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Links Between the research infrastructure actors

Examples of key infrastructures and actions for young scientists

Peter Ph. Mohler, ECRI 2007, Hamburg

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Overview

a. Key infrastructures from fields as diverse as Astronomy and Social Research will be discussed.

b. ESO, the European Southern Observatory, will be taken as an example from the natural sciences.

c. ESS, the European Social Survey will be taken as an example from the social sciences + a word on survey infrastructures

d. Training of young researchers is now standard.

e. Common is the hope to find and foster future leading scientists.

f. Now, we need Scout-Activities to systematically search for talent

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ESO, the European Southern Observatory

ESO is European Organisation for Astronomical Research in the Southern Hemisphere. On behalf of its thirteen member states ESO operates a suite of the world's most advanced ground-based astronomical telescopes located at the La Silla Paranal Observatory in the Atacama desert in Chile.

ESS, the European Social Survey

ESS is an academically-driven social survey desig ion betw nd the a ns of its

Austria
Estonia
Ireland
Portugal
Spain
Ukraine
enmark
ungary
land
ovenia
K

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ESO & young researchers

ESO annual budget
About 170.000.000€

ESO - Educational Office – high school level

Numerous workshop offers within and outside of EOS

Numerous links to grant offers

Integrating young researchers in ongoing work

Actual number of users & young researchers not found on web

ESO & Education

ESO's educational programmes aim to stimulate interest in the natural sciences, and in astronomy and astrophysics in particular, among European youth

Every year, ESO organises an astronomy contest for students. This contest, Catch a Star!, caters for all ages and abilities.

ESO produces a series of astronomical exercises, & a set of didactic sheets about the Solar System

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Summary Information Sheet

THE EARTH

The Earth is the third planet from the Sun and is the only planet known to support life. Equally unique is the presence of a large amount of water in different conditions: liquid in lakes, rivers and oceans, frozen as ice and vapour in clouds. It gives Earth its blue colour and so our planet also is called the Blue Planet.

Earth and seasons

Atmosphere

Earth's crustal plates

Plate tectonics

Physical Data

Property	Earth	For comparison: Venus	For comparison: Mars
Distance from the Sun	150 million km	108 million km	228 million km
Rotation period	23 hrs 56 min	243 days	24 hrs 37 min
Equatorial Radius	6378 km	6052 km	3397 km
Mass	5.97×10^{24} kg	4.87×10^{24} kg	6.42×10^{23} kg
Density	5520 kg/m³	5240 kg/m³	3940 kg/m³
Satellites	1	0	2

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European Social Survey

ESS & young researchers

ESS annual budget
About 3.000.000

ESS-Edunet – web based social science laboratory

ESS-Train – training for young researchers

ESS usage – about 13.000 users from more than

175 countries 55% students or PhD

7.520 young researchers registered

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European Social Survey

ESS & young researchers

ESS EduNet is a training resource for use in higher education. The ambition is to create a social science laboratory where theoretical questions can be explored using high quality empirical data.

ESS*Train* courses are designed for researchers new to cross-national research who already have an understanding of the basics of survey research but who need to understand more about the challenges of comparative survey research.

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What are surveys about?

A Word on Survey Infrastructures 1

My own story….

1972 Training seminar at the digital central data archive (data library) Germany – ZA, Cologne

Standard infrastructure then (starting in the 60ties)

- Unified data concept across social surveys
- Digitised meta-data (codebooks)
- Standardized interoperable software (BMDP, OSIRIS, SAS, SPSS)

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A Word on Survey Infrastructures 2

Surveys are instruments (like telescopes)

Examples (annual & bi-annual only – all in public domain)

- Eurobarometer (since 1973) all EU ++
- ISSP (since 1985) – global 40
- ESS (since 2002) – EU +

