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Language Aquisition: An Elaboration of the Chiswick-Model

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Outline

Language and Integration

The Chiswick-Model

An Elaboration

The Investment-Model of Language Acquisition

An Explanation of the the Interaction Effects

Some Practical Conclusions

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What is (linguistic) integration?

Social Integration: In-/Exclusion and (In-)Equality

Dimensions		
	cultural	habits, knowledge, language
	structural	rights, education, labor market
	social	networks, friends, marriage
	emotional	identity, identification, values

Social Integration: In-/Exclusion and (In-)Equality

Dimensions   cultural   habits, knowledge, **language**

                             structural   rights, education, labor market

                             social   networks, friends, marriage

                             emotional   identity, identification, values

Types of Social Integration of Migrants
(Berry (1990, 1991) for subjective integration)

		Receiving-Context	
		yes	no
Ethnic Context	yes	Multiple inclusion	Segmentation
	no	Assimilation	Marginality

for Language:

		Receiving-Context	
		yes	no
Ethnic Context	yes	L1 **and** L2	L1 only
	no	L2 only	neither L1 nor L2

for Language:

		Receiving-Context	
		yes	no
Ethnic Context	yes	fluent bilinguality	monolingual segmentation
	no	monolingual assimilation	limited bilinguality

Language and Structural Integration

The functions of language

resource   part and precondition of control of valuable resources (access to interactions, effective communication, precondition for investments…)

symbol   signalling of (latent) traits; activation of stereotypes and emotions; reinforcement of boundaries and identities

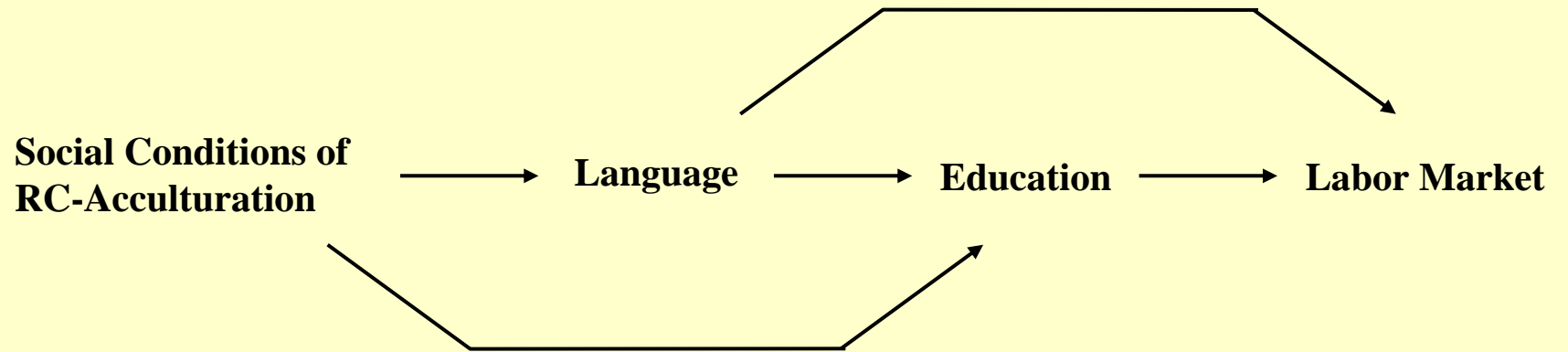medium   (main) instrument to solve problems of coordination and information flow

the three functions of language and the problem of integration

Functions of Language	(Structural) Social Integration		System Integration
	Education	Labor Market	
Ressource Symbol Medium			

the three functions of language and the problem of integration

Functions of Language	(Structural) Social Integration		System Integration
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Ressource Symbol Medium	Lerning Efficiency (in.) Discrimination Lerning Effort		

the three functions of language and the problem of integration

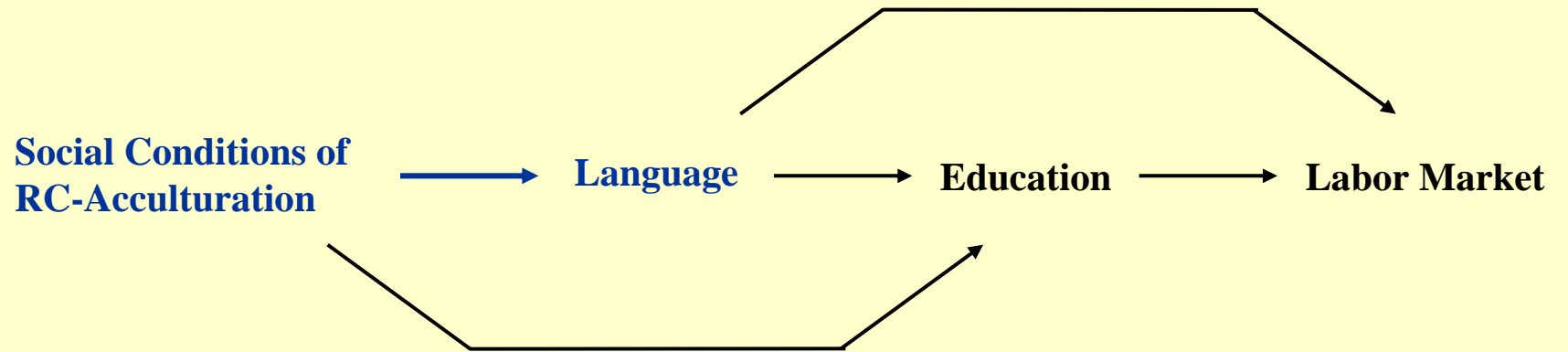| Functions of Language	(Structural) Social Integration		System Integration
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the three functions of language and the problem of integration

Functions of Language	(Structural) Social Integration		System Integration
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Ressource Symbol Medium	Lerning Efficiency (in.) Discrimination Lerning Effort	Productivity (st.) Discrimination Transaction Costs	Cultural diversity Framing of boundaries „Tower-of-Bable"

The causal chain:

Social Conditions of
RC-Acculturation → Language → Education → Labor Market

The causal chain:

Social Conditions of RC-Acculturation → **Language** → **Education** → **Labor Market**

… but how and why?

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Approaches to Language Acqusition

Linguistics	motivation	input ability	
Sociology	motivation	exposure	strains
Economics	incentives	opportunities	costs
Chiswick	**motivation**	**exposure** **efficiency**	**costs**

opportunities:
exposure *and* efficiency

Empirical Conditions and "Bridge Hypotheses"

Social Conditions (levels and contexts)

Individual: Family- and Migration-Biography

Contextual: Sending-Context (SC)
                Receiving-Context (RC)
                Ethnic Context (EC)

                Supra-National Context(s)
                "World Society"

Examples

Examples
(relating to motivation, exposure, efficiency and costs for L2)

