

# Package ‘SocialPosition’

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**Type** Package

**Title** Social Position Indicators Construction Toolbox

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**Description** Provides to sociologists (and related scientists) a toolbox to facilitate the construction of social position indicators from survey data. Social position indicators refer to what is commonly known as social class and social status. There exists in the sociological literature many theoretical conceptualisation and empirical operationalization of social class and social status. This first version of the package offers tools to construct the International Socio-Economic Index of Occupational Status (ISEI) and the Oesch social class schema. It also provides tools to convert several occupational classifications (PCS82, PCS03, and ISCO08) into a common one (ISCO88) to facilitate data harmonisation work, and tools to collapse (i.e. group) modalities of social position indicators.

**License** GPL-2 | GPL-3

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SocialPosition-package

*Social Position Indicators Construction Toolbox*

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## Description

Provides to sociologists (and related scientists) a toolbox to facilitate the construction of social position indicators from survey data. Social position indicators refer to what is commonly known as social class and social status. There exists in the sociological literature many theoretical conceptualisation and empirical operationalization of social class and social status. This first version of the package offers tools to construct the International Socio-Economic Index of Occupational Status (ISEI) and the Oesch social class schema. It also provides tools to convert several occupational classifications (PCS82, PCS03, and ISCO08) into a common one (ISCO88) to facilitate data harmonisation work, and tools to collapse (i.e. group) modalities of social position indicators.

## Details

Package: SocialPosition  
 Type: Package  
 Version: 1.0.1  
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 License: GPL-2 | GPL-3

Three main types of functions are available in the package:

**The "collapse" functions:** These functions collapse (i.e. group) different modalities of an occupational grid together

**The "convert" functions:** These functions convert different occupational classifications into another one. This can be very useful when you want to harmonize different datasets.

**The "recode" functions:** These functions are specifically the ones which enable you to construct social position indicators

For the moment, we have developed conversion tools mostly on:

- The French Professions et Categories Socioprofessionnelles 1982 and 2003 (PCS)
- The International Standard Classification of Occupations 1988 and 2008 (ISCO)

The following **conversions** are possible:

From...To...	PCS1982	PCS2003	ISCO1988	ISCO2008
PCS1982	X	Yes	in two steps	No
PCS2003	No	X	Yes	No
ISCO1988	No	No	X	No
ISCO2008	No	No	Yes	X

The following social position indicators constructed from ISCO1988 are at the moment available for **recoding**:

- The International Socio-Economic Index of Occupational Status (ISEI)
- The Oesch class schema

In the future, we will implement more conversion and recoding tools. If you would like to see some of your tools implemented in the package, please get in touch!

#### Author(s)

Julie Falcon (University of Lausanne)

Maintainer: Julie Falcon <julie.falcon@unil.ch>

---

collapse\_PCS2003\_21    *The collapsing of the French Professions et Categories Socioprofessionnelles (PCS 2003) from 2 levels*

---

#### Description

This function collapses the French Professions et Categories Socioprofessionnelles (PCS 2003) from 2 levels (niveau 2) into 1 level (niveau 1)

#### Usage

```
collapse_PCS2003_21(PCS2003_21, data)
```

#### Arguments

PCS2003_21	The name of the variable containing <b>the French PCS 2003 coded on 2 levels</b>
data	The name of the dataset

#### Author(s)

Julie Falcon (University of Lausanne)

#### References

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 can be found on the French National Statistic Agency, the INSEE (in French only):

<http://insee.fr/fr/methodes/default.asp?page=nomenclatures/pcs2003/pcs2003.htm>

## Examples

```
#load the data
data(data_PCS2003_21)

#visualize the data
str(data_PCS2003_21)
head(data_PCS2003_21)

#check the variable PCS2003_21 needed for the conversion
table(data_PCS2003_21$codes_2_level)

#Then, you can run the function:
data_PCS2003_21 <- collapse_PCS2003_21(
  PCS2003_21=data_PCS2003_21$codes_2_level,
  data=data_PCS2003_21)

#The corresponding variable was created:
names(data_PCS2003_21)
table(data_PCS2003_21$PCS2003_11)
```

