

# Do altmetrics capture societal engagement?

**A comparison between survey data  
and social media data**

# Do altmetrics capture societal engagement? A comparison between survey data and social media data



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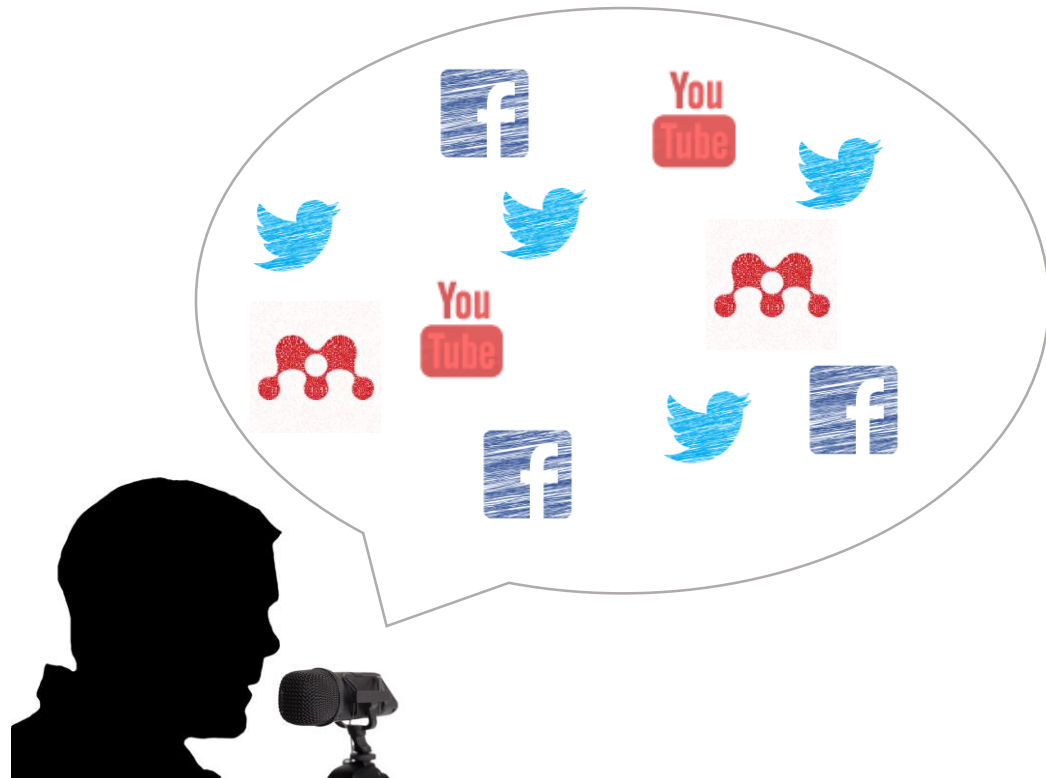
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# **Intro** Social media as a proxy for societal impact

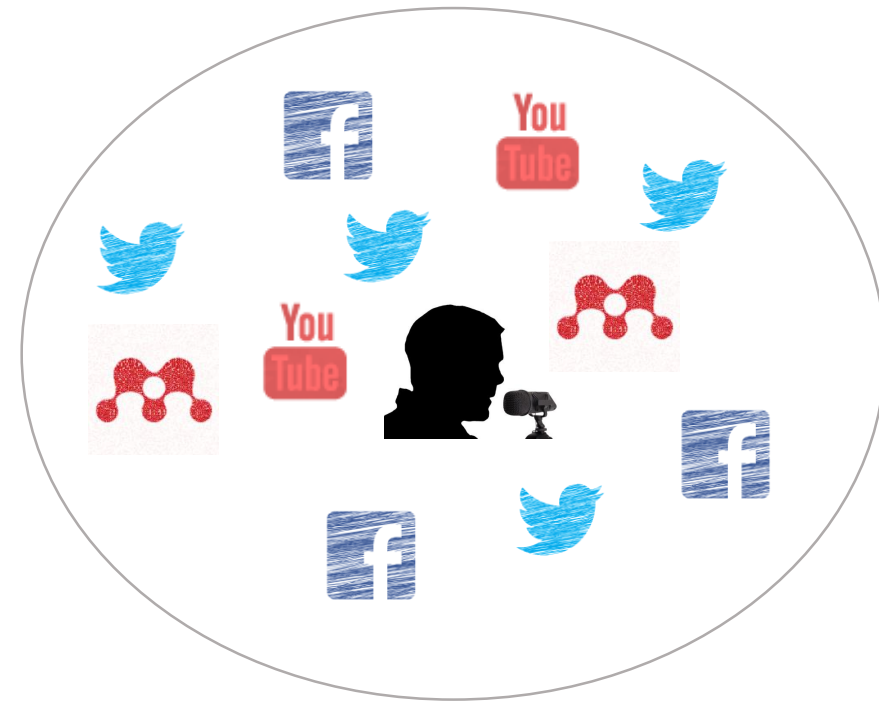
- Social media as a potential channel to accelerate transition from sci literature to practice – **Grande et al., 2014**
- Altmetrics as informative tools with the potential to be used in research evaluation – **Bornmann, 2014**
- Altmetrics indicators signal a variety of phenomena, from scientific impact to popularity or buzz – **Haustein et al., 2016**
- Maybe talking about impact is too ambitious, but we might capture engagement – **Robinson-Garcia et al., 2017**

