



NTNU

Norwegian University of
Science and Technology

On WEIRDness and the need to embrace diversity

Katrien De Moor

katrien.demoor@ntnu.no

Dept. of Information Security and Comm. Technology

womENcourage pre-event, Tromsø

Motivation

- Through human-centered design, technology and design decisions are influenced
- Despite focus on user involvement and diversity, broader population not represented in most studies (Linxen et al., 2021)
- Locality of researchers influences the locality of studies and samples (cf. Linxen et al., 2021)
- Our social identity influences the whole research process



Linxen et al. (2021)

- **WEIRD**: Western, Educated, Industrialized, Rich and Democratic
- Dominant role of **WEIRD**-society perspectives (values, knowledge. Intuition)
- 73% of CHI studies (2016-2020): based on Western participant samples (i.e., < 12% of world population)
- Most samples are from industrialized, rich, democratic countries with high education level; most HCI researchers: from Western countries

Another recent WEIRDness study

The Diversity of QoMEX Authorship Considering Locality and Gender

Julia Himmelsbach¹, Katrien De Moor², Andreas Sackl¹, Raimund Schatz¹
and Manfred Tscheligi^{1,3}

¹ AIT Austrian Institute of Technology GmbH, Center for Technology Experience, Austria

² Norwegian University of Science and Technology, Norway

³ University of Salzburg, Center for Human-Computer Interaction, Austria

DOI: [10.1109/QoMEX51781.2021.9465413](https://doi.org/10.1109/QoMEX51781.2021.9465413)

13th **International Conference on Quality of Multimedia Experience (QoMEX)**, June 2021,

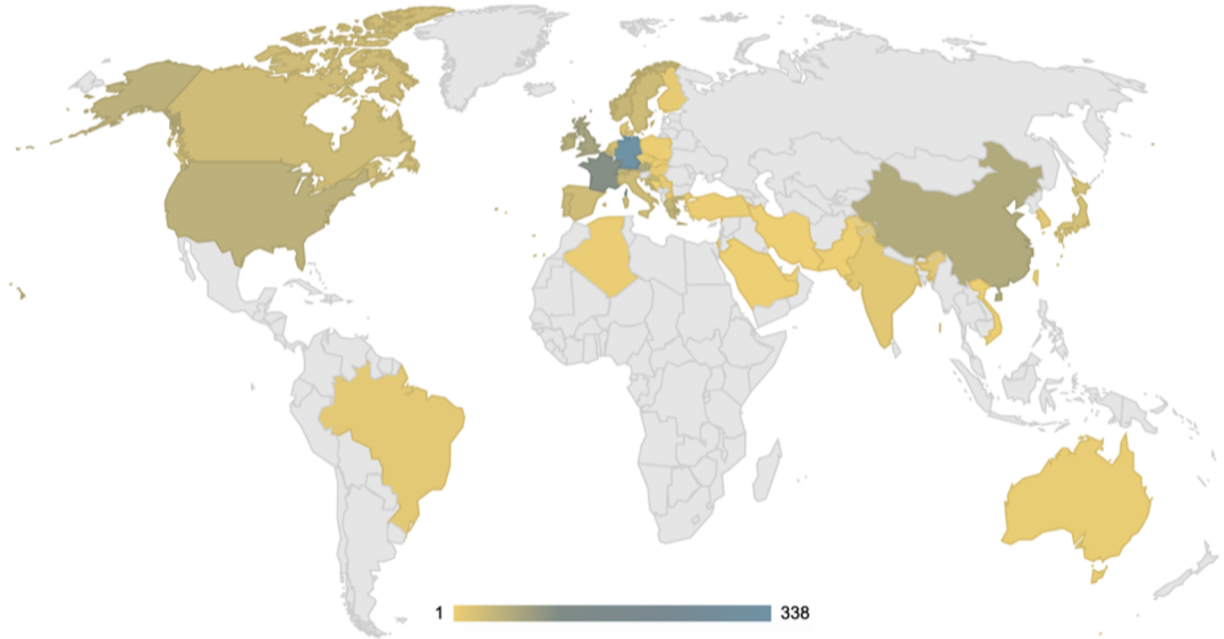
Which social groups considering locality and gender shape the discourse and to what extent is there diversity-related inequality and change over time?