---

collapse\_PCS2003\_31    *The collapsing of the French Professions et Categories Socioprofessionnelles (PCS 2003) from 3 levels*

---

## Description

This function collapses the French Professions et Categories Socioprofessionnelles (PCS 2003) from 3 levels (niveau 3) into 1 level and 2 levels (niveaux 1 and 2)

## Usage

```
collapse_PCS2003_31(PCS2003_31, data)
```

## Arguments

PCS2003_31	The name of the variable containing <b>the French PCS 2003 coded on 3 levels</b>
data	The name of the dataset

## Author(s)

Julie Falcon (University of Lausanne)

## References

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 can be found on the French National Statistic Agency, the INSEE (in French only):

<http://insee.fr/fr/methodes/default.asp?page=nomenclatures/pcs2003/pcs2003.htm>

## Examples

```
#load the data
data(data_PCS2003_3l)

#visualize the data
str(data_PCS2003_3l)
head(data_PCS2003_3l)

#check the variable PCS2003_3l needed for the conversion
table(data_PCS2003_3l$codes_3_level)

#Then, you can run the function:
data_PCS2003_3l <- collapse_PCS2003_3l(
  PCS2003_3l=data_PCS2003_3l$codes_3_level,
  data=data_PCS2003_3l)

#Two variables corresponding each to one different level of collapsing were created:
names(data_PCS2003_3l)
table(data_PCS2003_3l$PCS2003_2l) #CSP 2003 on 2 levels
table(data_PCS2003_3l$PCS2003_1l) #CSP 2003 on 1 level
```

---

collapse\_PCS2003\_4l    *The collapsing of the French Professions et Categories Socioprofessionnelles (PCS 2003) from 4 levels*

---

## Description

This function collapses the French Professions et Categories Socioprofessionnelles (PCS 2003) from 4 levels (niveau 4) into 1 level, 2 levels and 3 levels (niveaux 1, 2 and 3)

## Usage

```
collapse_PCS2003_4l(PCS2003_4l, data)
```

## Arguments

PCS2003_4l	The name of the variable containing <b>the French PCS 2003 coded on 4 levels</b> (i.e. 3 digits followed by 1 letter, such as 226a)
data	The name of the dataset

## Author(s)

Julie Falcon (University of Lausanne)

## References

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 can be found on the French National Statistic Agency, the INSEE (in French only):

<http://insee.fr/fr/methodes/default.asp?page=nomenclatures/pcs2003/pcs2003.htm>

**Examples**

```

#load the data
data(data_PCS2003_4l)

#visualize the data
str(data_PCS2003_4l)
head(data_PCS2003_4l)

#check the variable PCS2003_4l needed for the conversion
table(data_PCS2003_4l$codes_4_level)

#Then, you can run the function:
data_PCS2003_4l <- collapse_PCS2003_4l(
  PCS2003_4l=data_PCS2003_4l$codes_4_level,
  data=data_PCS2003_4l)

#Three variables corresponding each to one different level of collapsing were created:
names(data_PCS2003_4l)
table(data_PCS2003_4l$PCS2003_3l) #3 level
table(data_PCS2003_4l$PCS2003_2l) #2 level
table(data_PCS2003_4l$PCS2003_1l) #1 level

```

---

```
convert_from_ISCO08_to_ISCO88_3d
```

*The conversion of the ISCO 2008 classification into the ISCO 1988*

---

**Description**

This function converts occupational codes of the ISCO 2008 classification into the occupational codes of the ISCO 1988 classification on 3 digits

**Usage**

```
convert_from_ISCO08_to_ISCO88_3d(ISCO08, data)
```

**Arguments**

ISCO08	The name of the variable containing <b>the ISCO 2008 codes</b> , ideally coded on 4 digits, although the function also supportes variables coded on 3 digits, and even on 2 digits
data	The name of the dataset

**Author(s)**

Julie Falcon (University of Lausanne)

## References

Documentation on the ISCO 2008 and 1988 can be found on the ILO website:

- For ISCO 2008: <http://www.ilo.org/public/english/bureau/stat/isco/isco08/>
- For ISCO 1988: <http://www.ilo.org/public/english/bureau/stat/isco/isco88/index.htm>