# Intro Two approaches: Active or passive role of the researchers

## Altmetric approach



## Interactional approach



# **Intro** Comparing with self-reported evidence and scholars' perception

- Scholars are increasingly using social media – **Haustein et al., 2014**
- Social media is a good venue for interacting and engaging with stakeholders – **Grande et al., 2014**
- Researchers have mixed feelings towards the benefits of social media – **Jordan, 2014**



# Context Excellence and knowledge transfer

- Survey aimed at understanding the relation between *scientific excellence* and *knowledge transfer*
- Population. 52,529 researchers affiliated to Spanish institutions with at least one publication in WoS during the 2012-14 period.
- Scholars were surveyed between June and July, 2016
- 21% response ratio (12,115 respondents).



# Context Excellence and knowledge transfer

## TYPES OF QUESTIONS

- Variety of interacting stakeholders
- Types and frequency of interactions (formal and informal)
- Dissemination strategies of research findings (analogue and digital)
- Period asked: 2013-2015



# **Main goal** Do altmetrics reflect offline societal engagement?

- Pilot study. Selected a small sample of researchers based on their reported use of Twitter. 8% of respondents
- Analyzed coverage of altmetric indicators both, at the individual level (at least one authored paper) and article level
- Stratification by academic rank and scientific field





# **Main goal** Do altmetrics reflect offline societal engagement?

- Differences by altmetric coverage, field and academic rank
- Differences by variety of stakeholders, field and academic rank
- Relationship between altmetric coverage and variety of stakeholders



# Material & Methods Survey sample

Discipline	Responses	Selected respondents	Prevalence
CHEMISTRY & PHYSICS	1975	82	4%
EARTH & ENVIRONM SCI	1178	82	7%
ENGINEERING	972	51	5%
<b>HUMANITIES</b>	793	130	16%
LIFE SCIENCES	1661	97	6%
MATH & COMP SCI	924	87	9%
MED SCIENCES	1935	147	8%
MULTIDISCIPLINARY	1429	113	8%
SOCIAL SCIENCES	1248	148	12%
<b>TOTAL</b>	<b>12115</b>	<b>937</b>	<b>8%</b>



# Material & Methods Survey sample

Academic rank	Responses	Selected respondents	Prevalence
PROFESSOR	1796	101	6%
SENIOR RESEARCHER*	7142	509	7%
EARLY STAGE RESEARCHERS**	1570	153	10%
OTHER**	1587	173	11%
NO RESPONSE	20	1	5%
TOTAL	12115	937	8%

