

# Segregation and school composition effects



**Vincent DUPRIEZ  
GIRSEF (UCL)**

**January 2009  
Workshop on school  
enrollment policies, ULB**

# Structure



1. What is the problem? Segregation or inequality ?
2. School effectiveness research and school composition effect : one example in Belgium
3. Other studies
4. Interpretation of school composition effect
5. Conclusion

# What is the problem? Segregation or inequality ?



- In some way, segregation has become an important topic for educational and sociological studies
- Usually, segregation is seen as an unequal distribution of students between schools, according to some characteristics: sex, ethnicity, academic and sociocultural backgrounds, ...
- But nowadays, most studies about segregation do not analyse segregation itself; these researches evaluate segregation effects
- In particular, most studies try to identify if segregation contributes to achievement differences among students



- In other words segregation is mainly seen as the **cause** of something: inequalities of achievement, wellbeing, ...among students
- E.g., Research on compositional effect, school mix effect, peer effect
- In all cases, the goal is to assess the effect of school composition differences

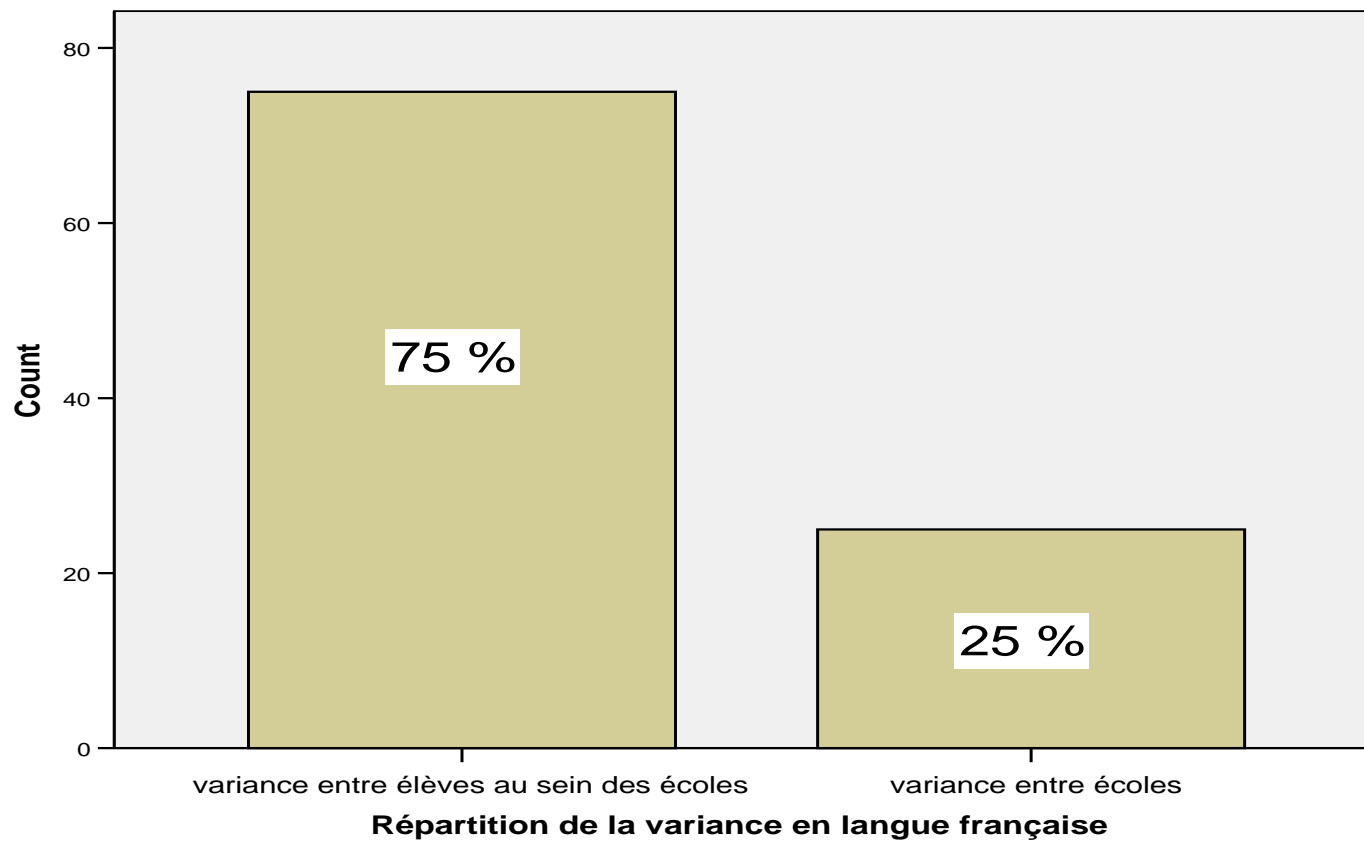


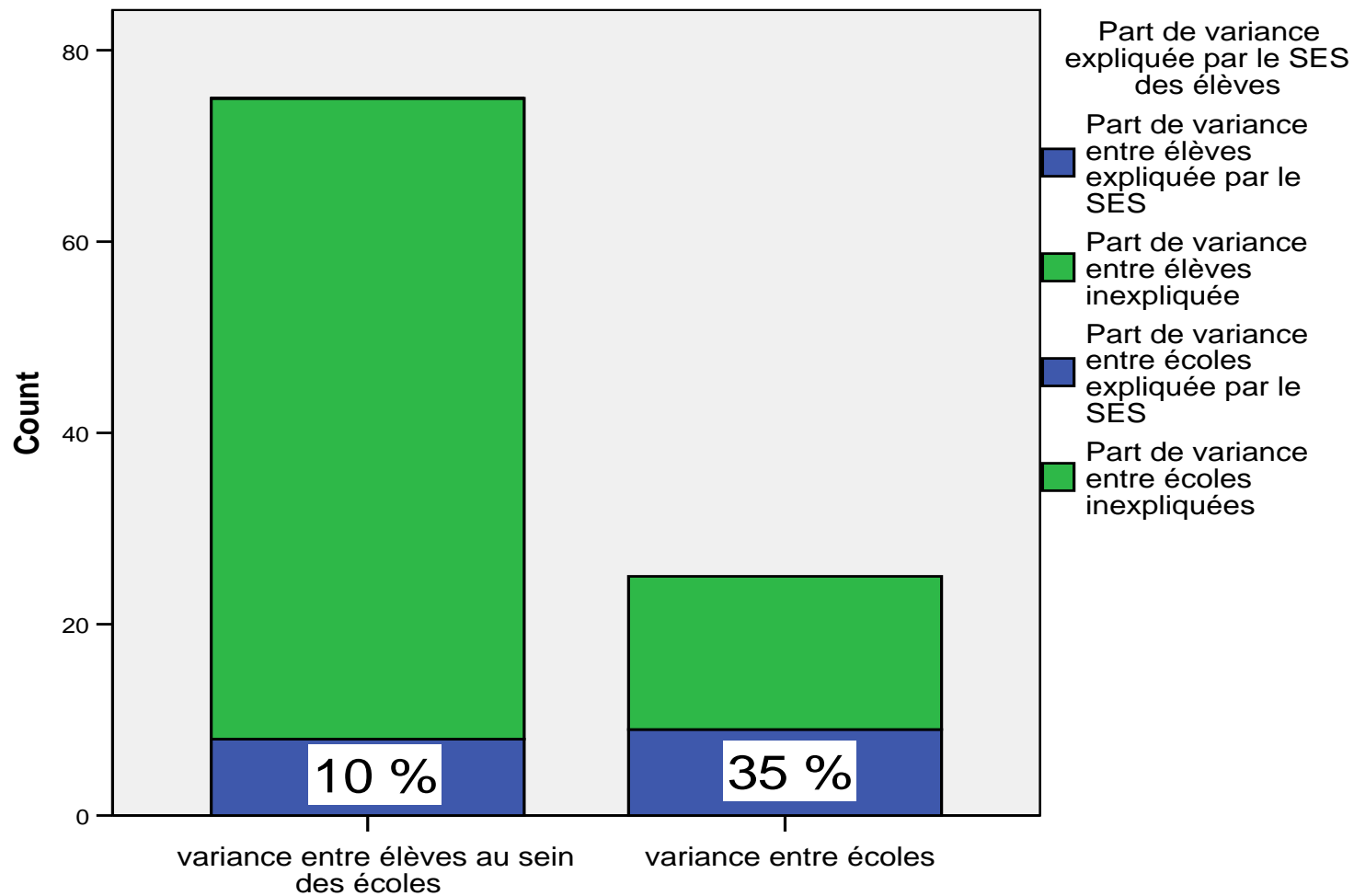
- **In my opinion, scientific and political debates must differentiate two different questions**
  - **What kind of schools do we want ?** What is the meaning of school as institution ? If school is seen as the main institution preparing citizens for living in a pluralistic and democratic society, every school must be a pluralistic place where children learn to live and to study with people from other backgrounds and social groups (Walzer, 1983)
  - What is the influence of school composition on students' learning, aspirations and wellbeing, over and above students' individual characteristics ?

