

Economic aspects of individual and societal multilingualism

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Economics is methodology

- Two cornerstones
 - Methodological individualism
 - Goal-oriented behavior
- Two types of analysis
 - Positive, descriptive
 - Normative, prescriptive

- Individual behavior in the center
- Social behavior is the sum of individual behavior
- Norms, customs have double rôle
 - Formed by individual behavior
 - Influence individual behavior
 - Equilibrium

Example: language

- Language use in society
 - Determined by individuals
 - Determines language choices by individuals
 - Equilibrium

Clearly defined goals (preferences)

- Profit
- Individual fulfillment
- Altruism
- Power
- ...

Example: language

- Communication
- Cultural identity
- Market value

Positive analyses answer the question: What happens?

- Depends on
 - Assumptions
 - Institutions
 - ...

Normative analysis evaluates outcomes with respect to societal goals

- Definition of societal goals
 - Aggregation of individual goals
- Problem: identification of individual goals
 - Behavior versus well-being
- Problem: new individuals
 - Short run: only existing individuals (recent immigrants)
 - Long run: also future generations (children of immigrants)
- Problem: irreversible processes
 - Short sighted: language death
 - Far sighted: value of diversity

Two forces

- Pull towards unilingualism
 - Language as means of communication: net-work externality
- Push towards multilingualism
 - Cohort structure
 - Language as carrier of identity
 - Market value of language knowledge

Simple model

- Look at the decision to acquire a language from the point of view of an individual
 - Value of communication given by number of interlocutors (n)
 - Three groups, A -speakers (N_A), B -speakers (N_B) and bilingual individuals (N_C)
 - Value of communication $V = F(n)$
 - Cost of learning language A : C_A
 - Cost of learning language B : C_B
 - Cost of becoming bilingual: C_C
 - Net value of language X : $U_X := F(n_X) - C_X$

Number of interlocutors

- For A -speaker: $n_A = N_A + N_C$
- For B -speaker: $n_B = N_B + N_C$
- For C -speaker: $n_C = N_A + N_B + N_C =: N$

Let $N_A > N_B$

- $F(n_C) > F(n_A) > F(n_B)$

Let $C_A = C_B < C_C$

- $U_A - U_B := F(n_A) - C_A - F(n_B) + C_B = F(n_A) - F(n_B) > 0$
 - Number of B -speakers will decline

If N_B is small enough

$$\bullet U_A - U_C = F(n_A) - C_A - F(N) + C_C =$$

$$\underbrace{C_C - C_A}^+ - \underbrace{[F(N) - F(N - N_B)]}^+ > 0$$

- Number of bilingual individuals will decline

In the end, only language A will survive; this is the network-externality effect.

Different learning costs in different families

- $C_A(AA) < C_A(BB)$ etc.
- Then in BB -family
 - $U_A - U_B := F(n_A) - C_A(BB) - F(n_B) + C_B(BB) =$

$$\overbrace{[F(n_A) - F(n_B)]}^+ - \overbrace{[C_A(BB) - C_B(BB)]}^+ \leq 0$$
 - Bilingualism can survive

Education forces bilingualism on minority

- Cost difference disappears
- Only A survives

Parents value language as carrier of identity

- *BB*-family

- $U_B = F(n_B) + I_B - C_B$

- $U_A = F(n_A) - C_A$

- $U_A - U_B := F(n_A) - C_A - F(n_B) - I_B + C_B =$

$$\underbrace{[F(n_A) - F(n_B)]}_{+} - \underbrace{[C_A - C_B + I_B]}_{+} \leq 0$$

- *AA*-family

- $U_A = F(n_A) + I_A - C_A$

- $U_B = F(n_B) - C_B$

- $U_A - U_B := F(n_A) + I_A - C_A - F(n_B) + C_B =$

$$\underbrace{[F(n_A) - F(n_B)]}_{+} - \underbrace{[C_A - C_B - I_A]}_{-} > 0$$

Labor-market premium for bilingual individuals

- AA-family

- $U_A = F(n_A) - C_A$

- $U_C = F(n_C) - C_C$

- $U_A - U_C := F(N - N_B) - C_A - F(N) + C_C - L_C =$

$$\underbrace{[C_C - C_A - L_C]}_{?} - \underbrace{[F(N) - F(N - N_B)]}_{+} \leq 0$$

- BB-family

- $U_B = F(n_B) - C_B$

- $U_C = F(n_C) - C_C$

- $U_B - U_C := F(N - N_A) - C_B - F(N) + C_C - L_C =$

$$\underbrace{[C_C - C_B - L_C]}_{?} - \underbrace{[F(N) - F(N - N_A)]}_{+} \leq 0$$

Goal

- Improvement on equality

Point of departure

- Equality
 - All individual equal

(Pareto) Improvement

- Unanimity
 - Compensations

Example: Cake

- Equal division

Example: Cake and Wine

- Equal division
 - Trade

Language rights

- Equal rights
 - Compensation for differences
- Point of departure (Status quo)
 - No rights (absolutism)
 - All rights (liberalism)

Costs of language rights

- Proportional to number of speakers
 - Schools
 - Courts
 - Public service
- Proportional to number of languages
 - Television stations
 - Official documents
 - Translation services

Benefits of language rights

- Proportional to number of speakers

Just provision of language rights

- Costs proportional to number of speakers
 - All language groups to be treated equally
- Costs proportional to number of languages
 - Rights for bigger languages
 - Compensation payments for speakers of smaller languages

Preferences endogenous Identity depends on upbringing

- Preferences of a given cohort depends on behavior of previous cohort
 - No intrinsic value of bilingualism
- Linguistic ecology
 - Value of diversity

Economic thinking

- Not an ocean of data

Other themes

- Economic linguistics
- Linguistic ecology
- Language planning, power and economics
- Globalization and language death
- Internet and language use
- ...

Gratias habeo multas

Hjärtlig tack

Koran dankon

Mange takk

Merci beaucoup

Mille grazie

Muchas gracias

Vielen Dank