



From a Tiny Island of Survey Data to an Ocean of Transactional Data

Karl H. Müller (WISDOM, Vienna)

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Deep Search II-Conference

Overview of the Talk


Focus on the Potentials of Societal Knowledge
with Respect to Its Internal States

The Period of Flat Search (1750 – 2000)

Towards a Period of Deep Search (2000 onwards)



Focus of the Talk



Observing Societies (Observing Societies
Observing Societies)

Measurements and Observations in Societal
Domains

Observation Levels: Flat Search and Deep Search



The Period of Flat Search (1750 – 2000)

Starting Point: French Encyclopedia (beyond flat search)

Flat Searches:

Macrodata: Census-data (1754 in Austria), Official Data from Statistical Offices (1829 the Formation of the Statistical Bureau in Austria)

Microdata (from the 1920s onwards) through Surveys and Panels



The Age of Flat Search: The Victory March of Survey Data



	Economics	Sociology	Political Science	Social Psychology	Public Opinion
1949/50	5.7%	24.1%	2.6%	22.0%	43.0%
1964/65	32.9%	54.8%	19.4%	14.6%	55.7%
1979/80	28.7%	55.8%	35.4%	21.0%	90.6%
1994/95	42.3%	69.7%	41.9%	49.9%	90.3%



The Epistemological Status of Survey Data I

Over-Learned Facts

Context-Independent

Identical Reproduction

Long-term Memory

Logic of Identity

Relevant

Under-Learned Facts

Context-Dependent

Variable Reproduction

Just in time-Production

Forgotten within a Time-Span of 15 to 20 Minutes

Inconsistent, Intransitive, Non-identity, etc.

Irrelevant



The Epistemological Status of Survey Data II

Examples of Under-Learned Facts:

- Life Satisfaction (Germany, ALLBUS, 1984)
- Multiple Images of Societies:
“Left-wing”-Image, “Right-wing”-Image:
Consistent Group: 51%, Inconsistent Group 49%.
- Multiple Meanings of Survey-Questions:
Self-Assessments of Unskilled Labourers