## 2. School effectiveness research and school composition effect : one example in French-speaking Belgium (Grade 6)

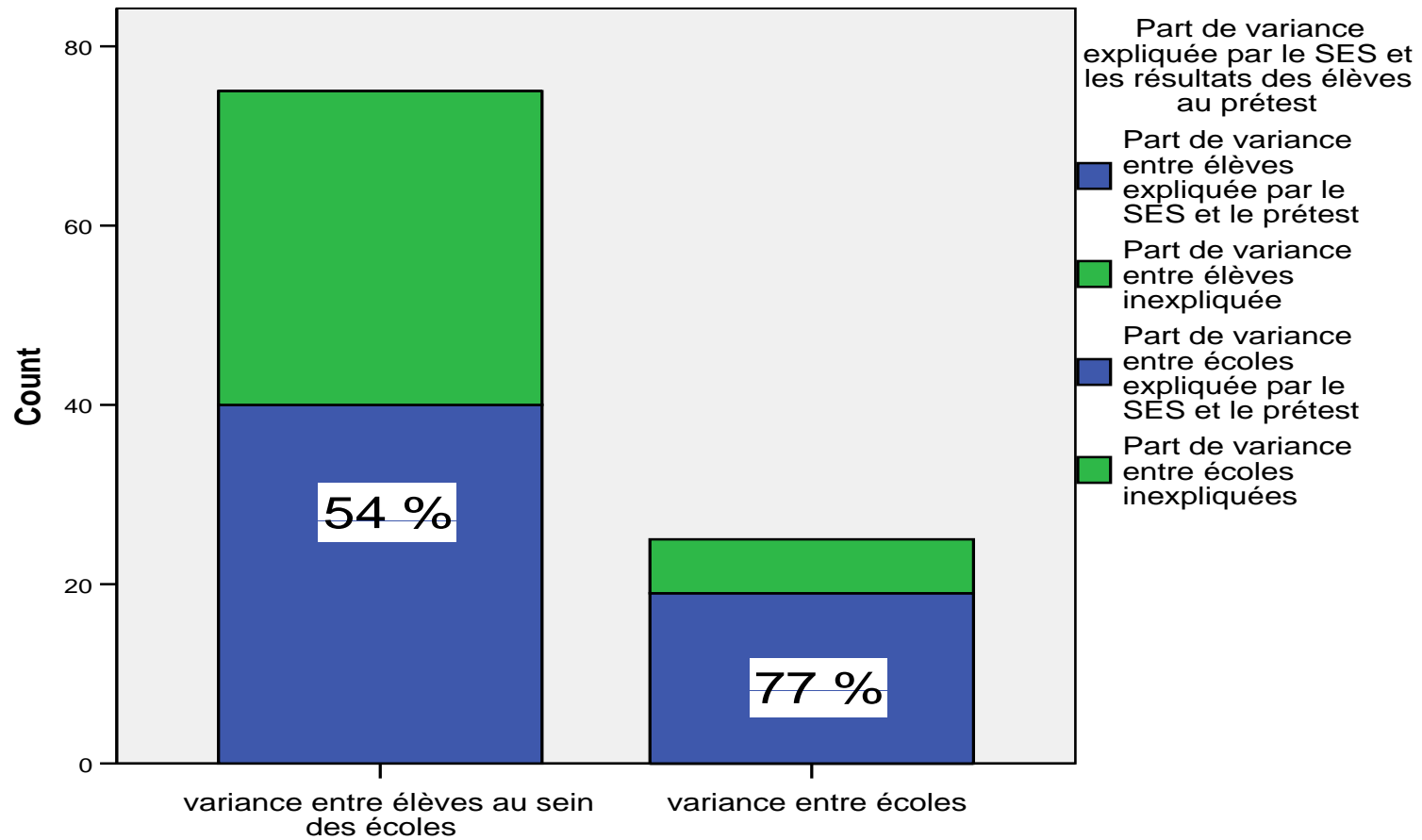


- From differences to causal inferences (school effect, corresponding to impact of school composition and/or quality of instruction)
- How to interpret differences between schools ?
- Out of a random distribution of students, researchers try to construct a statistical control for individual characteristics of students