## Examples

```
#load the data
data(data_ISCO2008)

#visualize the data
str(data_ISCO2008)
head(data_ISCO2008)

#check the variable ISCO2008 needed for the conversion
table(data_ISCO2008$ISCO2008)

#Then, you can run the function:
data_ISCO2008 <- convert_from_ISCO08_to_ISCO88_3d(
  ISCO08=data_ISCO2008$ISCO2008,
  data=data_ISCO2008)

#Check the created variable:
names(data_ISCO2008)
table(data_ISCO2008$ISCO88_3d)
```

---

```
convert_from_PCS1982_4l_to_PCS2003_4l
```

*The conversion of the French PCS 1982 into the French PCS 2003*

---

## Description

This function converts occupational codes of the French Professions et Catégories Socioprofessionnelles from the 1982 codes into the 2003 codes

## Usage

```
convert_from_PCS1982_4l_to_PCS2003_4l(PCS1982_4l, data)
```

## Arguments

PCS1982_4l	The name of the variable containing
data	The name of the dataset

## Author(s)

Julie Falcon (University of Lausanne)

## References

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 1982 and 2003 can be found on the French National Statistic Agency, the INSEE (only in French):

- For 1982: <http://www.insee.fr/fr/methodes/default.asp?page=nomenclatures/pcsese/pcsese1982/pcsese1982.htm>
- For 2003: <http://insee.fr/fr/methodes/default.asp?page=nomenclatures/pcs2003/pcs2003.htm>

## Examples

```
#load the data
data(data_PCS1982)

#visualize the data
str(data_PCS1982)
head(data_PCS1982)

#check the variable PCS1982 needed for the conversion
table(data_PCS1982$PCS1982)

#Then, you can run the function:
data_PCS1982 <- convert_from_PCS1982_4l_to_PCS2003_4l(
  PCS1982_4l=data_PCS1982$PCS1982,
  data=data_PCS1982)

#Check the variables created:
names(data_PCS1982)
table(data_PCS1982$PCS2003_4l) # CSP 2003 4 digits (4 niveaux)
table(data_PCS1982$PCS2003_3l) # CSP 2003 3 digits (3 niveaux)
table(data_PCS1982$PCS2003_2l) # CSP 2003 2 digits (2 niveaux)
table(data_PCS1982$PCS2003_1l) # CSP 2003 1 digit (1 niveau)
```

---

```
convert_from_PCS2003_4l_to_ISCO88_3d
```

*The conversion of the French PCS 2003 into the ISCO 1988 codes*

---

## Description

This function converts occupational codes of the French Professions et Categories Socioprofessionnelles 2003 into the occupational codes of the ISCO 1988 classification on 3 digits

## Usage

```
convert_from_PCS2003_4l_to_ISCO88_3d(PCS2003_4l, data)
```



**Arguments**

PCS2003_41	The name of the variable containing <b>the French PCS 2003 coded on 4 levels</b> (i.e. 3 digits followed by 1 letter, such as 226a)
data	The name of the dataset

**Author(s)**

Julie Falcon (University of Lausanne)

**References**

Documentation on the French Professions et Categories Socioprofessionnelles (PCS) 2003 and on the ISCO 1988 can be found:

- For the French PCS 2003 on the French National Statistic Agency website, the INSEE (in French): <http://insee.fr/fr/methodes/default.asp?page=nomenclatures/pcs2003/pcs2003.htm>
- For ISCO 1988 on the ILO website: <http://www.ilo.org/public/english/bureau/stat/isco/isco88/index.htm>

**Examples**

```
#load the data
data(data_PCS2003_41)

#visualize the data
str(data_PCS2003_41)
head(data_PCS2003_41)

#check the variable needed for the conversion
table(data_PCS2003_41$codes_4_level)

#Then, you can run the function:
data_PCS2003_41 <- convert_from_PCS2003_41_to_ISCO88_3d(
  PCS2003_41=data_PCS2003_41$codes_4_level,
  data=data_PCS2003_41)

#Check the variable created:
names(data_PCS2003_41)
table(data_PCS2003_41$ISCO88_3d)
```