Contexts	Examples	Constructs
Family- and Migration-Biography	Education Length of stay Age at immigration	Motivation Exposure Efficiency
Sending-Context	Q-Value L1 Contact with L2 in SC Linguistic distance	Motivation Exposure Efficiency/Costs
Receiving-Context	Labor market RC Interethnic contacts Social Distance	Motivation Exposure Costs
Ethnic Context	Ethnic economy Ethnic concentration Cultural distance	Motivation Exposure Costs

four special conditions …

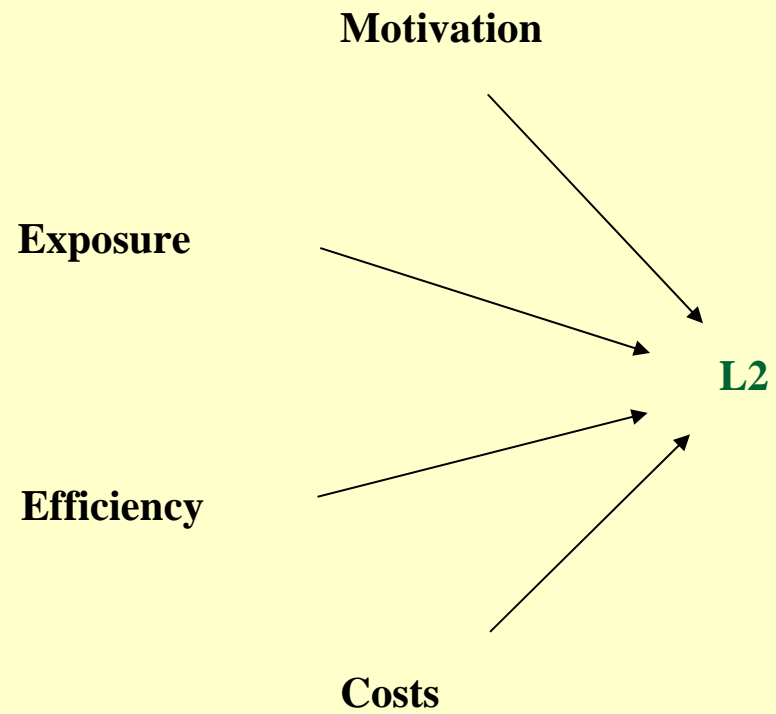| Contexts	Examples	Constructs
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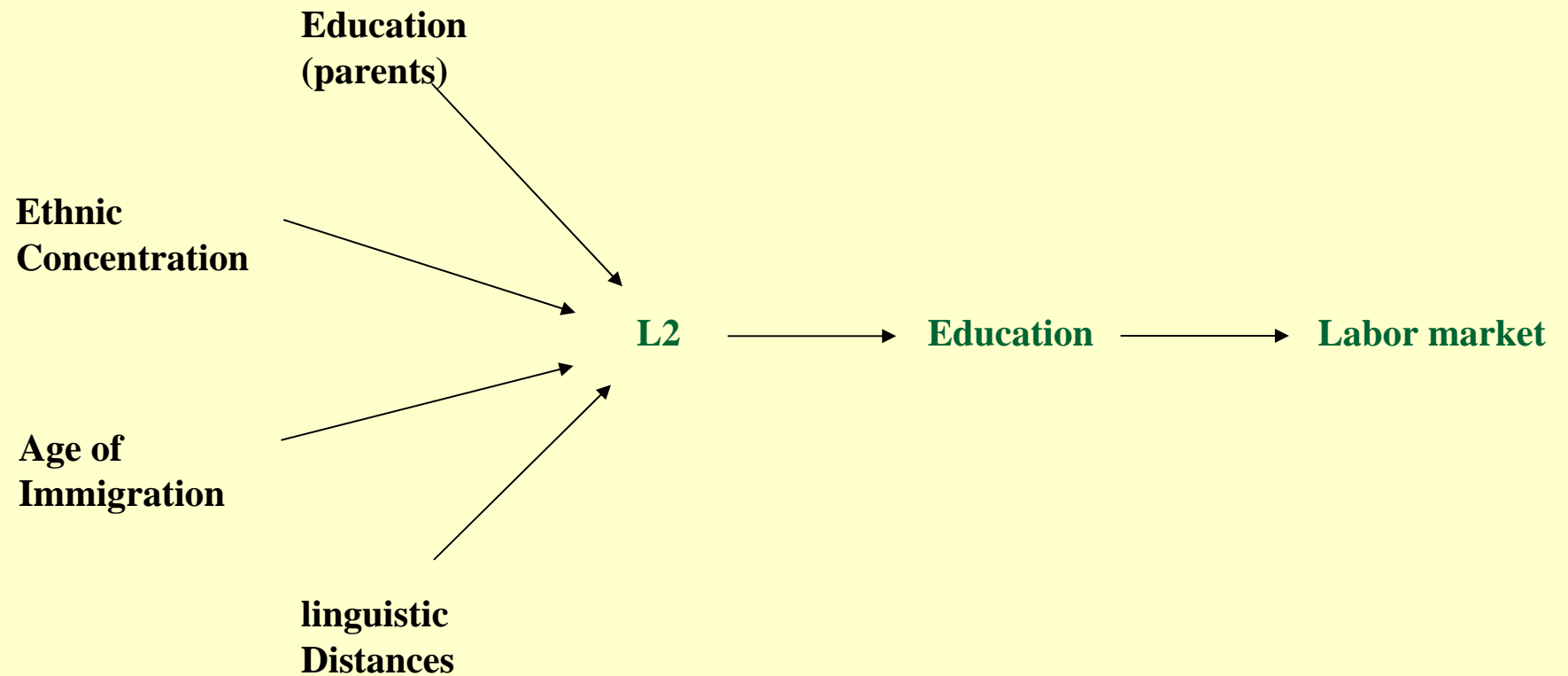| Contexts	Examples	Constructs
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Receiving-Context	Labor market RC Interethnic contacts Social distance	Motivation Exposure Costs (-)
Ethnic Context	Ethnic economy **Ethnic concentration** Cultural distance	Motivation **Exposure (-)** Costs

… and the implications (main effects)

- Education (of parents) promotes Learning
- Ethnic concentration impedes Learning
- Older age at immigration impedes Learning
- Lingusitic distance impedes Learning

Theoretical constructs…

Motivation

Exposure

Efficiency

Costs

L2

… and empirical conditions (among others)

Education
(parents)

Ethnic
Concentration

Age of
Immigration

linguistic
Distances

L2 ⟶ Education ⟶ Labor market

The statistical model (for the for basic constructs)

L2 $\quad\quad = c + b1Educ - b2Conc - b2Age - b4LDist$
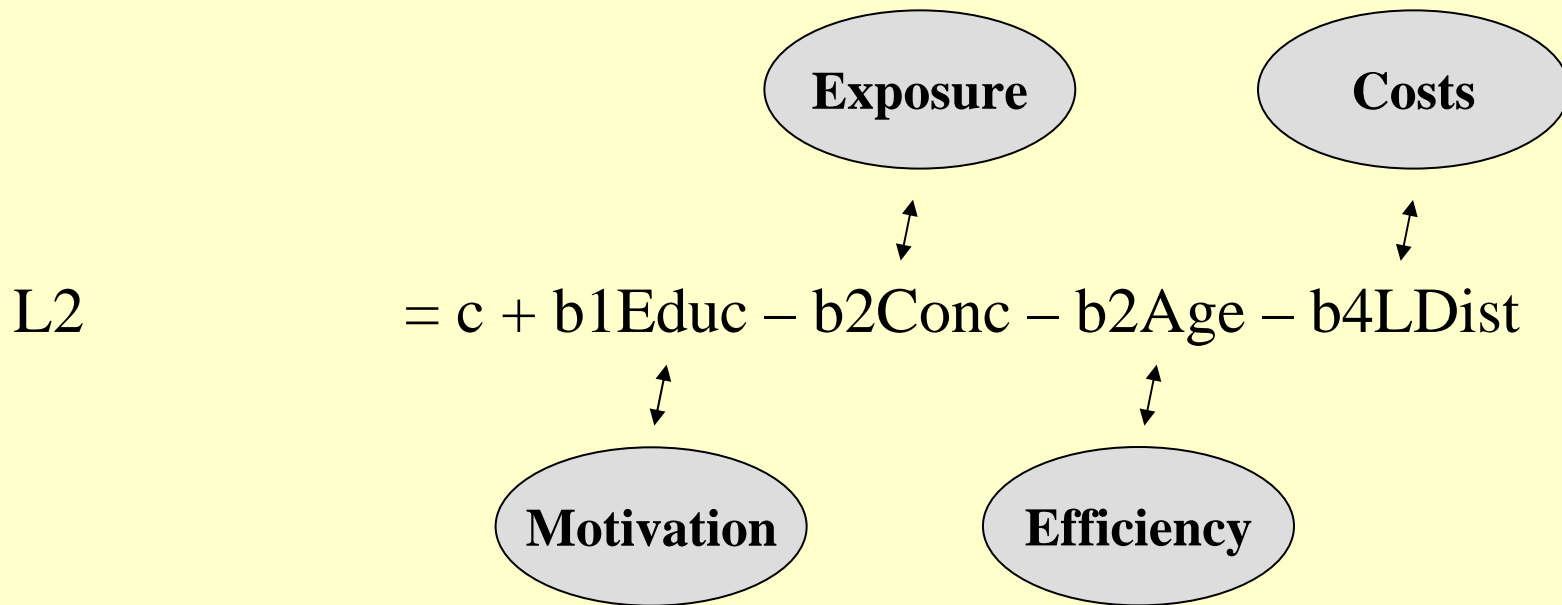
Empirical Results

