

# *EU's Babel Tower*

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- ▶ The EU comprises 27 countries and carries 23 official languages, some very small (Maltese, 800,000 speakers), some that are not official (Catalan, 4 million speakers)
- ▶ Regulations and other documents of general application have to be drafted in all 23 official languages
- ▶ Translation
  - 1,3 million pages translated in 2002
  - 0,25 million pages translated by freelances
  - 4,600 eurocrats (2,710 translators)
- ▶ Interpretation
  - 1,110 people
  - 962 interpreters (497 for the Parliament)
- ▶ Costs: 686 millions Euros (0.8% of total budget, but 30% of administration costs)
- ▶ Cost after the 2005 enlargement: 1,045 million Euros

\*This presentation is essentially based on Fidrmuc, Ginsburgh and Weber (2007).

## *Languages used in 2002*

Language	Drafts (percent)	Final (percent)
English	57.4	11.5
French	29.1	13.2
German	4.6	13.1
Italian	2.1	8.4
Spanish	2.0	8.9
Dutch	1.2	7.8
Greek	1.0	7.9
Swedish	0.8	7.1
Portuguese	0.6	7.1
Danish	0.5	7.1
Finnish	0.4	7.0
Other	0.3	0.4
Total	100.0	100.0

Note: 1% = 13,000 pages!!!

# Problems

- ▶ Keeping all the languages entails large costs
- ▶ Restricting the number of languages may have a major impact on the well-being by limiting access to laws, rules, regulations, violate the basic principles of the society, and create the feeling of being *disenfranchised*
- ▶ Tradeoff between costs (too many languages) and disenfranchisement (not enough)
- ▶ In all cases, communication hampered by translation errors and delays

## *Examples of problems*

- ▶ MPs are instructed to make short sentences, and no jokes!
- ▶ Patenting in Europe: has to be done on a country by country basis. For 13 countries:
  - Translation costs: 13,600 Euros
  - Filing for 20 years: 129,000 Euros (16,500 in the US and 17,300 in Japan)
  - Consequence on the number of claims: 1 million in Europe, 3 million in Japan, 8 million in the US, though the 13 European countries together are larger than the US
- ▶ In 2003, the EU agreed to allow developing countries to import cheap generic drugs to treat HIV, malaria, and tuberculosis. The implementation was delayed by more than a year because of the need to translate the decision into 20 languages

# Survey

- ▶ End 2005: Survey by Directorate of Education and Culture
- ▶ 1,000 interviews in each EU country – Questions on knowledge and proficiency of languages:
  - mother tongue plus list of up to three languages
  - spoken well enough to have a conversation

	Native population (millions)	Know the language in the EU (millions)	Language multiplier (units)
English	62.3	183.3	2.9
German	90.1	122.0	1.4
French	64.5	97.5	1.5
Italian	57.6	65.2	1.1
Spanish	39.4	54.3	1.4
Polish	38.6	41.2	1.1
Dutch	21.9	24.0	1.1
Russian	–	22.4	–

## Disenfranchisement Rates (%)

	E	G	F	I	S	Po	D	Ru
All	63	75	80	87	89	92	95	95
Age groups								
15-29	45	74	78	87	87	92	95	96
30-44	59	75	81	87	89	92	95	95
45-60	68	76	80	87	90	92	95	95
≥ 60	76	75	81	87	89	92	95	96

- ▶ ● However disenfranchisement is very unevenly distributed. In 20 out of 27 countries, English only disenfranchises more than 50% of the population. This is worse with any other language
- It is somewhat better for those aged 15-29: the number of such countries drops to 11
- The only language that gains across generations is English

## *Disenfranchisement–Optimal sequence (%)*

- ▶ Calculate a sequence by adding languages, in such a way that at each step disenfranchisement decreases as much as possible
  - Problems: possibility of multiplicity and switching of languages as languages are added

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	E	+G	+F	+I	+S	+P	+Ro	+Hu	+Pt
All	63	49	38	30	22	16	13	11	9
15-29	45	35	26	20	14	10	8	6	5

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- ▶ Beyond Portuguese, disenfranchisement decreases by less than 1% when any of the remaining languages is added

