

Publications and Quality of Research

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Plan

- ◉ Making Science
- ◉ Measuring Science
- ◉ Models for Performance Based Funding
- ◉ New Model now discussed at one university

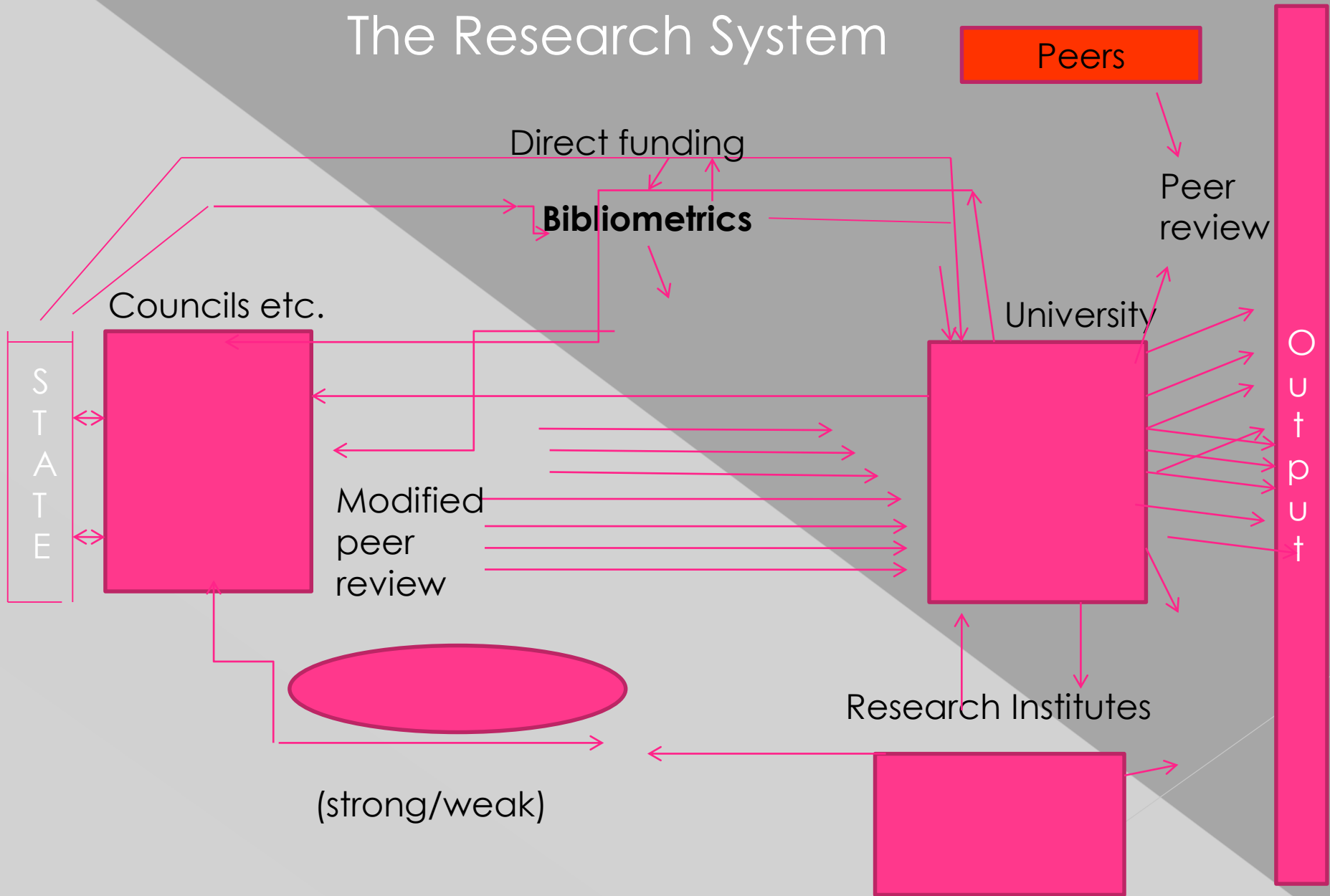
Required is a fair system

- ◉ Should be neutral re. field of science
- ◉ Should be neutral re. status of researcher
- ◉ Should be neutral re. gender
- ◉ Should be neutral re. basic or applied
- ◉ Should be neutral re. disciplinary or interdisciplinary
- ◉ etc. any type of categorisation relevant to scientific activities

