</th>
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<tr>
<td>0.273</td>
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</table>

Sources: CIA Factbook, IMF, UN, UIS, World Bank, WBDID, Wikipedia
Steady state: One global language?

World is heading to one lingua franca with pockets of regional languages

No knowledge of English in the globalised age is equivalent to being illiterate. But will world converge to just one language?

One single language not the likely outcome – people are attached to their language. But one true global *lingua franca* with several dominant regional languages.
Death of translators and polyglotism?
Will technology obviate the need for learning other languages?

"In the long run, we are all dead."  
John M. Keynes

Most dictionaries cover only a fraction of the active language vocabulary (which itself changes over time and is region specific)

Technologies will arrive that will tear down linguistic barriers, but language is also cultural and...

Google Translate has just 103 languages in its database
Language as a tool for success
Many benefits of learning a second (or third) language

Bilinguals in Canada earn (4 to 8 per cent) more than unilinguals (Christofides & Swidinsky, 2010). True across countries – but (income) gains are usu. small.

Studies have also shown that people’s behaviours/personality and criticalness in thinking are influenced by language (Keysar et al., 2012).

Thank you
Questions and answers