Chiswick and Miller 1992: 257, Table 7-7; OLS-Coefficients; boldface: significant

Variables	USA	Canada
Education	**0.027**	**0.006**
Age	**-0.004**	**-0.001**
Length of stay	**0.014**	**0.005**
Married	**0.012**	-0.001
Marriage in SC	**-0.035**	**-0.013**
Ethnic concentration	**-0.018**	**-0.014**
R^2	0.38	0.18
N	32255	23741

and with comparative data: van Tubergen 2004

	Odds			Odds
Migr.-Biography			**Sending Context**	
Education	**1.18**		Pol. Repression	0.96
Age	**0.95**			
Length	**1.12**		Spt. Distance	0.89
Length (sq)	0.99		Spt. Distance (sq)	1.01
			L2-Exposure	1.45
Receiving Context			Ling. Distance	
Right-wing government	1.10		indo-eur. same	---
Public Intolerance	0.90		indo-eur. other	0.70
			not indo-european	0.30
Ethnic Context			Non-christ. Religion	1.50
Group Size	**0.40**		Imports	1.02
Group Size (sq)	1.32		GNP	0.92
			GNP(sq)	1.01

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Additionally: Interaction effects

Chiswick and Miller 1992: 241, Table 7-2; OLS-Coefficients; other variables controlled for

Variables	OLS	t
Ethnic concentration	**-0.022**	11.2
* **Education**	**0.001**	16.0
* **Age at immigration**	**-0.036**	8.7
* **Length of stay**	**0.060**	14.9
R^2	0.38	
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Generalizability?
(Chiswick&Miller and others)

Main effects

Variables	AUS 1980 1986		USA	CAN	ISR	GER
Education	+	+	+	+	+	+
Age at immigration	−	−	−	−	−	−
Length of stay	+	+	+	+	+	+
Ethnic concentration	−	−	−	−	−	−*

Interaction effects

Variables	AUS	USA	CAN	ISR	GER
Ethnic concentration	−	−	−	−	−*
* Education	+	+	+	+	+*
* Age	−	−	−	−	−*
* Length	+	+	+	+	+*

* not constistently confirmed

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What do we have?

Seminal contribution to a unified theory of L-Acquisition

Strong empirical confirmations, even in details

What is missing, however?

> no (explicit) modelling of the interplay of the (four) theoretical constructs
>
> no (explicit) theoretical derivation of the interaction effects (see also Tservadse&Jirhan 2004)

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Options

Status quo
Investment in (re-)improvement

**three
variants
of
Investment**

Investments **in** RC-capital: assimilation

Investments **with** SC/EG-capital:
ethnic entrepreneurship/transnational relations

Investments in **re-evaluation** of SC/EG-capital:
ethnic organization/ethnic movement

Components

U(L1): Gains in case of no learning

U(L2): Gains from learning

p: Probability of learning success: Exposure*Efficiency

C: Costs of learning

EU-weights (for language acquisition)

Gain L1

no L2 $EU(L1) = U(L1)$

L2 $EU(L2) = pU(L2) + (1-p)U(L1) - C$

Gain L2 in case
of success

Gain L1 in case
of failure

Costs

L2-Acquisition if:

$$U(L2) - U(L1) \quad > C(L2)/p(L2)$$

Gain L2 → $U(L2) - U(L1)$

Gain L1 → $U(L2) - U(L1)$

Opportunities: Exposure*Efficiency → $C(L2)/p(L2)$

Motivation → $U(L2) - U(L1)$

Cost → $C(L2)/p(L2)$
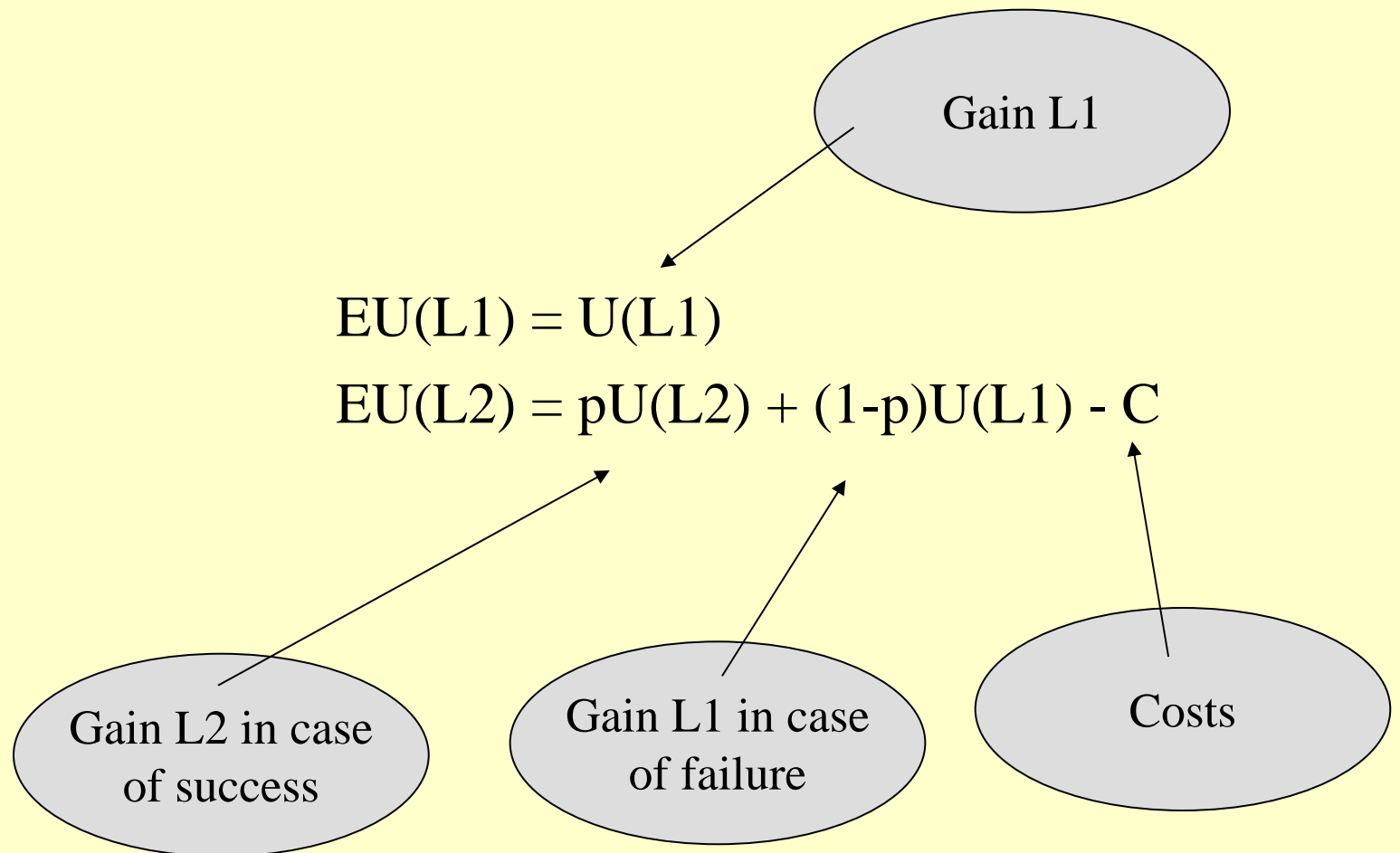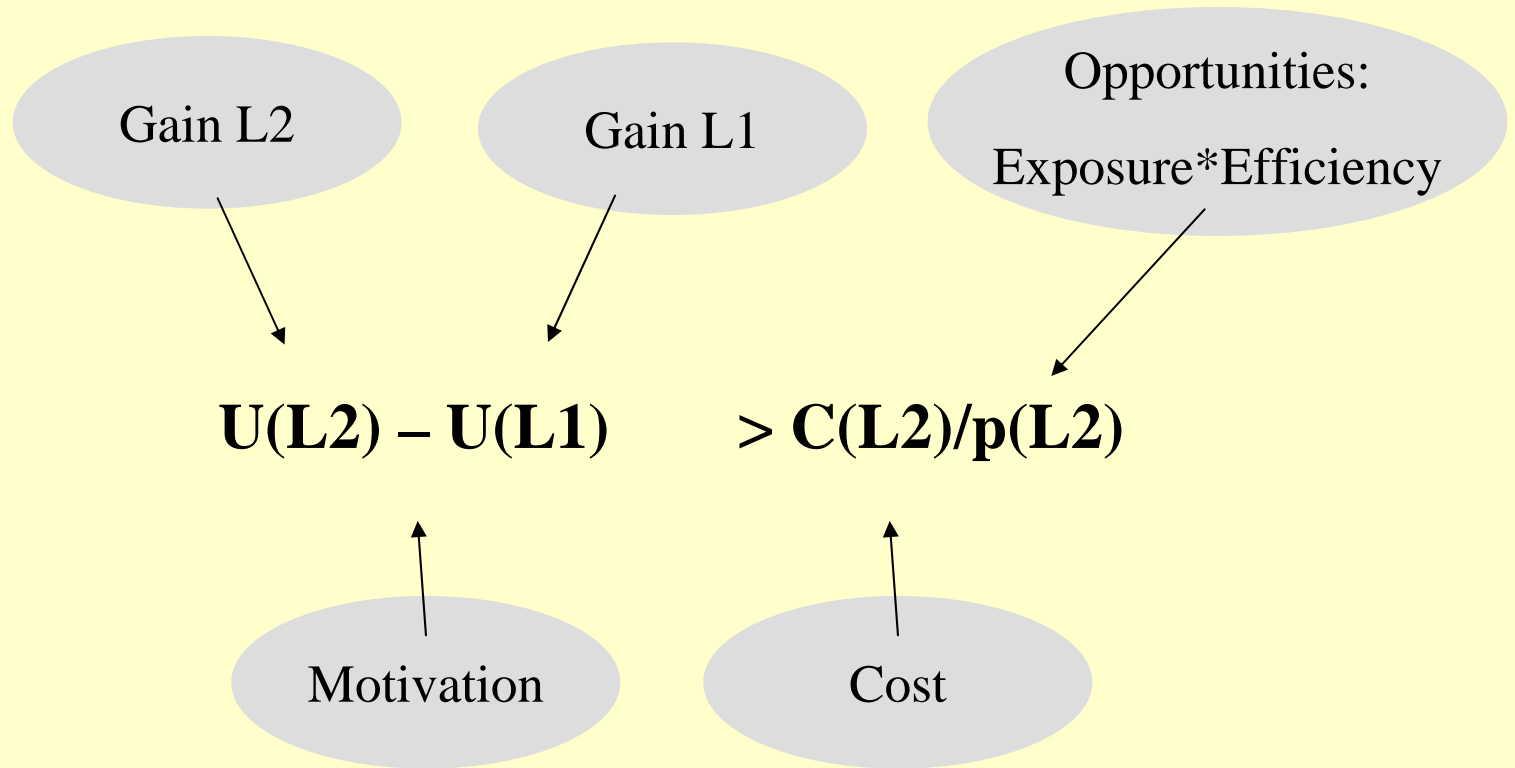
Chiswick (ext): **Gain L2- Gain L1   > Costs/Efficiency*Exposure**

The interplay of
motivation, exposure, efficiency and costs
in L2-acquisition
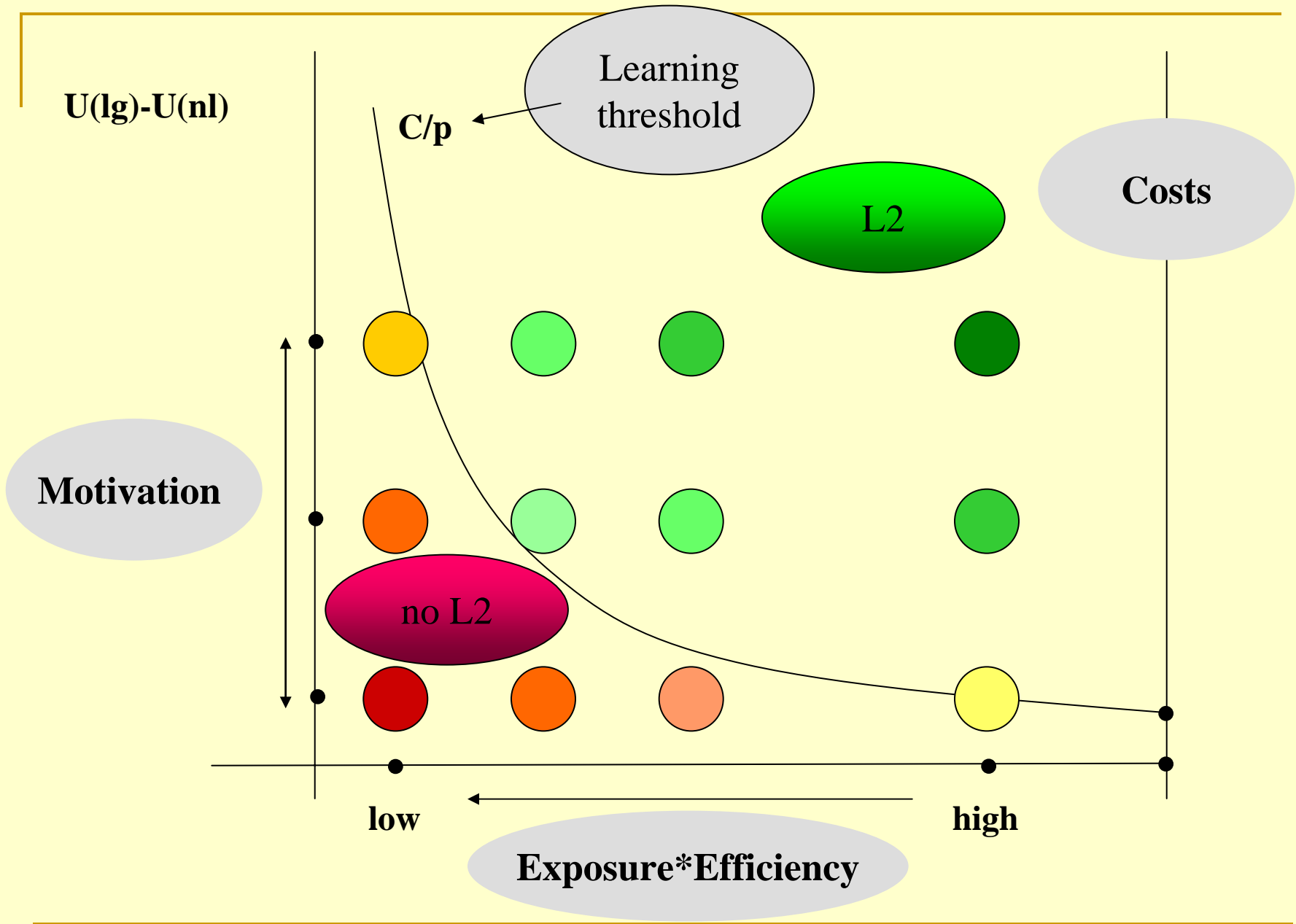
The statistical model (for the four basic constructs)

