# Demography Today lecture series
Historical occupational classification and stratification schemes:
HISCO, HISCAM, HISCLASS

Richard L. Zijdeman [1,2]

[1]International Institute of Social History

[2]University of Stirling

March 22, 2017

# Outline

## Social inequality

> ... it is market position, and especially position in the
> occupational division of labour, which is fundamental to
> the generation of structured inequalities. The life chances
> of individuals and families are largely determined by their
> position in the market and occupation is taken to be its
> central indicator ... .

(Rose, 2009)

## Analysis of inequality

*Occupations are important as dependent variables
(occupational attainment studies) and independent
variables (occupation stratification studies) in educational
(and occupational!) status attainment, health, voting,
consumption, marriage etc.*

(Ganzeboom, 2008)

## Historical research

Occupations are one of the few indicators of social positions that are available in:

- large quantities
- different time periods
- various societies
- at the individual level

Introduction
**HISCO**
HISCLASS
HISCAM

**Background**
HISCO structure
Coding into HISCO
FAQ

## Lack of comparability

- Many different occupational classifications
- Differences in mobility studies could results from different classification methods (Kaelble 1985)

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
FAQ

## Comparable occupations

To make occupations comparable across language and over time

- ILO's Int. Standard Classification of Occupations (ISCO 1968, 1988, 2008)
- Historical ISCO (HISCO)
  - Van Leeuwen, Maas & Miles (2002)
  - $+$ 8 key collaborators
  - 20 other mentions in preface
  - a dozen institutes

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
FAQ

## Data

Resources

- 8 West-European countries
- period from ca. 1800-1950
- ca. 2.4 million records (e.g. birth, marriage, death)

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
FAQ

## HISCO structure

- Occupational category
- Subsidiary classifications

Introduction
**HISCO**
HISCLASS
HISCAM

Background
**HISCO structure**
Coding into HISCO
FAQ

## Occupational category

What is an occupational category?

- Jobs consist of occupational activities
- Jobs are categorized according to activities
- Occupational category contains jobs with overlapping activities

Introduction
**HISCO**
HISCLASS
HISCAM

Background
**HISCO structure**
Coding into HISCO
FAQ

## Examples of occupational categories

3.95-30 - Filing Clerk

- Classifies and systematically files papers, documents and other records.

8-12.30 - Wood turner

- Shapes pieces of wood rotating in a lathe, using hand tools

Introduction
**HISCO**
HISCLASS
HISCAM

Background
**HISCO structure**
Coding into HISCO
FAQ

## Occupational category codes

Occupational category codes consist of 5 digits, e.g.: 6.11-15

- 6: major group
  - Agriculture, animal husbandry and forestry workers, fishermen and hunters
- 6-1: minor groups
  - Farmers
- 6-11: unit groups
  - General Farmers
- 6-11.15: occupational category
  - Small subsistence farmer (Husbandman)

Introduction
**HISCO**
HISCLASS
HISCAM

Background
**HISCO structure**
Coding into HISCO
FAQ

## Occupational category codes

One more example: 8-39.30

- 7/8/9: major group
  - Production and related workers, transport equipment operators and labourers
- 8.3: minor groups
  - Blacksmiths, toolmakers and machine-tool operators
- 8.39: unit groups
  - Blacksmiths ... Not Elsewhere Classified (NEC)
- 8.39-30: occupational category
  - Locksmith

Introduction
**HISCO**
HISCLASS
HISCAM

Background
**HISCO structure**
Coding into HISCO
FAQ

## Subsidiary classifications

Additional information on occupations not related to activities

- status

- relation

- product

Introduction
HISCO
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
FAQ

## Status

Additional information on a type of status:

- ownership (proprietor, poor)
- artisan career (master, apprentice)
- principles and subordinates (principal, serfs and slaves)
- tertiary education (student, graduate)
- 'pure' status (nobility, prestige titles)

Introduction
**HISCO**
HISCLASS
HISCAM

Background
**HISCO structure**
Coding into HISCO
FAQ

## Relation

Additional information on relationship to (incumbent's) occupation

- family relationship (son, wife of...)
- temporal relationship (former...)
- voluntary or honorary relationship
- incapicitated (disability)
- housework (assisting at home)

Introduction
HISCO
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
FAQ

## Product

Additional information on occupations related to trade of product

- based on UN Central Product Scheme
- 2-digit (only)
- e.g.: agriculture, ores and minerals, food, construction

Introduction
HISCO
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
FAQ

## Codes for missing data

In some instances

- -1: there is no occupational activity in the description
- -2: it was explicitly stated that a person did not work
- 9-99.99:
    - extremely vague description of occupational activity
    - title refers to a multitude of occupational activities