\* ASSOCIATE PROFESSOR, ASSISTANT PROFESSOR, SENIOR RESEARCHER

\*\* POSTDOC, PHD FELLOW, TEACHING ASSISTANT

\*\*\* CLINICAL RESEARCHER, TECHNICIAN, TEMPORARY/PART-TIME LECTURER, LECTURER/RESEARCHER IN PRIVATE CENTRE

# Material & Methods Altmetric data

		CHEM	EAR	ENG	HUM	LIF	MAT	MED	MUL	SOC	TOTAL
PROF	Res.	10	9	6	5	12	9	12	3	20	86
	Pubs	127	57	34	15	194	89	144	16	54	730
	%DOI	99,3%	98,2%	94,1%	73,3%	96,4%	95,5%	93,8%	100,0%	81,5%	94,8%
SR	Res.	43	43	30	46	49	50	44	61	62	428
	Pubs	576	246	132	78	354	163	279	149	168	2145
	%DOI	97,9%	96,7%	93,9%	80,8%	96,9%	92,6%	94,6%	89,3%	82,7%	94,1%
ECR	Res.	19	15	2	11	17	9	20	17	14	124
	Pubs	95	44	2	23	71	23	97	40	24	419
	%DOI	100,0%	100,0%	100,0%	100,0%	95,8%	91,3%	96,9%	100,0%	87,5%	97,4%
OTHER	Res.	3	6	3	19	8	7	49	16	20	131
	Pubs	14	13	3	37	46	12	220	21	38	404
	%DOI	1,0%	92,3%	100,0%	89,2%	93,5%	91,7%	90,5%	90,5%	86,8%	90,8%
TOTAL	Res.	75	73	41	81	86	75	126	97	116	770
	Pubs	812	360	171	153	665	287	743	226	284	3701
	%DOI	98,4%	97,2%	94,2%	85,0%	96,4%	93,4%	93,5%	92,0%	83,5%	94,3%