L2 if:

$$U(L2) - U(L1) \qquad\qquad > C/p$$

$$(U(L2) - U(L1l))*p \qquad\qquad -C \qquad > 0$$

$$(\text{Motivation} \quad *(\text{Exposure}*\text{Efficiency}) \quad -\text{Cost} \qquad > 0$$

$$(\text{Educ} \qquad\quad *(_\text{Conc}*_\text{Age}) \qquad\qquad -\text{LDist} \qquad > 0$$

… as regression model (for the four empirical conditions):

$$L2 = c + b1(Educ*((-Conc)*(-Age))) - b2LDist$$

three-way-
interaction

main effect
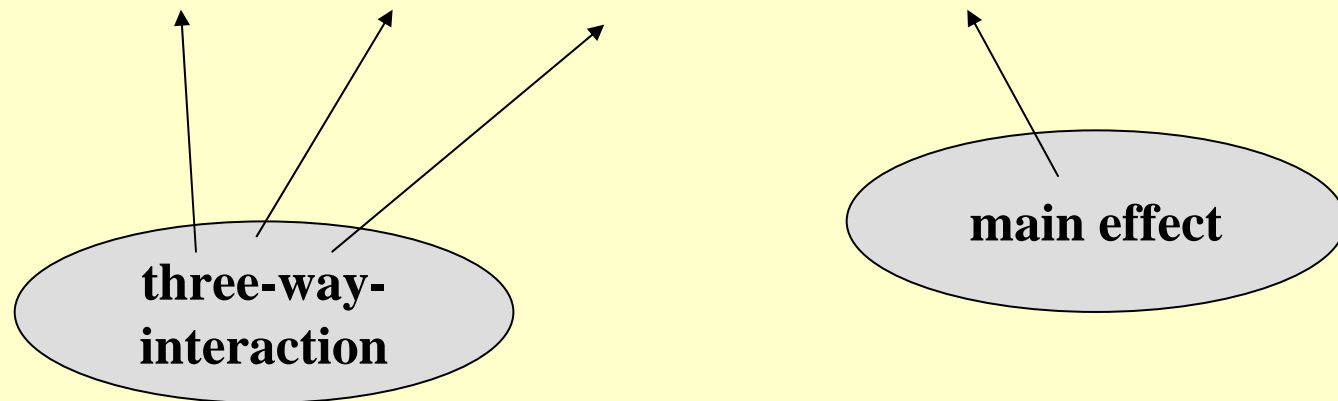
… as regression model (for the four empirical conditions):

L2   = c + b1(Educ*((–Conc)*(–Age))) – b2LDist

L2   = c + b1Educ – b2Conc – b3Age   – b4LDist

… and that would have been the Chiswick-Model: *no* interaction effects

The Differences to the Chiswick-Model

Motivation as *Difference* between Gain for L2 and L2 ("ability trap")

Interaction between Motivation and Opportunities

Opportunities as *Interaction* between Exposure and Efficiency

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Remember: The theoretical model**

L2 if:

(Motivation   * Exposure)   – Costs   > 0

(Educ   *–Conc)   – LDist   > 0

   ** Efficiency and age at immigration not considered here

The statistical model
(with extension to main effects)

interaction
effect

L2 = c + b1Educ – b2Conc + b3(Educ*-Conc) – b4LDist

main effects
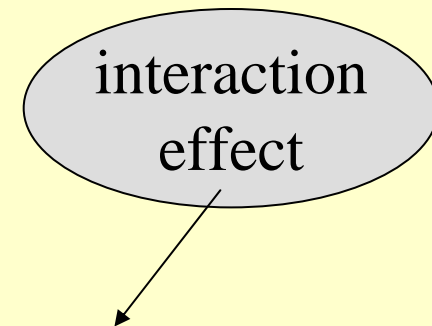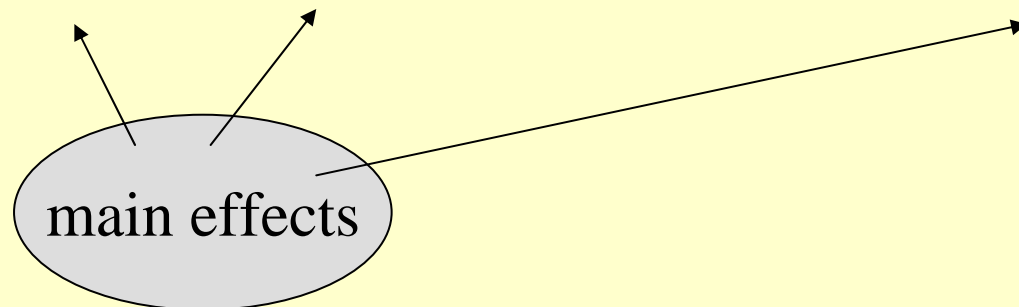
An application:
The interaction of good and bad conditions

Two cases

Case 1

Partial effect of **ethnic concentration** on L2

Partial effect of **ethnic concentration**

$$L2 = c + b1Educ - b2Conc + b3(Educ*-Conc) - b4LDist$$

$$d(L2)/d(Conc) = -b2 + b3(Educ)$$

Substantial interpretation:

increasing ethnic concentration is *less negative* ("positive") for migrants children with *higher* education parents

increasing ethnic concentration is *more negative* for migrants chlidren with *lower* education parents

A graphical illustration …
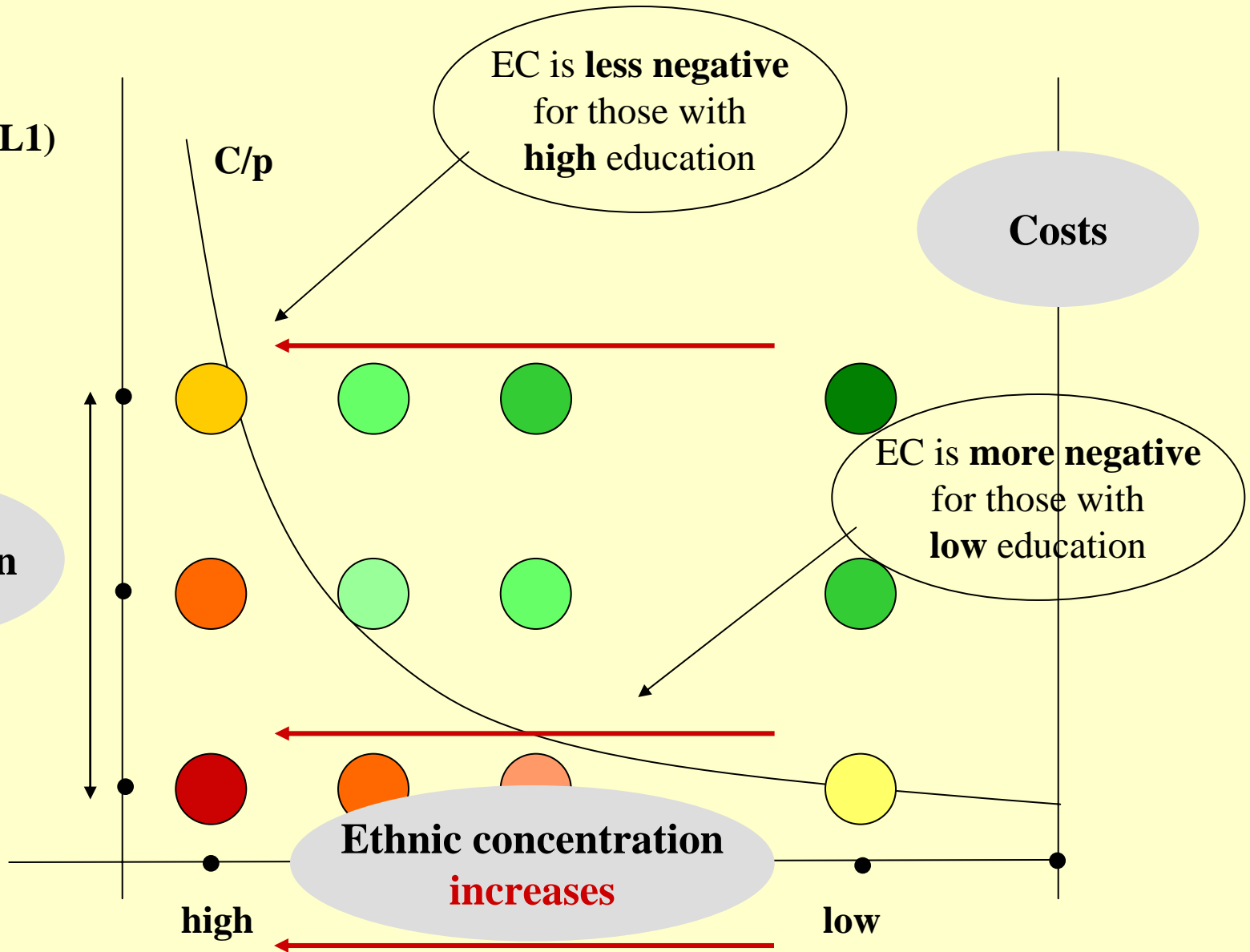
Empirical confirmations?