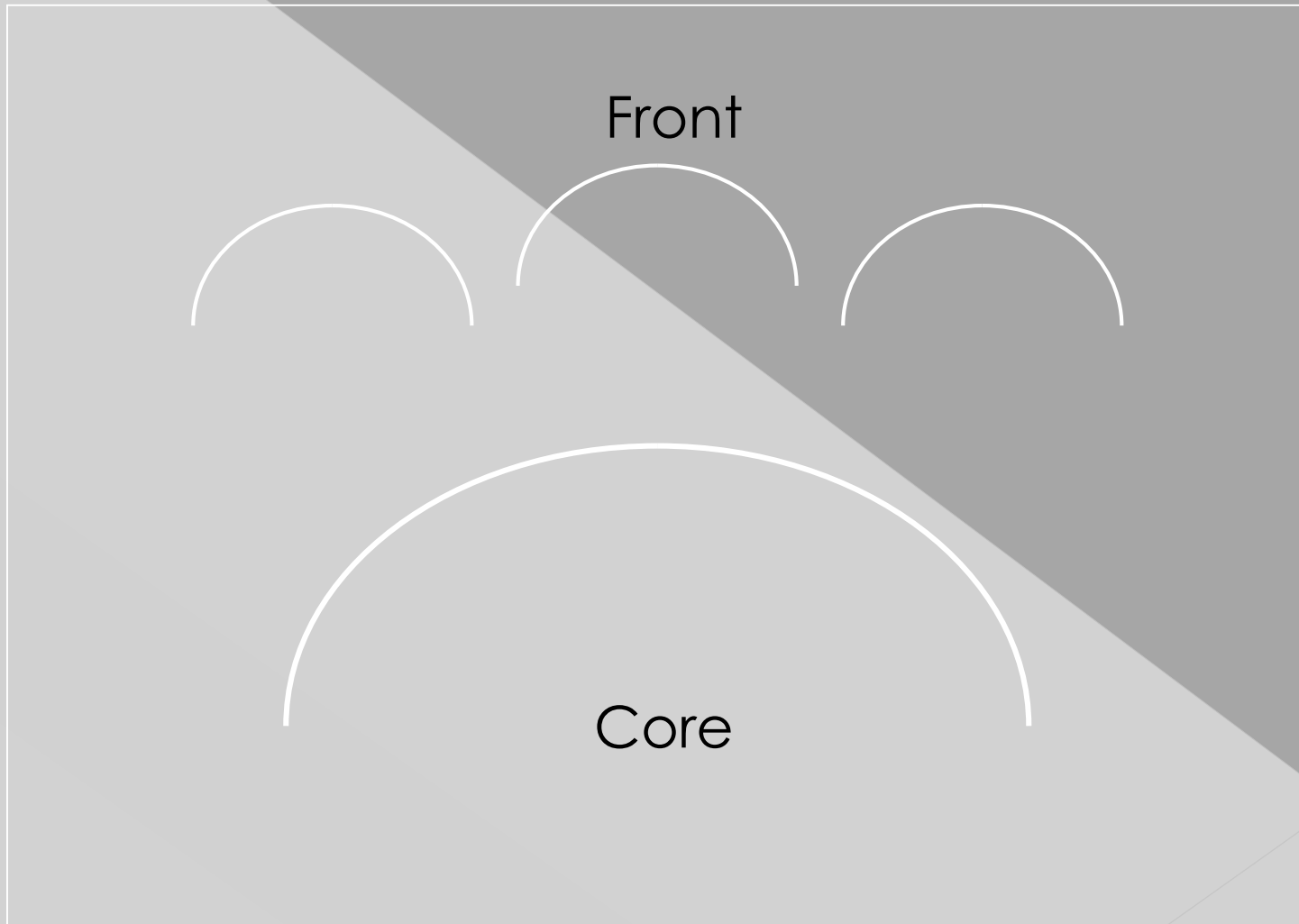
Scientific communities

- ◉ The Growth of Knowledge
- ◉ Core and Front
- ◉ Knowledge Communities
- ◉ Gate keepers (invisible colleges)
- ◉ Journals for fast communication and
- ◉ Books for slow (core) knowledge