More than 120.000 citizens
take part in these surveys annually

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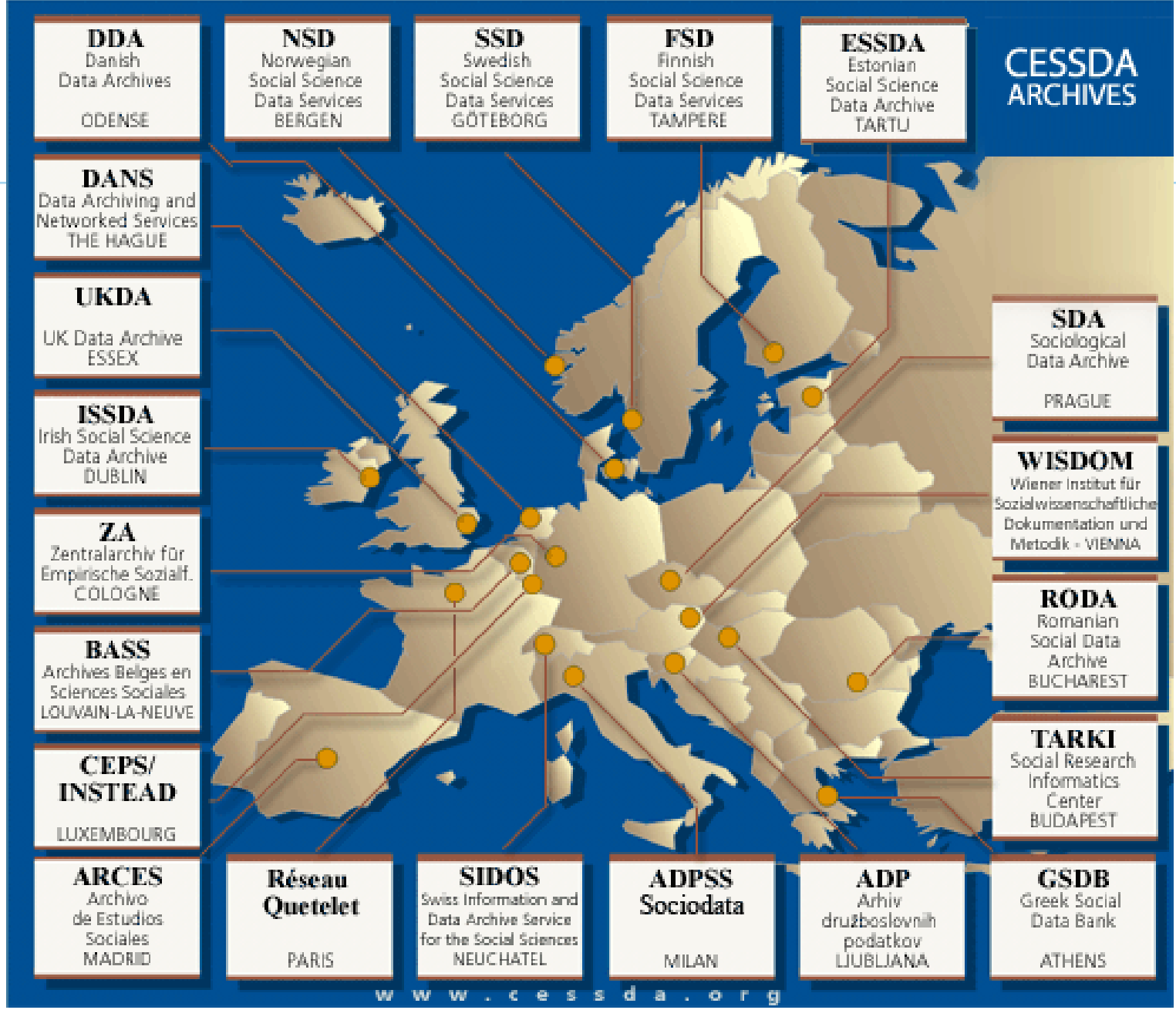
A Word on Survey Infrastructures 3

Data from survey instruments

Are published by a huge network of digital data libraries

Free global access to thousands of studies

And millions of observations


DDA
Danish
Data Archives
ODENSE
NSD
Norwegian
Social Science
Data Services
BERGEN
SSD
Swedish
Social Science
Data Services
GÖTEBORG
FSD
Finnish
Social Science
Data Services
TAMPERE
ESSDA
Estonian
Social Science
Data Archive
TARTU
CESSDA
ARCHIVES
DANS
Data Archiving and
Networked Services
THE HAGUE
UKDA
UK Data Archive
ESSEX
ISSDA
Irish Social Science
Data Archive
DUBLIN
ZA
Zentralarchiv für
Empirische Sozialf.
COLOGNE
BASS
Archives Belges en
Sciences Sociales
LOUVAIN-LA-NEUVE
CEPS/
INSTEAD
LUXEMBOURG
ARCES
Archivo
de Estudios
Sociales
MADRID
Réseau
Quetelet
PARIS
SIDOS
Swiss Information and
Data Archive Service
for the Social Sciences
NEUCHATEL
ADPSS
Sociodata
MILAN
ADP
Arhiv
družboslovnih
podatkov
LJUBLJANA
GSDB
Greek Social
Data Bank
ATHENS
SDA
Sociological
Data Archive
PRAGUE
WISDOM
Wiener Institut für
Sozialwissenschaftliche
Dokumentation und
Metodik - VIENNA
RODA
Romanian
Social Data
Archive
BUCHAREST
TARKI
Social Research
Informatics
Center
BUDAPEST
www.cessda.org

Digitised information 1972 …

V12 Law shd let if serious defect baby?

Location: 22 MD1: 0

Width: 1 MD2: 8

Q.7 Do you think the law should or should not allow a woman to obtain a legal abortion...

(Please tick one box on each line)

Q.7a If there is a strong chance of a serious defect in the baby?

---

1. Definitely should allow it
2. ….
8. Can't choose, don't know
9. NA

Germany, Slovenia

0. Not available

	D-W	D-E	GB	NIRL	USA	H	NL	I	IRL
1			917	393	810	912	882	705	239
%			76.3	50.4	64.2	92.3	57.8	72.6	25.2
2									

View documentation

European Social Survey

....