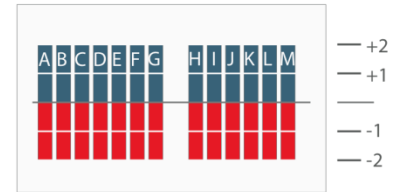
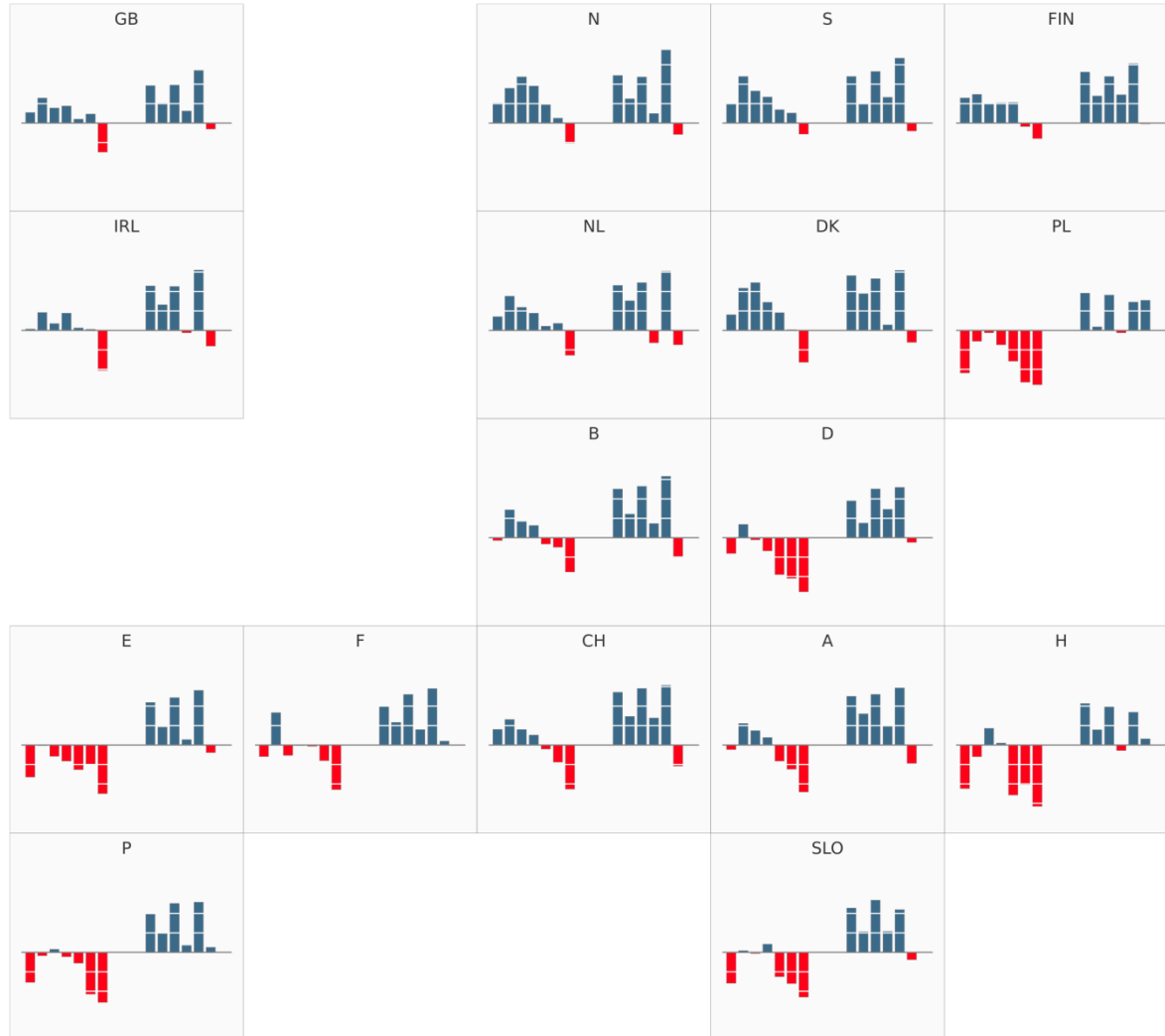
Under-Learned Facts: Working Conditions and Work-Assessments

- Survey Data from the European Social Survey: Six Dimensions on Working Conditions, Six Dimensions on Evaluations of One's Work (Under-learned Facts)
- Topological Visual Arrangements, Each Country of Equal Size
- Program WISDOMIZE: Relational Maps, Bar-Charts (<http://linux.wisdom.at/wisdomize>)




The Homogeneous Arrangement of Under-Learned Facts across Europe

Working Conditions and Work Satisfaction in General (Europe)