The Research System

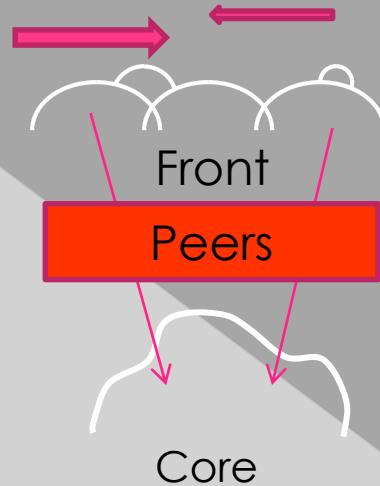


Research Front and Core of Knowledge



Research programs and knowledge fronts

Competition 



Results: Articles

Handbooks
Readers
Wikipedia
Books

Infrastructure
Research money
Universities
Research Institutes

Peer review – concepts

- ◉ Classical peer review
E.g. Journals
- ◉ Modified peer review
E.g. Councils
- ◉ Performance indicators
E.g. Bibliometrics
- ◉ Informed peer review

Classical peer review



Modified peer review



Styles of research
and research
subjects

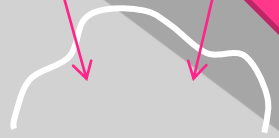
Council Model with modified peer review

Track Record favoured

Ex ante evaluation



Cognitive Bias
Conflict of Interest



Core

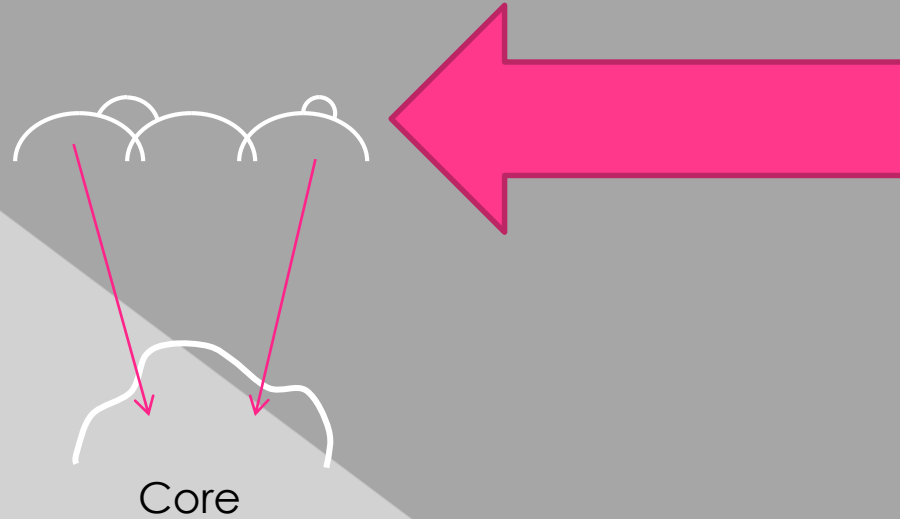
Handbooks
Textbooks
Wikipedia

Infrastructure
Financing
Universities
Research Institutes

Reward Model

- Based on publication databases only
- Rewards to the best performance (during the last period)
- Grants are preferably given to individual researchers
- This model can be combined with any other model