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
FAQ

## General coding procedure

- is there information on work activity?
    - no? $\Rightarrow$ -1 or -2 and subsidiary variables
    - yes? $\Rightarrow$ code into HISCO
- is title too vague to call? $\Rightarrow$ 9-99.99
- two occupations? $\Rightarrow$ code the first or most important one
- one title, but two possible codes? $\Rightarrow$ make a contextual decision

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
**Coding into HISCO**
FAQ

# Some hints on coding

- Code 2 digits at first, later on remaining digits
- Code similar occupations (e.g. all clerks, farmers)
- Read Ganzeboom's "Do's and don'ts of occupational coding"
  PDF

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
**FAQ**

## What about "alternative" schemes

- OCCHISCO (NAPP)
- PST (Cambridge Group)

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
**FAQ**

# Can I include other variables in HISCO?

- NO!!!
- e.g. gender, race, size of land (farmer)
- not everybody will have your variables too! (comparability)
- control for those variables in your analysis instead

Introduction
**HISCO**
HISCLASS
HISCAM

Background
HISCO structure
Coding into HISCO
**FAQ**

# Where can I get help?

- HISCO book
- HISCO Collab: http://collab.iisg.nl/hisco

Introduction
HISCO
**HISCLASS**
HISCAM

Measures of occupational stratification
HISCLASS

## 'Socio-Economic' Classifications (SECs)

- Prestige scores (SIOPS)
- Socio-economic index (ISEI)
- Social class (EGP, SOCPO, HISCLASS)
- Patterns of social interaction (CAMSIS, HISCAM)

Introduction
HISCO
**HISCLASS**
HISCAM

Measures of occupational stratification
HISCLASS

## Social Classes

- Aggregating data
- Grouping of occupations
- A group: "A set of persons with the same life chances"

Introduction
HISCO
**HISCLASS**
HISCAM

Measures of occupational stratification
HISCLASS

# HISCLASS dimensions

- manual/non-manual
- skill (higher, medium, lower, unskilled)
- provide supervision (yes, no)
- economic sector (primary, other)

Introduction
HISCO
**HISCLASS**
HISCAM

Measures of occupational stratification
HISCLASS

## HISCLASS design

Score HISCO's along the 4 dimensions, using:

- US 1965 Dictionary of Occupational Titles
- historical experts
- go with experts in case of major incongruence

Introduction
HISCO
**HISCLASS**
HISCAM

Measures of occupational stratification
HISCLASS

## Practical implementation

- SPSS script coding HISCO into HISCLASS
- Context specific coding of (agricultural) labour

Introduction
HISCO
HISCLASS
HISCAM

Measures of occupational stratification
HISCLASS

## Some observations on HISCLASS

- Role of 'experts' Cf. SOCPO
- Aggregation of classes (4, 5, 7, 12 classes)
- Lacks simple mapping table to HISCO

Introduction
HISCO
HISCLASS
HISCAM

CAMSIS
HISCAM

# Cambridge Social Interaction and Stratification

Some characteristics:

- Only one assumption: interaction determines distance
- Space and time specific scales (appealing to historians)
- Scales for sub-populations (e.g. gender)

Introduction
HISCO
HISCLASS
HISCAM

CAMSIS
HISCAM

## Social Interaction Distance (SID)

- The more social interaction, the smaller the distance
- RC-II Models
- Pseudo-diagonals

Introduction
HISCO
HISCLASS
HISCAM

CAMSIS
HISCAM

# HIStorical CAMSIS (HISCAM)

Universe:

- 7 Western countries
- period: 1800-1938
- 4.5 million occupational records
- 12 scales
    - M, F, M-F universal scales (U)
    - Early and late period (E,L)
    - M national scales (BE, CA, DE, FR, GB, NL, SE)

Introduction
HISCO
HISCLASS
**HISCAM**

CAMSIS
**HISCAM**

## HISCAM properties

Scale properties

- theoretical range: 0-99
- mean 50, standard deviation 10

Introduction
HISCO
HISCLASS
HISCAM

CAMSIS
HISCAM

## Methodological notes

- no friendship relations (cf. CAMSIS)
- $> 30$ observations per occ unit
- smoothing
    - post-hoc tests
    - smoothing of specific scales with universal scale
- pseudo-diagonals
- circularity? (no)
    - high correlation with other scales
    - occupational unit vs. individual observation
    - robustness between 100's of models (no case for specific relations in data)

Introduction
HISCO
HISCLASS
HISCAM

CAMSIS
HISCAM

Questions?