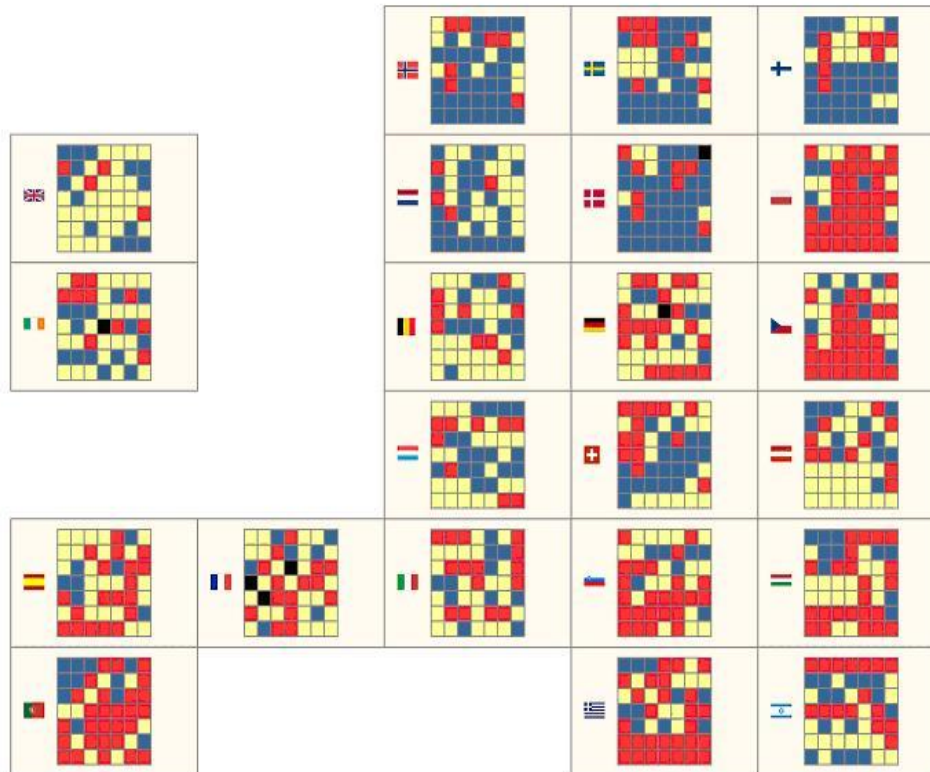


- A Allowed to be flexible in working hours
- B Allowed to decide how daily work is organised
- C Allowed to influence job environment
- D Allowed to influence decisions about work direction
- E Allowed to change work tasks
- F Get similar or better job with another employer
- G Start own business
- H How satisfied with job
- I Satisfied with balance between time on job and time on other aspects
- J Find job interesting
- K Find job stressful
- L Become unemployed in the next 12 months, how unlikely
- M Get paid appropriately, considering efforts and achievements

Complex Visualizations of Flat Searches

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- European Social Survey: Seven Large Domains (Working Conditions, Work Assessments, Life Satisfaction/Health, Social Capital I, Social Capital II , etc.)
 - Seven Dimensions for Each Domain
 - Colours for Each Dimension:
 - Blue: Upper Third of the Overall Distribution
 - Yellow: Middle Third of the Overall Distribution
 - Red: Lower Thid of the Overall Distribution

Complex Pattern Formation of a 7 x 7 Data Set (European Social Survey)



A Remarkable Quotation on Flat Search

The questionnaire is cheap, easy and mechanical. The study of human behavior is time-consuming, intellectually fatiguing and depends for its success on the ability of the investigator ... Yet it would seem far more worthwhile to make a shrewd guess regarding that which is essential than to accurately measure that which is likely to prove quite irrelevant. (Richard T. La Piere 1934:237)