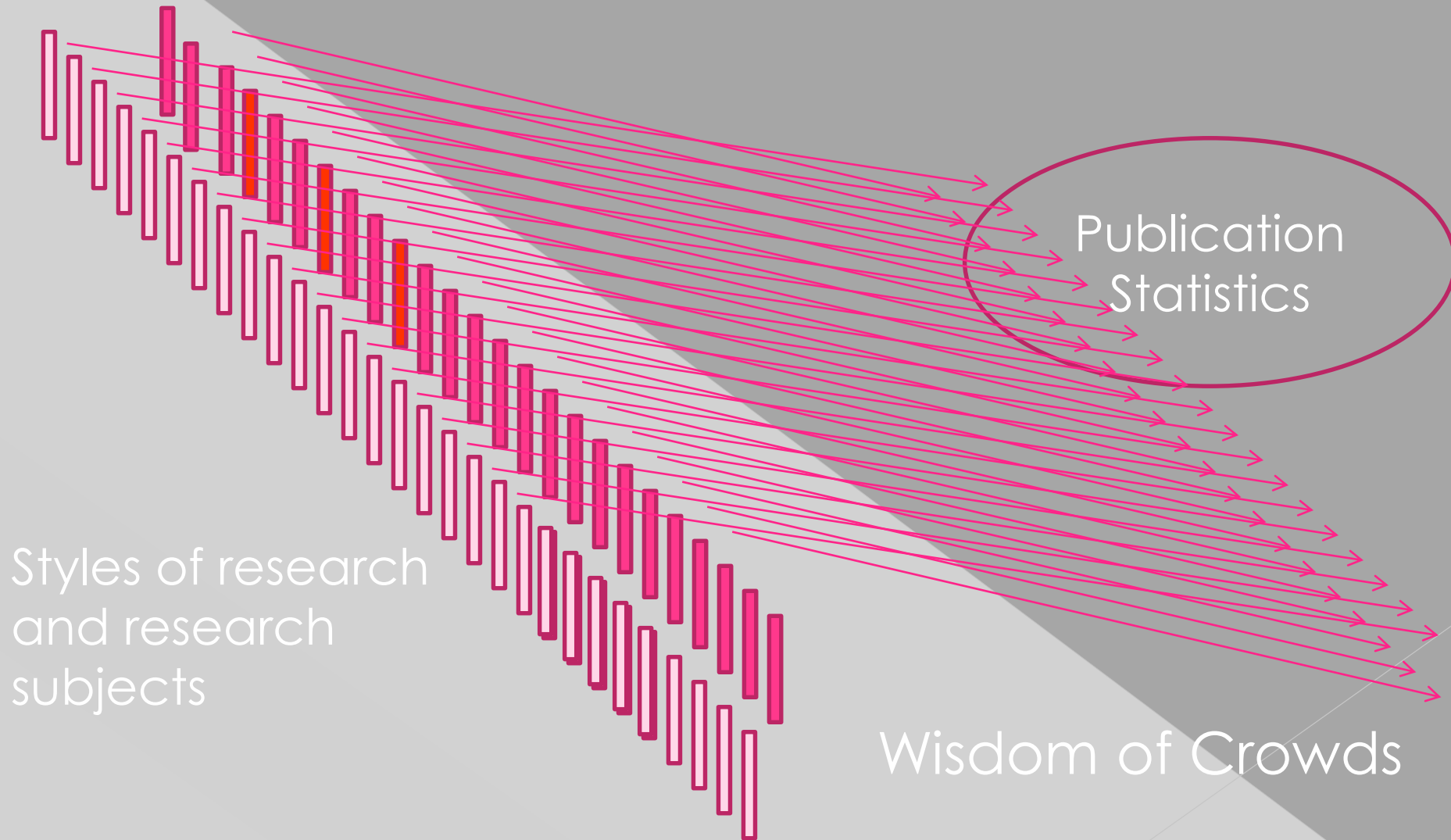
Reward model



Handbooks
Textbooks
Wikipedia

Infrastructure
Financing
Universities
Research Institutes

Bibliometric Peer Review



Styles of research
and research
subjects

Wisdom of Crowds

Publication
Statistics

Focus on actual citations

Percentiles

TOP 1%

TOP 5%

TOP 10%

TOP 25%

Reward Model

TOP 1% -> 120.000 EURO

TOP 5% -> 80.000 EURO

TOP 10% -> 40.000 EURO

TOP 25% -> 10.000 EURO

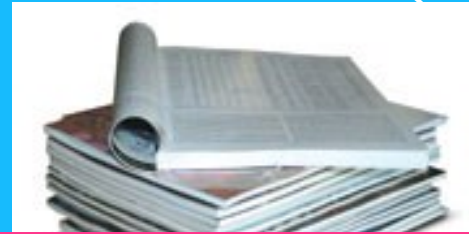
Publication Cultures are Not Given by God

- Evaluations started in 1975 (Swedish Model)
- Physics and Chemistry (worked well)
- Biology and Geology (didn't work)
- Evaluators could not read Swedish
- Decision to internationalize the council
- No support to Swedish journals
- In five years publication habits changed

Book chapters

Conf. Proceed.