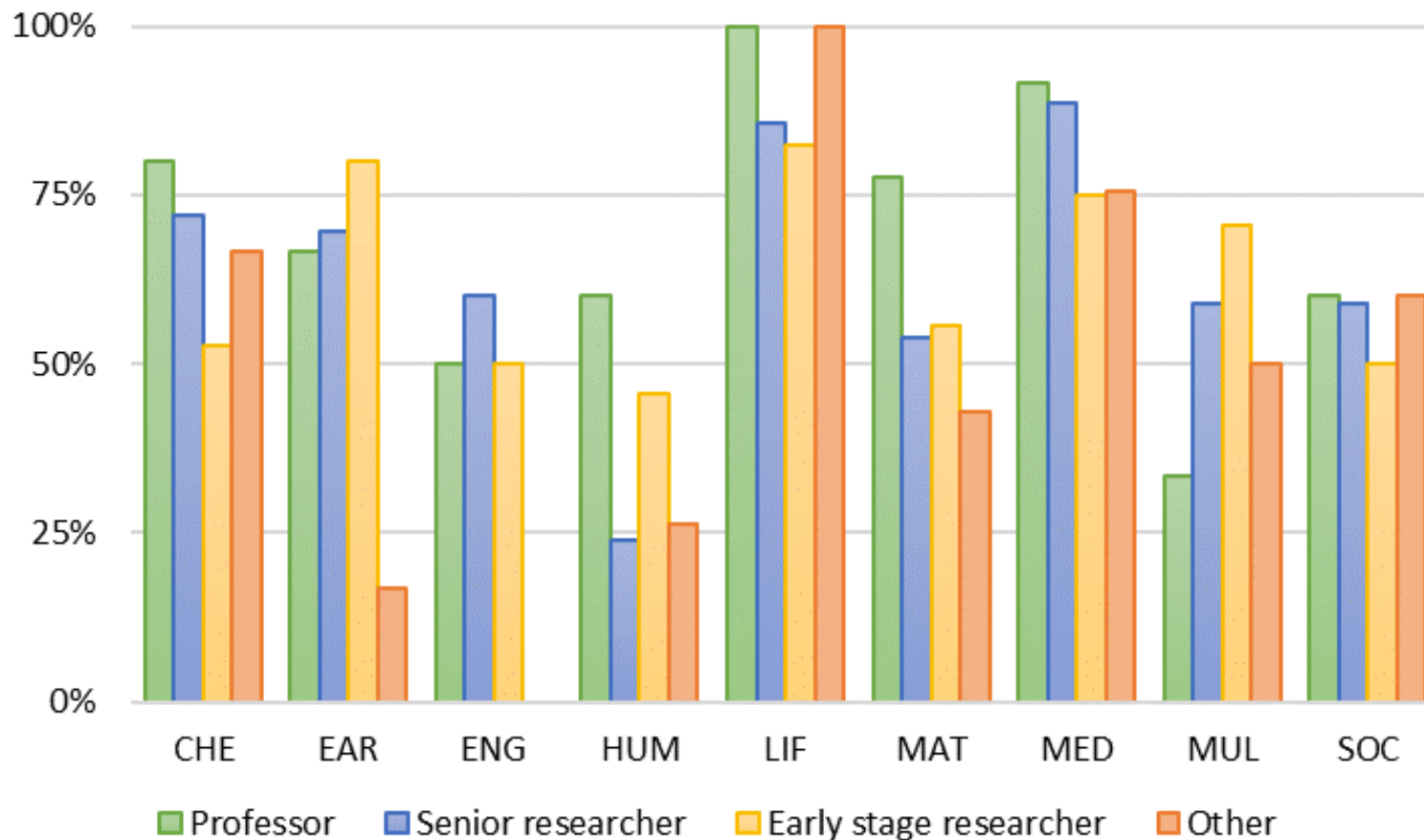
# Material & Methods ↗ Final sample

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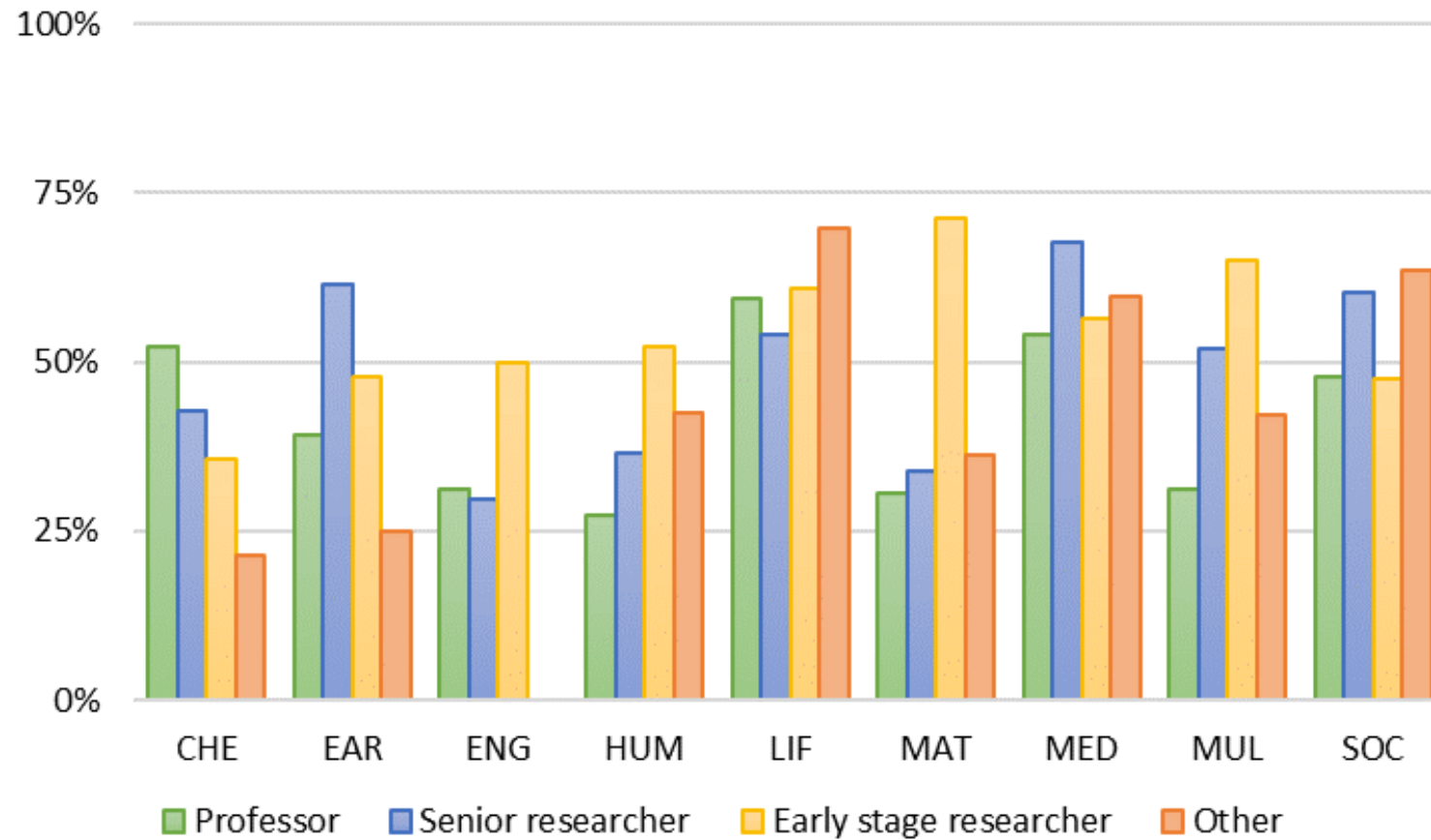
**770 respondents**