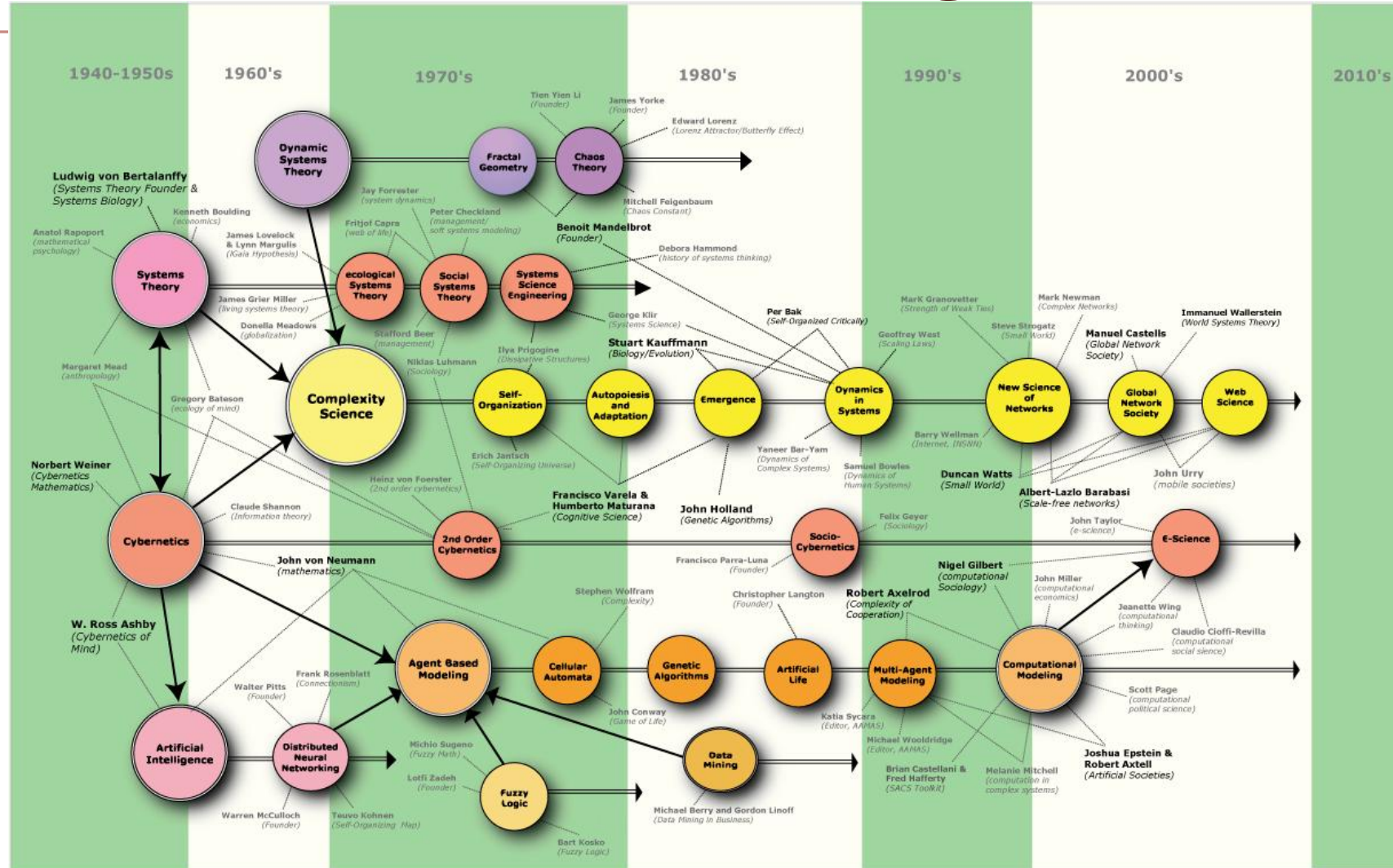


Towards a New Era of Societal Deep Search

- Changes in Surveys from Their Current Format to Deliberative Online Surveys: Information Support, Open Time Horizons, Changes from Under-Learned Assessments to Over-Learned Assessments
- Changes in Data from Tiny Islands of Survey Data to an Ocean of Transactional Data
- Changes in Models from Trivial Models to Complex Models (e.g., Geometrical Algorithms, Based on Parallel Coordinates)



Towards a Map for Deep Search Methods and Designs



A Long-Term View on the Evolution of Information Societies

Four Basic Stages:

- Darwin-Societies (4 bio. Years - 500 mio. years): Genetic Code
- Polanyi-Societies (500 mio years - 1 mio. year): Implicit Practices, Communication, Neural Code
- Piaget-Societies: (1940/1950 – 1 mio.year): The Age of Languages, Scriptures, Symbolic Codes
- Turing Societies (from 1940/50 onwards): Turing Creatures (app. 100 bio.), Machine-Code-Based, Man-Turing Creature-Interaction, Societal Deep Search