Recode variable

ESS2-2004, ed. 3.0

Metadata

Variable Description

Country

Country

Weights

Media and social trust

…

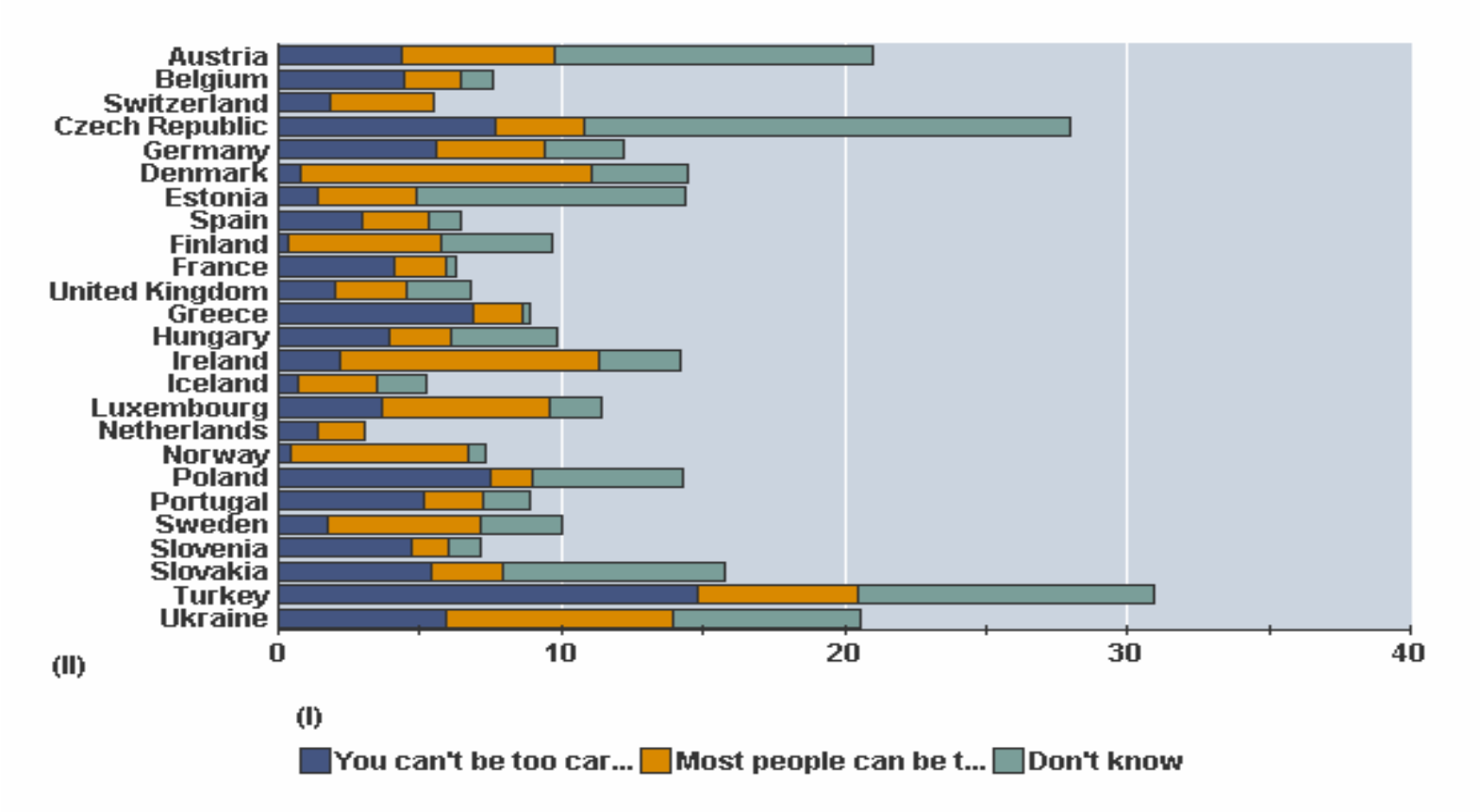
Most people can be trusted or you can't be too careful

…….

Most people try to take advantage of you, or try to be fair

Present

European Social Survey



European Roadmap for ResearchInfrastructures

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Back to Young Researchers

Standard activities are today

- Training Workshops
- Educational Tools
- Involving young researchers in ongoing research
- Competitions

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Why do we need talent?

No question!

On Talents

- The search for talent
  - Top issue in business
  - Scarcity of talent
- High achievers vs high IQ
  - 10-15% of high IQ are under-achievers
  - Competitions, mass-selection etc. miss 10-15%

Talent, Excellence & Infrastructures

Scientific infrastructures need a stock of well trained professionals

Progress and innovation hinges on excellent researchers

The level of excellence depends on talent and training

In search for talent

Training and teaching effects are limited by levels of talent

Formalised training and teaching has proven to be good for identifying high achievers

Additional efforts have to be made to search for talents

Summary

Both ESO and ESS take advantage of training & teaching as an outreach to young researchers

Infrastructures need scientific talents for their special needs

Critical note – active search for talents is not on the agenda of infrastructures

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