- How to explain remaining between school differences ?

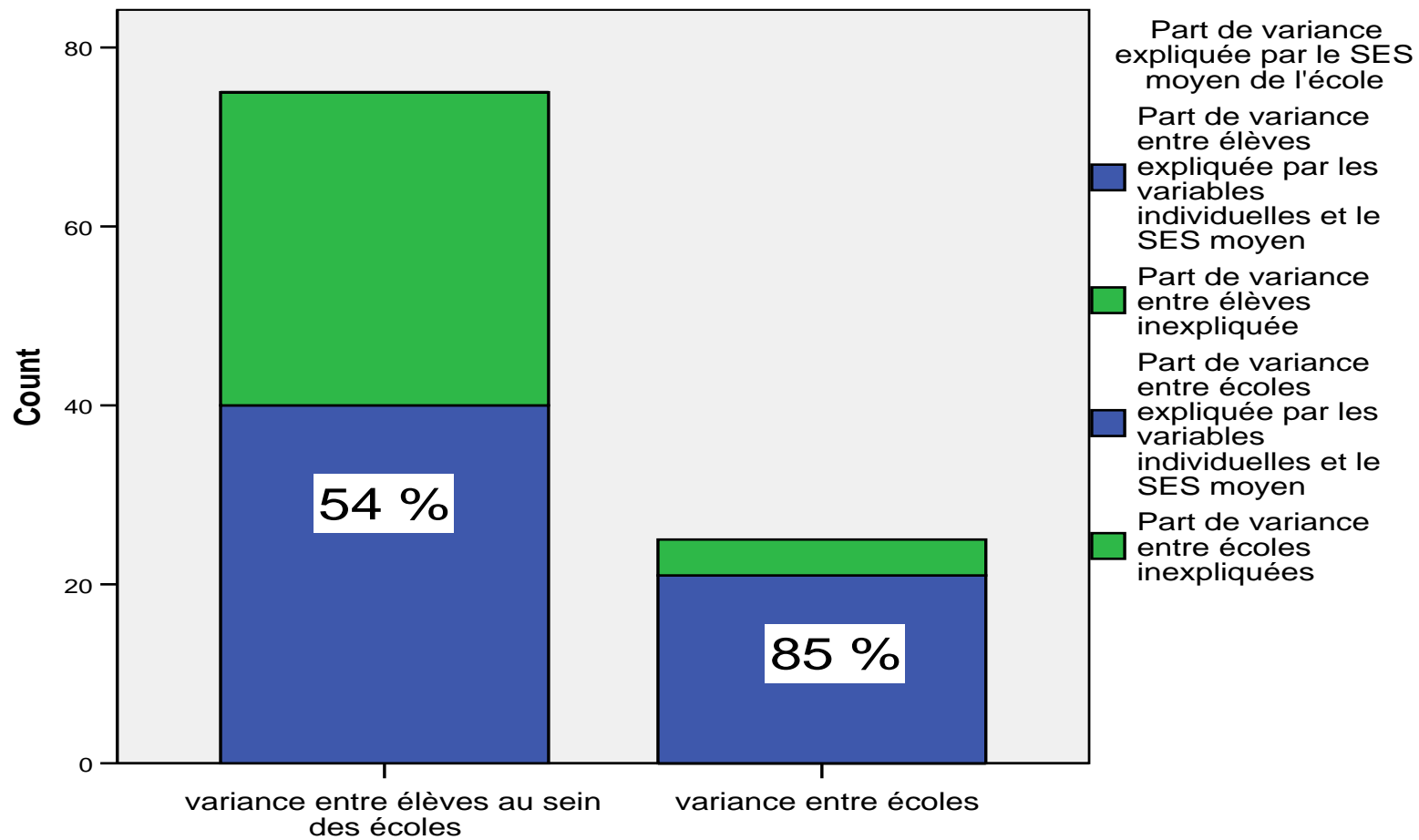




**Répartition de la variance en langue française**



**Répartition de la variance en langue française**



**Répartition de la variance en langue française**

### 3. Other recent studies (including variables controlling for individual differences, in particular prior achievement)