# *Political feasibility of reforms*

- ▶ Language issues require unanimity of the European Council. No reform would pass unless some degree of disenfranchisement is accepted
- ▶ But even with 20 languages, some countries will vote against, since they will feel too much disenfranchised
- ▶ *Weakening the unanimity rule I: The Nice Treaty*
  - Each state has a given number of votes with a total of 345 (France, Germany, Italy and the UK have 29 votes, Malta has 3)
  - For a decision to pass the following three requirements have to be satisfied:
    - backed by more than half of the states
    - supported by 72% of the votes
    - the states backing the vote must represent 62% of the EU population



## *Political feasibility of reforms*

- ▶ *Weakening the unanimity rule II: The new Constitution*
  - QMV will be applied to all issues except veto in foreign policy, defense and taxation
  - Each state has one vote
  - For a decision to pass the following two requirements have to be satisfied:
    - backed by at least 55% of the votes
    - the states backing the vote must represent 65% of the EU population
  
- ▶ *Weakening the unanimity rule III: The Penrose Law*
  - The Nice Treaty and the Constitution assign too much power to some countries. Voting weights can be rectified by Penrose's "square root law": Each country is assigned a voting right proportional to the square root of its population
  - For a decision to pass, it must be backed by 62% of the votes

# Qualified Majority Voting

- ▶ Let  $Q$  be the collection of all subsets in the EU that satisfy QMV (Nice, Constitution, or Penrose)  
For every set of languages  $T$  and disenfranchisement rate  $r$ , let  $W(T, r)$  be the set of countries whose disenfranchisement rate, given  $T$  does not exceed  $r$ :

$$W(T, r) = \{j \in EU : D^j(T) \leq r\}$$

- ▶ Given the sequences described above, define, for every value of  $r$ , the minimal number of languages  $m^*(r)$  that guarantees that the set of countries  $W(T_{m^*(r)}, r)$  satisfies QMV:

$$m^*(r) = \min\{m : W(T_m, r) \in Q\}$$

# Minimal number of languages

		Nice Treaty		Constitution	Penrose
	$r$	$m^*(r)$	binding	$m^*(r)$	$m^*(r)$
<i>All</i>	10	11	votes	11	8
	20	9	countries, votes	9	6
	30	8	countries, votes	9	6
	40	7	votes	6	6
	50	7	votes	4	5
<i>15-29</i>	10	7	votes	7	6
	20	7	votes	5	5
	30	6	votes	4	5
	40	6	votes	4	4
	50	3	votes	3	3

## Why six or less languages?

- ▶ The optimal order is: English, German, French, Italian, Spanish, Polish
- ▶ This solution leads to a disenfranchisement rate of some 16% (10% for the younger generation)

	E	+G	+F	+I	+S	+P
All	63	49	38	30	22	16
15-29	45	35	26	20	14	10

- ▶ Includes the three main groups of Indo-European languages (Germanic, Romance, Slavic) + English, which is significantly different from Germanic languages
- ▶ The languages included are all spoken in large EU countries (more than 40 million inhabitants)

## *Why six or less languages?*

- ▶ Countries in “trouble” with disenfranchisement larger than 50 percent:  
Bulgaria, Czech R., Estonia, Finland, Greece, Hungary, Latvia, Lituania, Portugal, Romania, Slovak R.)
- ▶ Adding more languages would produce small gains obtained almost only in the countries of which the languages are native
- ▶ The next optimal languages would be Romanian (a fourth romance language, spoken by 21 million people only) and Hungarian (12 million speakers), while Dutch with 22 million speakers would be ignored
- ▶ Two more questions:
  - Which languages should be used where?
  - What happens to other languages?

# *Which languages, where?*

- ▶ EU Parliament: democracy cannot impose MPs to know other languages than their native language and an MP should have the possibility to speak his native language
  - All languages in simultaneous translation (possibly using relay languages)
- ▶ Other conferences: Six languages are translated, and as is the case at the UN for example, countries pay for other languages if the need translation
- ▶ Written documents: Translated into six languages
  - Countries whose language is not an official language pay for translation (this is so at the UN General Assemblies)

# *Decentralizing translation?*

- ▶ It seems Pareto improving to transfer the 50 million to each country and let it choose what it wants to do?
- ▶ Take Maltese as an extreme example:
  - 400,000 inhabitants
  - of which some 80,000 only do not know English
  - The cost of translating into Maltese is 625 Euros per inhabitant
- ▶ Malta would be given two choices:
  - Leave things unchanged, that is let the Commission do the job they are doing
  - Cash the lump-sum transfer from the EC and use it as it wants, including translating what it chooses to
- ▶ This is certainly welfare improving w.r.t. the present situation

# References

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