Reports

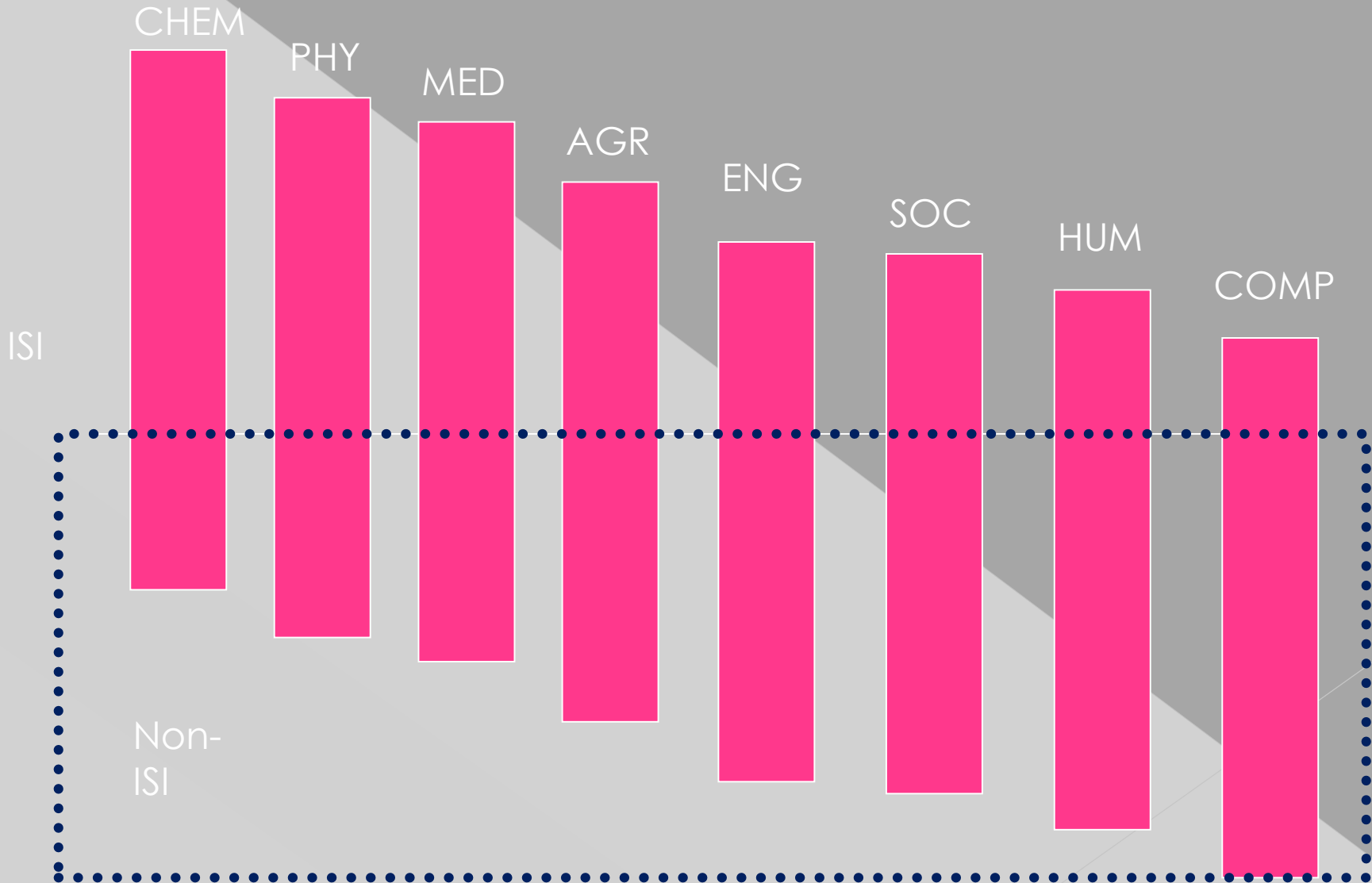


Books

Journal articles

*within Citation
Index*

Icebergs: areas are equally productive



Field Adjusted Production

- Publication frequencies differs between areas
- How many article fractions are published by a normal author in each area?
- Include the non-publishing researchers /humanities, social science, informatics/
- Disambiguate to have unique individuals
- Create a reference value for each field
- = Field Adjusted Production

Field Weights

MACROFIELD	#SO	REFERENCE
med	15	1,24
phy	995	1,11
math	1 194	1,03
biol2	790	0,97
chem	569	0,95
matsci	654	0,94
clin	2 656	0,93
health	580	0,82
ecol2	971	0,79
ecol	769	0,75
psyc	483	0,65
econ	630	0,65
biol	735	0,62
ma_comp	402	0,60
soc/hum	542	0,59
comp	126	0,53
soc	905	0,38
edu	358	0,35
hum	103	0,17
TOTAL	13 477	0,81

REWARDS TO RESEARCH

- ◉ Articles that are cited to the level of 99th, 95th, 90th and 75th percentile in their respective areas are rewarded
- ◉ Field Adjusted Points give weights
- ◉ Together this gives the monetary sum that should be transferred to the researcher

Experiences so far....