|                                     | Where ?         | SC Characteristics              | Effect                                  |
|-------------------------------------|-----------------|---------------------------------|---|
| Lauder & al (1999)                  | New-Zealand     | Composite measure               | Y                                       |
| Duru-Bellat & al (2004)             | France          | Social Composition              | N                                       |
| Van der Slik & al (2006)            | Netherlands     | Ethnic and social composition   | Y, in particular for social composition |
| Van de Gaer & al (2004)             | Flemish Belgium | Sex composition                 | Y                                       |
| Opdenakker & Van Damme (2001, 2006) | Flemish Belgium | Social and academic composition | Yes (both)                              |

# Studies with a longitudinal design



|                            | Where ? | Composition characteristics     | Effect (on achievement growth) ? |
|----------------------------|---------|---------------------------------|----------------------------------|
| Rumberger & Palardy (2005) | USA     | Social composition              | Y                                |
| Lauder & al (2007)         | England | Social and academic composition | Y                                |

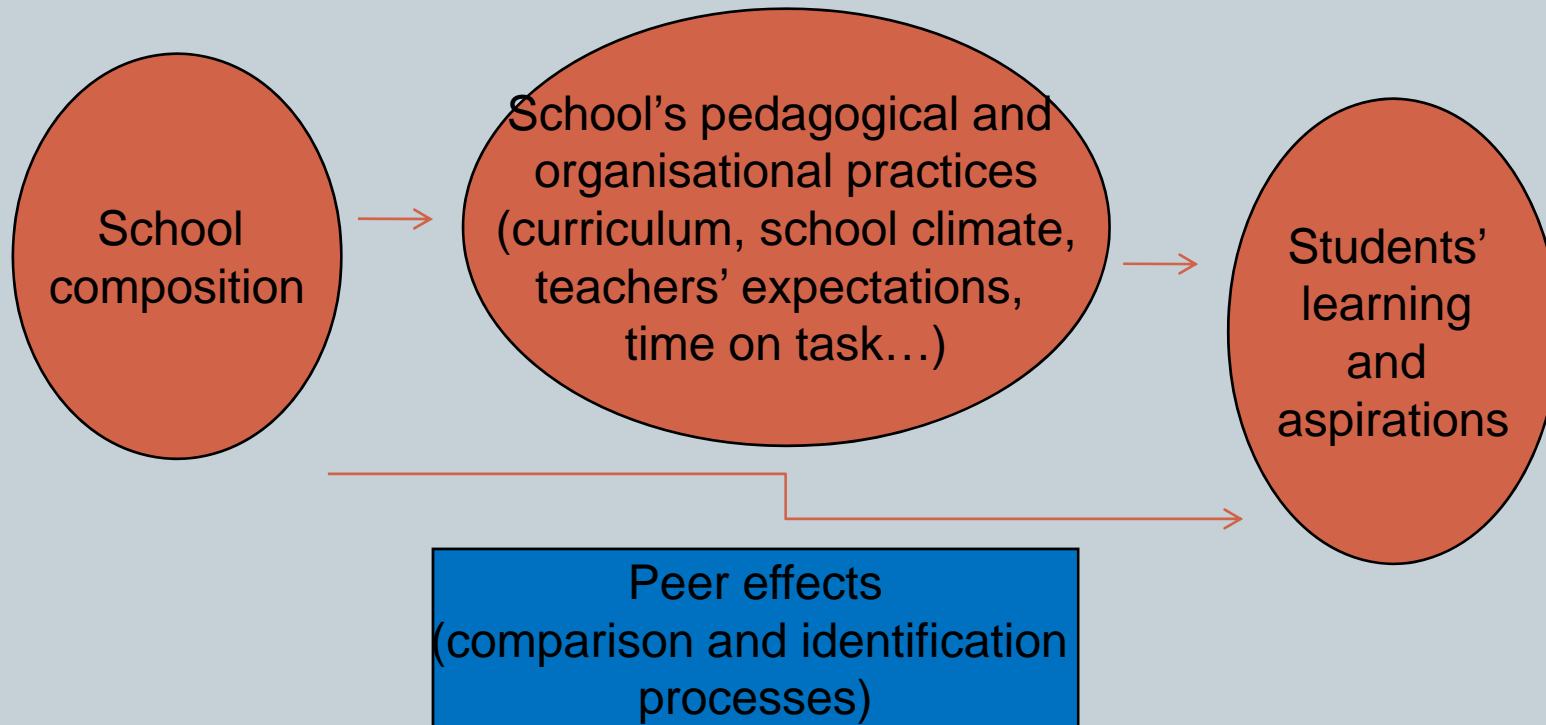
## 4. Interpretation of school composition effect