---

data\_ISCO2008

*Dataset with ISCO 2008 codes on 4 digits*

---

**Description**

This dataset contains occupational codes of the ISCO 2008 classification coded on 4 digits

**Usage**

```
data(data_ISC02008)
```

**Format**

A data frame with 1500 observations on the following variable:

ISC02008 a numeric vector

**Source**

The data was randomly generated

---

data\_MCH2007

*Random subsample of the MOSAiCH 2007 dataset*

---

**Description**

This dataset is a random subsample of the Swiss MOSAiCH survey 2007

**Usage**

```
data(data_MCH2007)
```

**Format**

A data frame with 300 observations on the following 2 variables:

iscoR a numeric vector with ISCO 1988 codes

nb\_emp\_SE a numeric vector containing informations on the number of employees of the self-employed (continuous variable)

**Source**

The data was generated from the Swiss MOSAiCH 2007 survey distributed by **FORS**

---

data_PCS1982	<i>Dataset with the French PCS 1982 codes on 4 digits</i>
--------------	---

---

**Description**

This dataset contains codes of the French Professions et Categories Socioprofessionnelles 1982 (PCS1982) coded on 4 digits (levels)

**Usage**

```
data(data_PCS1982)
```

**Format**

A data frame with 1500 observations on the following variable:

PCS1982 a numeric vector

**Source**

The data was randomly generated

---

data_PCS2003_21	<i>Dataset with the French PCS 2003 codes on 2 digits</i>
-----------------	---

---

**Description**

This dataset contains codes of the French Professions et Categories Socioprofessionnelles 2003 (PCS2003) coded on 2 digits (levels)

**Usage**

```
data(data_PCS2003_21)
```

**Format**

A data frame with 1000 observations on the following variable:

codes\_2\_level a numeric vector

**Source**

The data was randomly generated

---

data\_PCS2003\_31      *Dataset with the French PCS 2003 codes on 3 digits*

---

**Description**

This dataset contains codes of the French Professions et Catégories Socioprofessionnelles 2003 (PCS2003) coded on 3 digits (levels)

**Usage**

```
data(data_PCS2003_31)
```

**Format**

A data frame with 1000 observations on the following variable:

codes\_3\_level a numeric vector

**Source**

The data was randomly generated

---

data\_PCS2003\_41      *Dataset with the French PCS 2003 codes on 4 digits*

---

**Description**

This dataset contains codes of the French Professions et Catégories Socioprofessionnelles 2003 (PCS2003) coded on 2 digits (levels)

**Usage**

```
data(data_PCS2003_41)
```

**Format**

A data frame with 1000 observations on the following variable:

codes\_4\_level a factor with levels

**Source**

The data was randomly generated

---

`recode_from_ISCO88_to_ISEI`*The recoding of the ISEI index from ISCO 1988 codes*

---

### Description

This function recodes the International Socio-Economic Index of Occupational Status (ISEI) from ISCO 1988 codes

### Usage

```
recode_from_ISCO88_to_ISEI(ISCO88, data)
```

### Arguments

ISCO88	The name of the variable containing <b>ISCO 1988 codes</b> , ideally coded on 4 digits, although the function also supportes variables coded on 3 digits, and even on 2 digits
data	The name of the dataset

### Author(s)

Julie Falcon (University of Lausanne)

### References

The ISEI index was constructed by Harry Ganzeboom, Paul De Graaf and Donald Treiman. Please refer to the following article to find out more about this index and to cite it:

**Ganzeboom, H.B.G. De Graaf, P.M. & Treiman, D.J. (1992): A Standard International Socio-Economic Index of Occupational Status. Social Science Research 21 (1), 1-56**

The function was constructed from Harry Ganzeboom's SPSS syntax available on his website:

<http://www.harryganzeboom.nl/isco88/index.htm>

This syntax is part of the "International Stratification and Mobility File" project which provides several social position conversion tools in SPSS format:

**Ganzeboom, Harry B.G.; Treiman, Donald J., 'International Stratification and Mobility File: Conversion Tools'**

### Examples

```
#load the data
data(data_MCH2007)

#visualize the data
str(data_MCH2007)
head(data_MCH2007)
```

```
#check the variables needed for social position coding
table(data_MCH2007$iscoR,useNA="always")

#Then, you can run the function:
data_MCH2007 <- recode_from_ISCO88_to_ISEI(
  ISCO88=data_MCH2007$iscoR,
  data=data_MCH2007)

#Check the variable created:
names(data_MCH2007)
head(data_MCH2007)
table(data_MCH2007$ISEI,useNA="always")
```

---

```
recode_from_ISCO88_to_Oesch
```

*The recoding of the Oesch class schema from ISCO 1988 codes*

---

## Description

The function recodes the Oesch class schema from ISCO 1988 codes and a variable specifying the employment status of the corresponding occupation reported. Please note that this function does NOT use an educational variable to construct the Oesch class schema

## Usage

```
recode_from_ISCO88_to_Oesch(ISCO88, EMP_STA, SE_zero_emp, SE_one_to_nine_emp,
  SE_ten_plus_emp, not_SE, data)
```

## Arguments

ISCO88	The name of the variable containing <b>ISCO 1988 codes</b> , ideally coded on 4 digits, although the function also supports variables coded on 3 digits, and even on 2 digits
EMP_STA	The name of the variable containing the corresponding employment status of the occupation. This variable must specify for the self-employed the number of employee they employ. Ideally, this number should be coded in the form of a continuous variable, although in some surveys it takes the form of a categorical variable. It must also have a modality for those who are not self-employed. What is important is to be able to distinguish: <ol style="list-style-type: none"> <li>1. The self-employed without employee</li> <li>2. The self-employed with one to 9 employee-s</li> <li>3. The self-employed with 10 or more employees</li> <li>4. Those who are not self-employed (i.e. most likely those who are employees if they declared an occupation)</li> </ol>
SE_zero_emp	Indicate here the modality corresponding to the self-employed without employee

SE_one_to_nine_emp	Indicate here the modality / modalities corresponding to the self-employed with one to nine employee-s
SE_ten_plus_emp	Indicate here the modality / modalities corresponding to the self-employed with ten or more employees
not_SE	Indicate here the modality corresponding to those who are not self-employed (i.e. most likely those who are employees if they declared an occupation)
data	The name of the dataset

**Author(s)**

Julie Falcon (University of Lausanne)

**References**

The Oesch class schema was constructed by Daniel Oesch. Theoretical foundations and empirical assessment of it can be found in the following publication:

Oesch, Daniel. 2006. Redrawing the class map: stratification and institutions in Britain, Germany, Sweden and Switzerland. Basingstoke: Palgrave Macmillan

He also published an article which relates to the book:

**Oesch Daniel, 2006: Coming to Grips with a Changing Class Structure An Analysis of Employment Stratification in Britain, Germany, Sweden and Switzerland: *International Sociology*, 21:263-288**

Further information can also be found on Daniel Oesch's website:

<http://people.unil.ch/danieloesch/socialclasssyntax/>

**Examples**

```
#load the data
data(data_MCH2007)

#visualize the data
str(data_MCH2007)
head(data_MCH2007)

#check the variables needed for social position coding
table(data_MCH2007$nb_emp_SE,useNA="always")
table(data_MCH2007$iscoR,useNA="always")

#Then, you can run the function:
data_MCH2007 <- recode_from_ISCO88_to_Oesch(
  ISCO88=data_MCH2007$iscoR,
  EMP_STA=data_MCH2007$nb_emp_SE,
  SE_zero_emp=0,
  SE_one_to_nine_emp=1:9,
  SE_ten_plus_emp=10:100,
  not_SE=NA,
  data=data_MCH2007)
```

```
#Three variables were created:
names(data_MCH2007)
head(data_MCH2007)
table(data_MCH2007$Oesch17,useNA="always")
table(data_MCH2007$Oesch8,useNA="always")
table(data_MCH2007$emplnum,useNA="always")

#If you don't need the 'emplnum' variable, you can delete it by writing:
data_MCH2007$emplnum <- NULL
```



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