Chiswick and Miller 1992: 241, Table 7-2; OLS-Coefficients; other variables controlled for

Variables	OLS	t
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R^2	0.38	
N	32255	

Becker&Biedinger (2006): Preschool Attendance and
Linguistic Acculturation

An illustration of the practical meaning …

or …

Education

high

middle

low

L2

Migrant children with **low** education parents **gain more** from **decreasing** concentrations

high   middle   low

Ethnic concentration
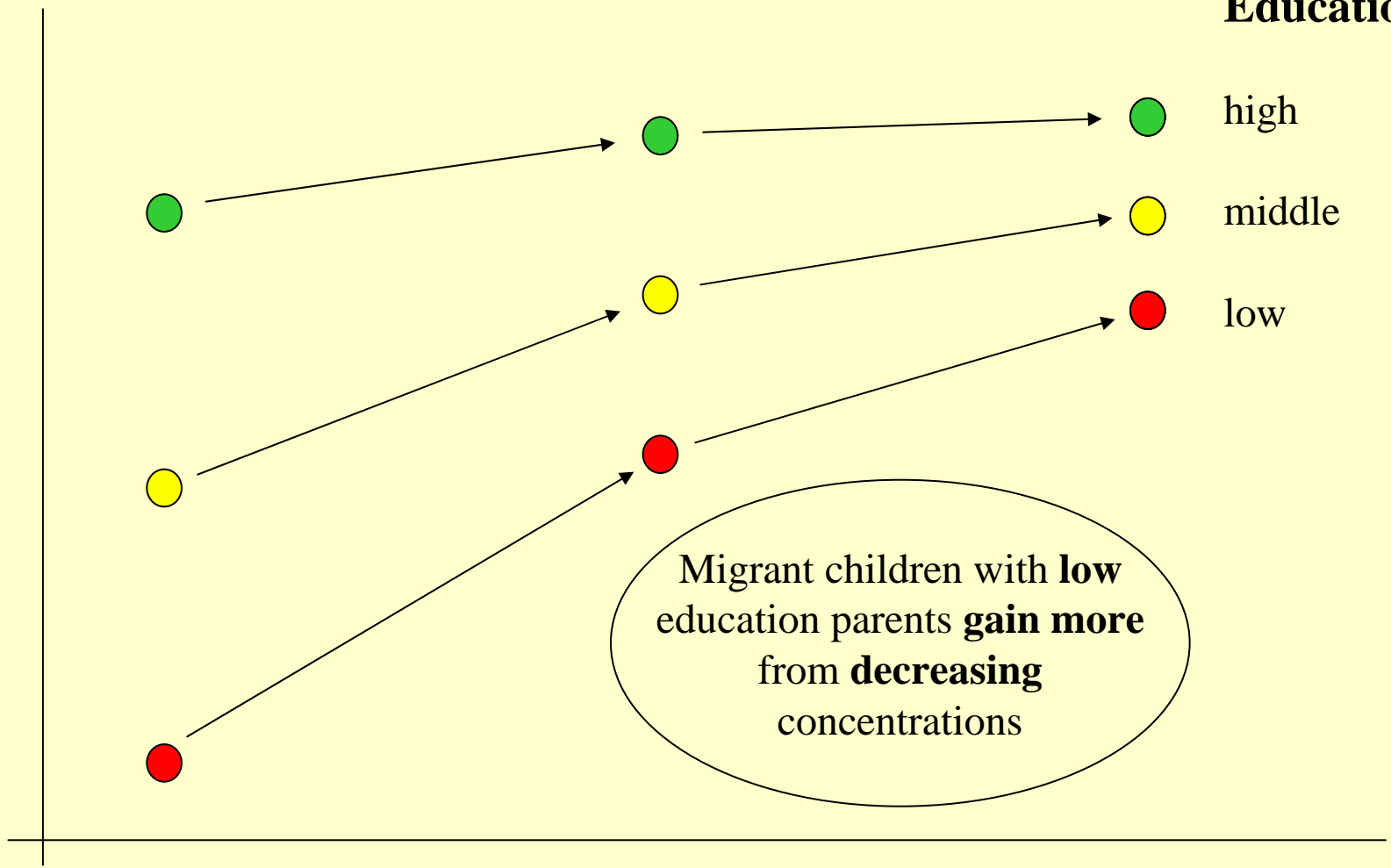
A first summary

„The *adverse* effects on English-language skills of living in an ethnic-language enclave is *greater* for those with *less* skill – that is, *less schooling*, or for more *recent arrivals* who immigrated at an *older age*. These are the immigrants with the *lowest* language facility, ceteris paribus"

(Chiswick und Miller 1992: 241; italics not in the original)

Case 2

Partial effect of **education** on L2

Partial effect of **education**

$$L2 = c + b1Educ - b2Conc + b3(Educ*-Conc) - b4LDist$$

$$d(L2)/d(Educ) = +b1 \quad -b3(Conc)$$

Substantial interpretation:

With *increasing* ethnic concentrations the *positive* effects of a higher education of parents *decrease*

With *decreasing* ethnic concentrations the *positive* effects of a higher education of parents *increase*