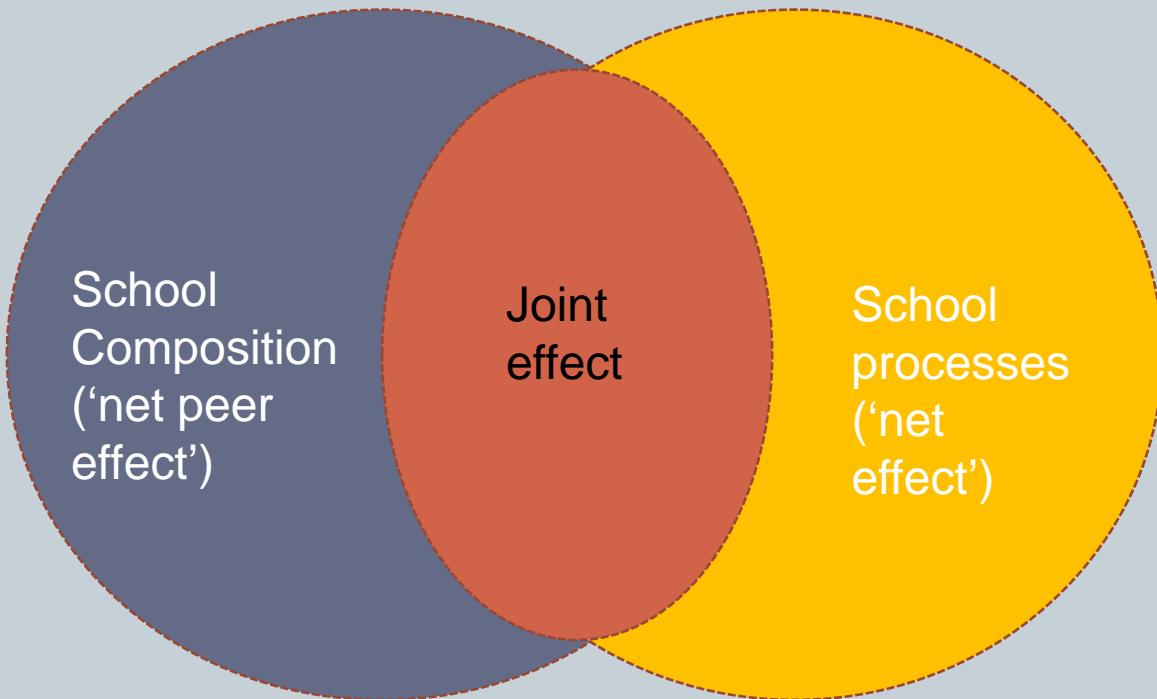


1. At the school level
2. At the institutional level

# Direct and indirect effect of school composition

School composition effect is partially mediated by school practices : adaptation of instructional work and goals according to school composition