1. Filtered by altmetric coverage
2. Filtered by valid responses on variety of stakeholders

# Preliminary results Altmetric coverage at the individual level



# Preliminary results Altmetric coverage at the article level

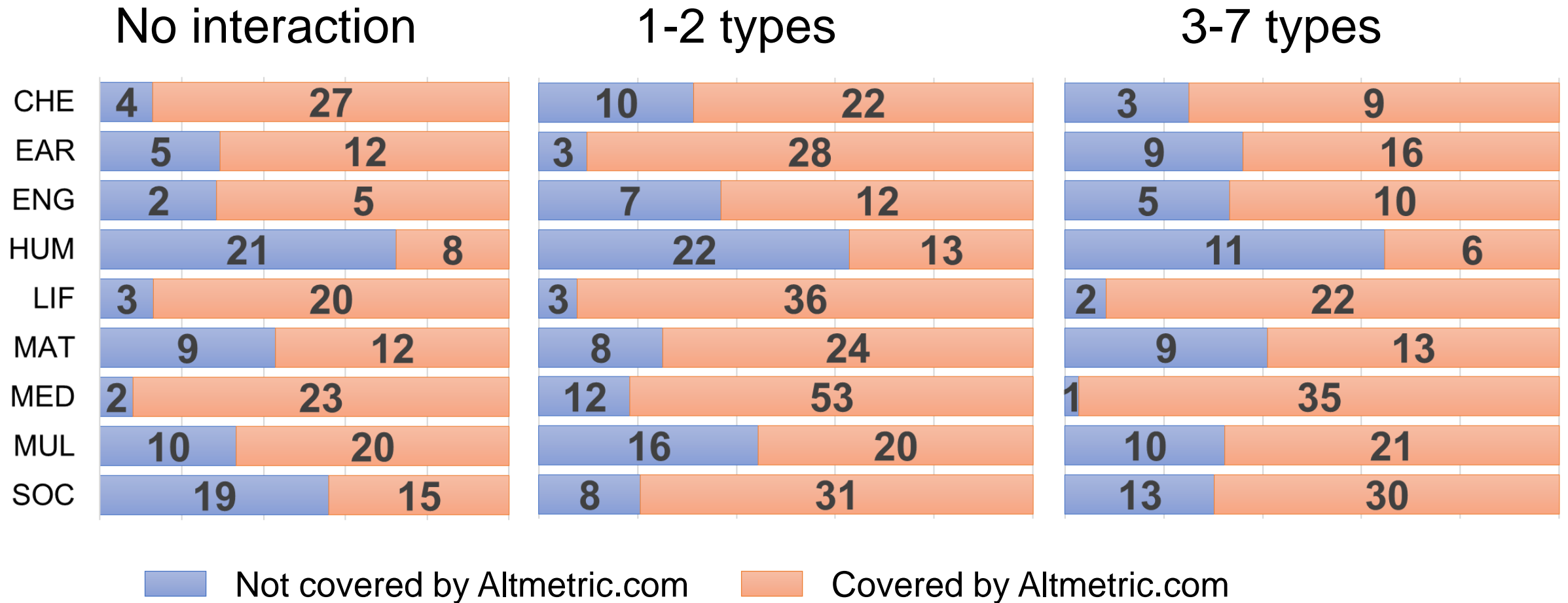


# Preliminary results Variety of stakeholders by rank and discipline





# Preliminary results Variety of stakeholders by rank and discipline



# **Discussion and further steps** Towards a nuanced framework of on/offline engagement

- We observe differences by field at the individual level as well as the article level
- Academic rank does not seem to be related to altmetric coverage but it is related with interactions with stakeholders
- At an exploratory stage, it seems that being covered or not by altmetric indicators does not relate to interacting with a variety of stakeholders

# **Discussion and further steps** Towards a nuanced framework of on/offline engagement

Descriptive results **not very promising** *but insufficient*:

- Which stakeholders?
- Which altmetrics?
- Which fields?
- Which types of interactions?
- Is social media a trace or off-line engagement or does it also facilitate it?

# Do altmetrics capture societal engagement? A comparison between survey data and social media data



# THANK YOU!

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and @IsmaelRafols