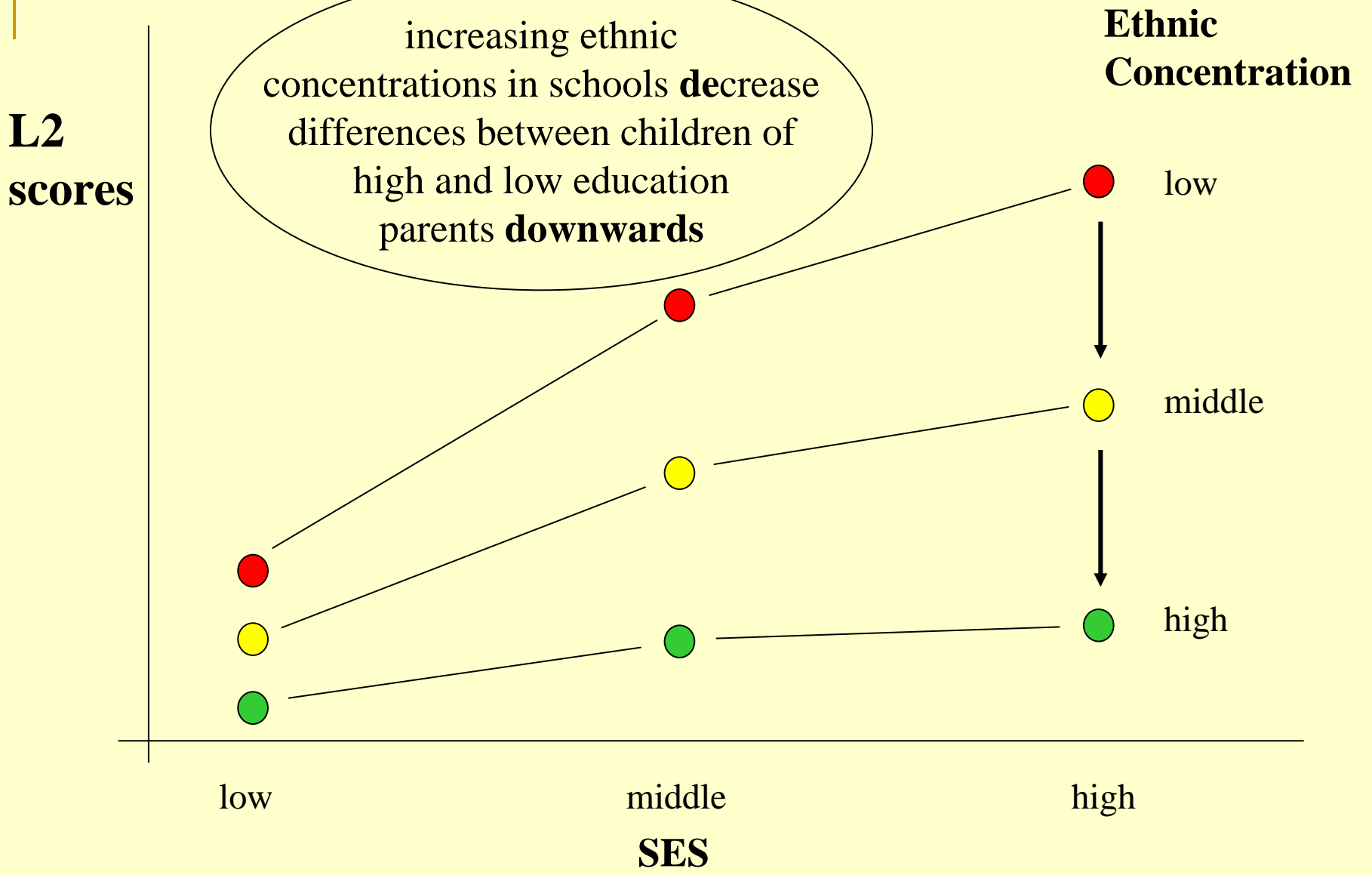**A graphical illustration …**
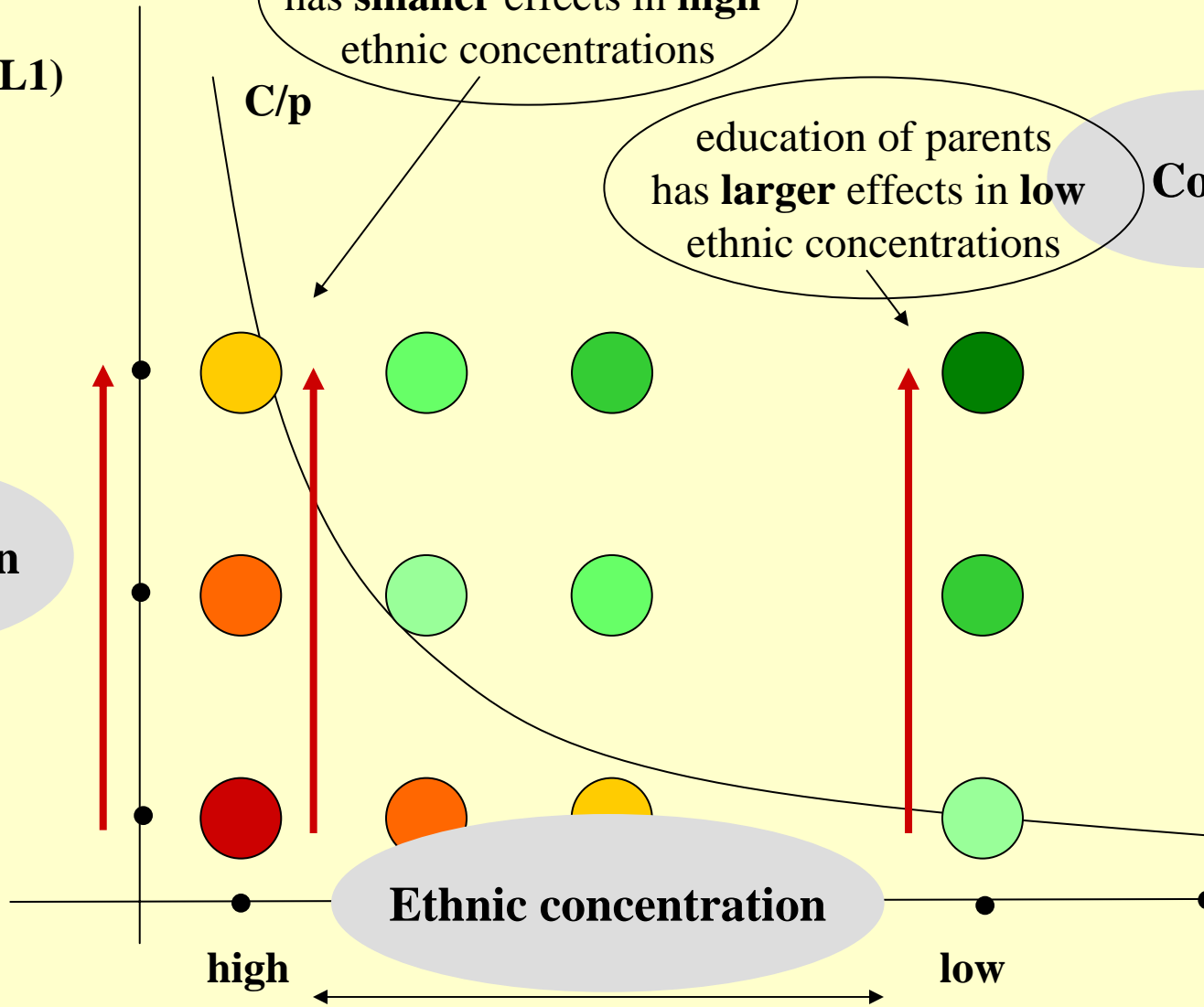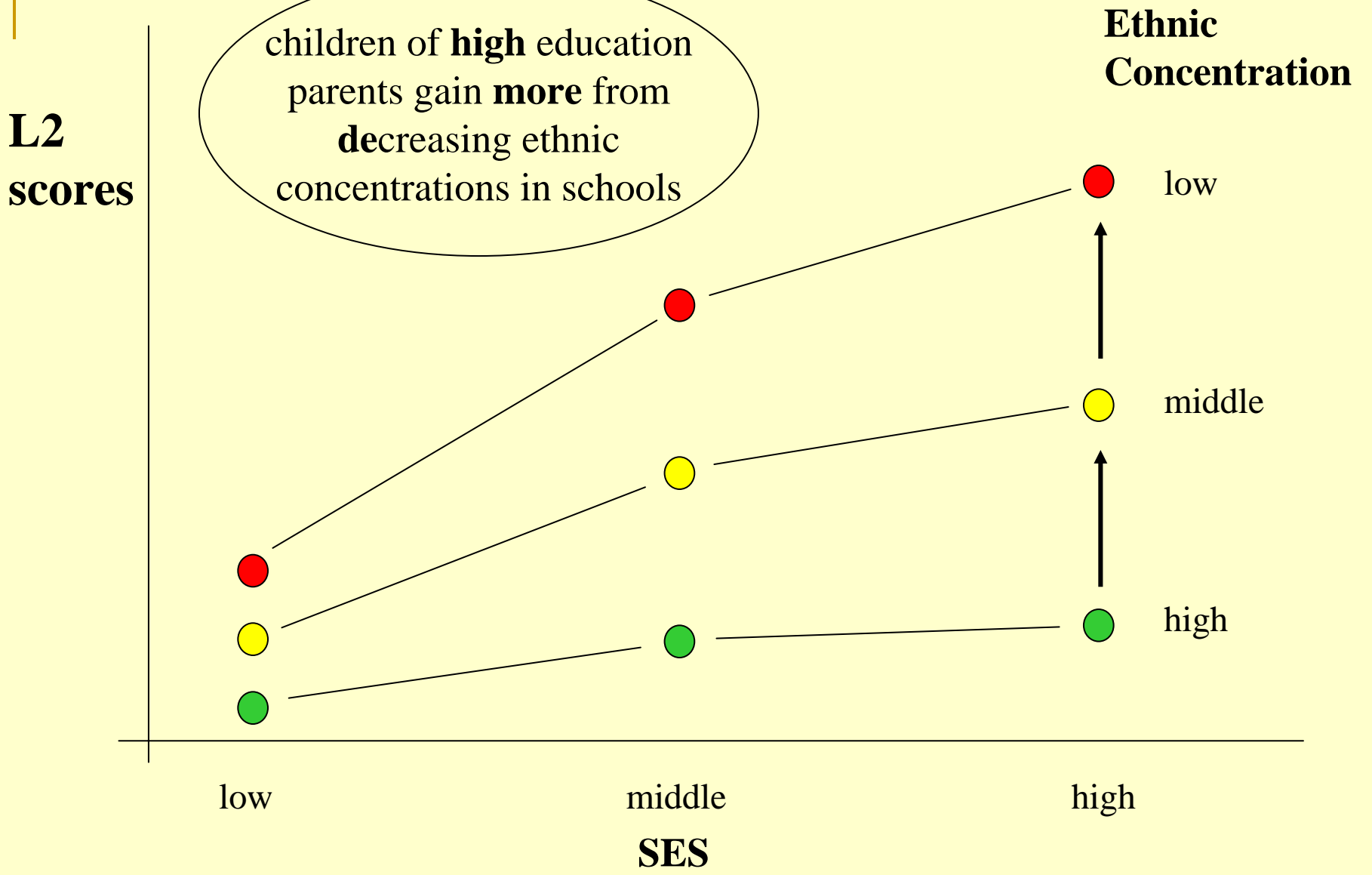
Empirical confirmations?