- Humanities and Social Science comes out well, actually at the top (they are fewer and will be more concentrated)
- Female researchers are well represented at the top
- No visible differences for applied or basic research
- Etc.

Top Rewarded Researchers

TOTALT	FULL_NAME	GENDER	ORG_HEM
1 102 237	OLAUSSON ULRICA	F	Hum
648 289	NILSSON ULRICA	F	Med
582 422	GEORGII-HEMMING EVA	F	Music
582 422	WESTVALL MARIA	F	Music
514 377	WEDIN ÅSA	F	Hum
365 925	LUNDELL ÅSA KROON	F	Hum
350 047	STATTIN HÅKAN	M	JPS
337 115	KERR MARGARET	F	JPS
335 782	LINDSTRÖM GUNILLA	F	NT
332 959	VAN BAVEL BERT	M	NT
322 062	SVENSSON MIKAEL	M	Bus
319 201	HALFVARSSON JONAS	M	Med
287 333	ÖHMAN JOHAN	M	Hum
254 635	TYSK CURT	M	Med
251 307	LINTON STEVEN J.	M	JPS
220 447	HÖIJER BIRGITTA	F	Hum
220 447	HYSING ERIK	M	Hum
217 080	BURK WILLIAM	M	JPS

35% of all
researchers
are rewarded

Distribution over faculty areas

AREA	 REWARD	%
Business Studies	615 034	5,0
Humanities	3 431 317	27,9
Medical School	3 544 613	28,8
Media and Law Studies	1 722 418	14,0
Music Studies	1 164 844	9,5
Natural & Engineer	1 729 712	14,1
Restaurant Studies	89 958	0,7
TOTAL	12 297 896	100

Rewards do not follow the present distribution of funds



Thanks for
listening!