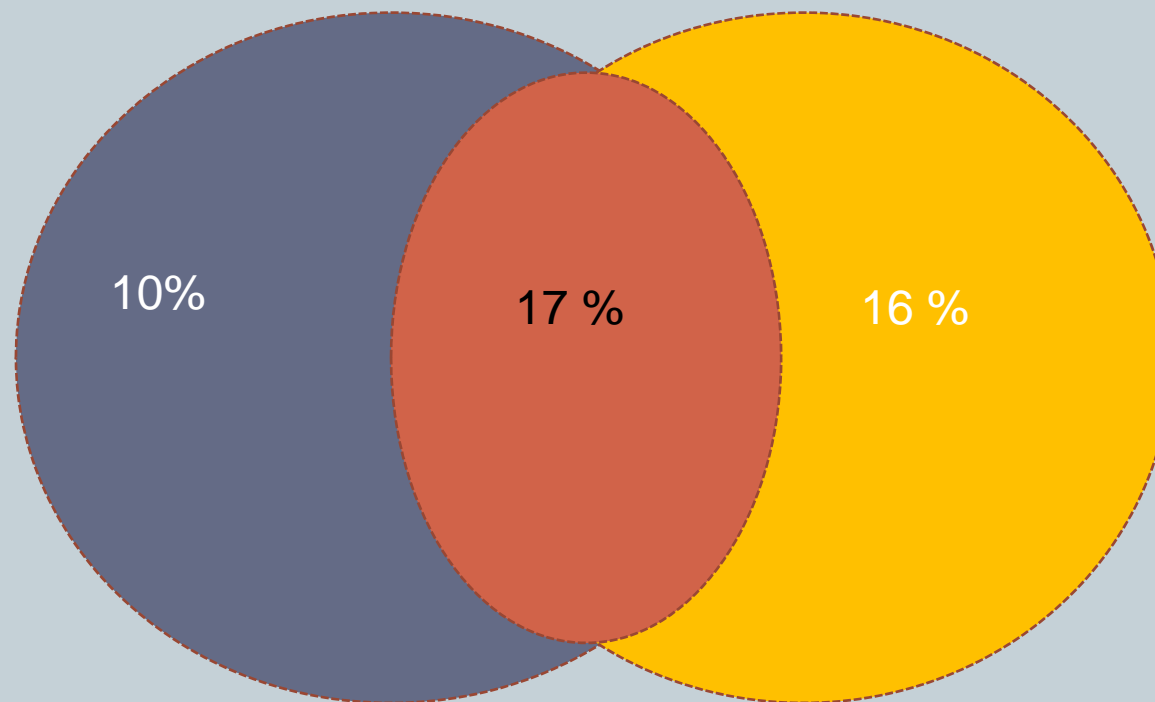
School  
Composition  
(‘net peer  
effect’)

Joint  
effect

School  
processes  
(‘net  
effect’)

# Opdenakker & Van Damme, 2001

## Flemish secondary schools



Between-school variance (in mathematics achievement) explained

## At the institutional level



- **Why do we observe a significant effect in some countries and not (or very low effect) in other countries ?**
- **Institutional hypothesis: the school composition effect will be higher if :**
  - Between-school differences in composition are high
  - Pedagogical autonomy is high (curriculum, instruction time, schoolbooks, ...)
  - External assessment of students does not exist

# Conclusion



- Unequal distribution of students can be seen as
  - a problem itself;
  - the cause of something (in particular inequality of opportunities of learning and achievement)
- In some contexts (in particular in Belgium), researches show that school composition has a significant (but usually small) impact on achievement
- Pupils perform better if they are in a school with pupils from 'favourable background' (academic or sociocultural background)
- Observed on one year, this impact is small, but its cumulative nature must be taken into account



- **School composition is not the only influential source; school processes (quality of instruction) do also matter**
- **We make the hypothesis of two ways of composition influence:**
  - **Direct peer effect: between pupils relationships, social networks, identification processes, ...**
  - **A mediation process: composition influences teachers expectations, real curriculum, time and opportunity to learn, ... (indirect effect)**
- **This indirect effect is probably higher in institutional contexts with higher pedagogical autonomy**

# References



- Dumay, X. & Dupriez, V. (2008). Does the school composition matter ? Evidence from Belgian data. *British Journal of Educational studies*, 56(4), 540-577.
- Dupriez, V. (2008). Faut-il combattre la ségrégation scolaire ? Conférence à Barcelone, septembre 2008.
- Opdenakker, M.C & Van Damme, J. (2001). Relationships between school composition and characteristics of school process and their effect on mathematic achievement. *British Educational research Journal*, 27, 407-432.
- More information on Girsef website (<http://www.uclouvain.be/girsef>) and personal webpage (<http://www.girsef.ucl.ac.be/Membres/Dupriez/cv%20dupriez.html>)