Portes&Hao (2004)
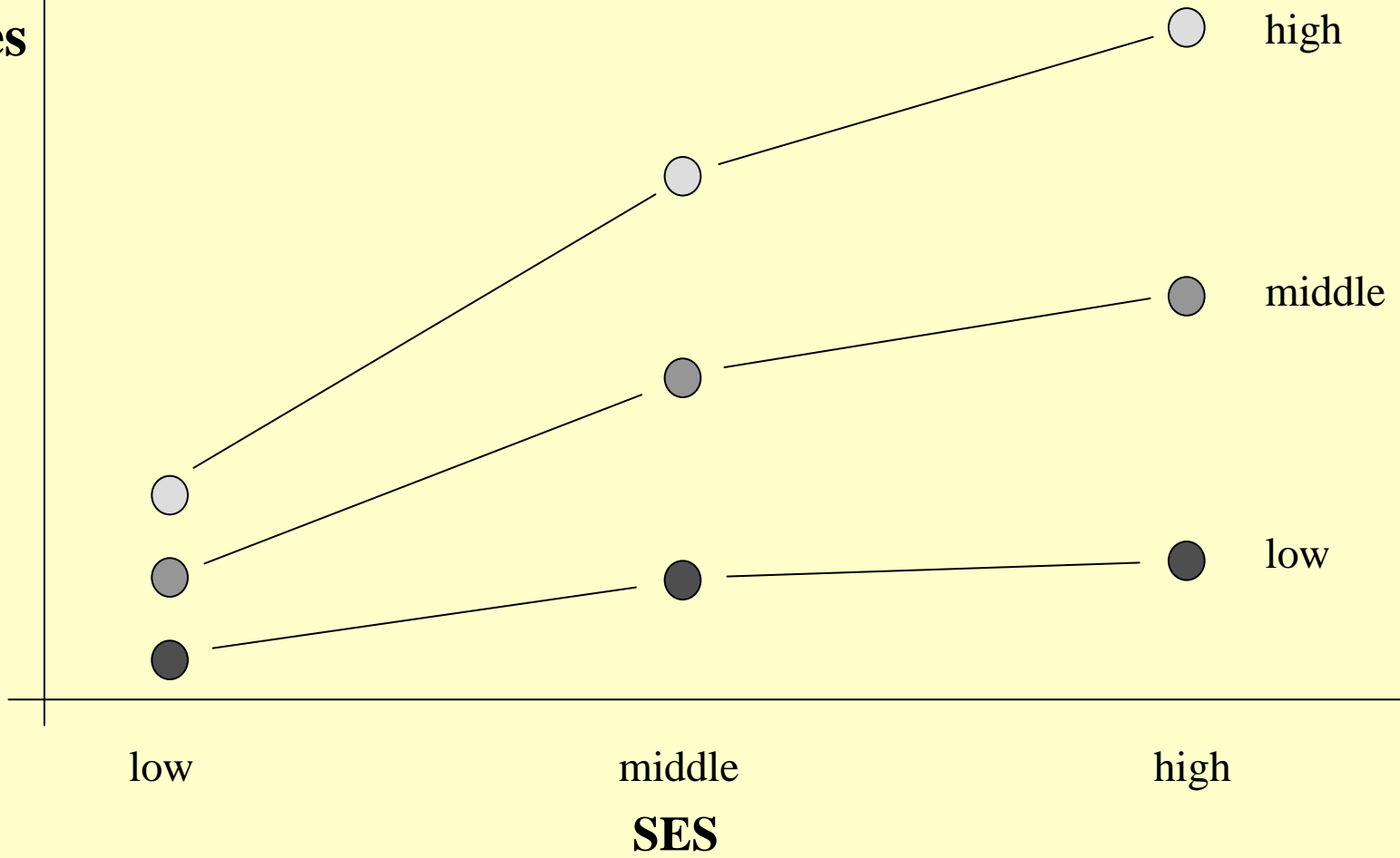
Portes&Hao (2004):

„The central finding … is that individual ethnic effects, positive for Asians and negative for Mexicans, are *attenuated* in the presence of a sizable percentage of coethnics."

An illustration of the practical meaning …

or …

A second summary …

„Our results suggest that if a young person from disadvantaged socioeconomic background has parents with *low* social status, and belongs to a *minority race*, then *diversity* would be an *advantage*. The student would benefit from the resources that the more advantaged students would bring to the social context of the school. On the other hand, our findings indicate that if a young person comes from a relatively *privileged* background, then *diversity* could be a *dis*advantage, at least in terms of achievement." (Caldas und Bankston (1996: 276)

… and a political problem!

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Conclusions

in general: bad contextual conditions **increase** the negative effects of (other) bad conditions

the improvement of bad contextual conditions is **especially** effective for migrants children with (other) bad conditions

the improvement of bad contextual conditions for migrant children **decreases**, however the advantages of the privileged children

hence: It **is** possible to break the vicious circle …,

… but that requires a certain behavior and insight in the collective good aspect of the problem by the privileged families and/or political actions!