Quantitative content analysis

Material corpus	General paper information	Author information	WEIRD instrument (cf. Linxen et al., 2021)	Statistical analysis
<ul style="list-style-type: none">• QoMEX proceedings (2015-2019)• Supplementary material (2018-2019)	<ul style="list-style-type: none">• Title• Year of publication• Conference location	<ul style="list-style-type: none">• Author position• Author affiliation• Affiliation country• Author type (student, industry, academia, NGO, not indicated)• Gender (female, male, not indicated)	<ul style="list-style-type: none">• Western• Educated (author type)• Industrialized (GDP per capita)• Rich (GNI per capita)• Democratic (political rights rating)	<ul style="list-style-type: none">• Locality• Gendered differences• Development over time

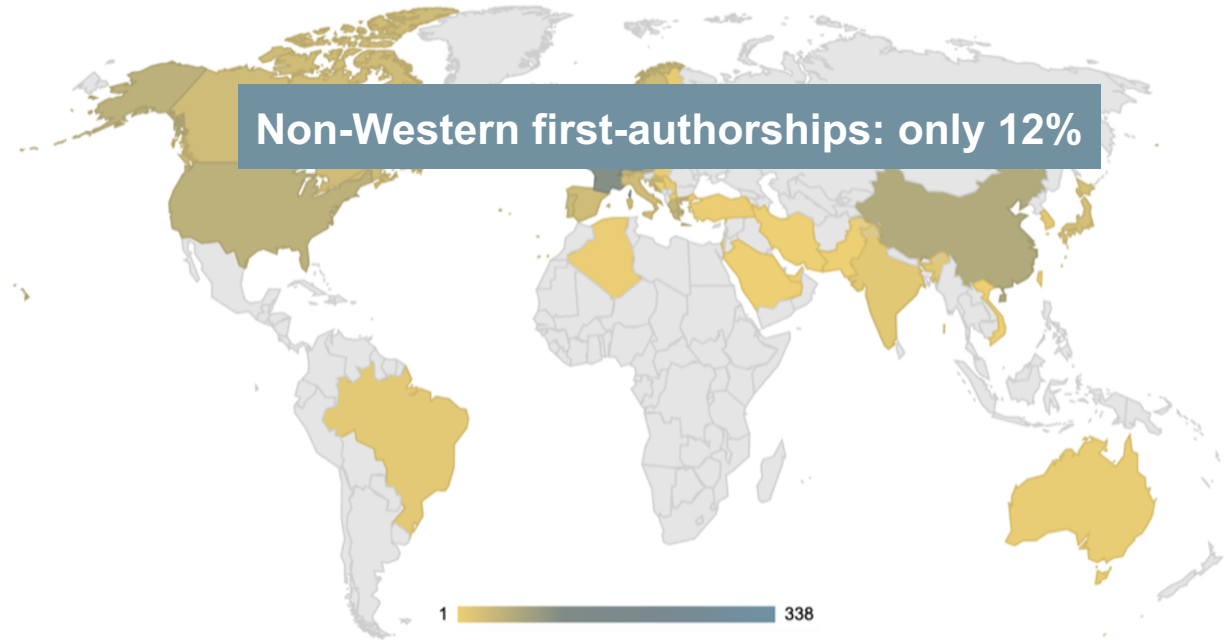
Exemplary results

Country	N	Country	N
DEU	338	FIN	8
FRA	107	SRB	8
GBR	74	CZE	7
AUT	67	HUN	6
CHN	62	AUS	5
IRL	56	SGP	5
BEL	52	DZA	4
CHE	52	ISR	3
USA	50	POL	3
GRC	44	TUR	3
NOR	40	TWN	3
HRV	38	ARE	2
PRT	38	BIH	2
SWE	34	FRA/CZE	2
ITA	33	HKG	2
CAN	32	MKD	2
ESP	32	IRN	1
JPN	26	PAK	1
NLD	22	SAU	1
DNK	17	SVK	1
IND	13	TSE	1
BRA	11	VNM	1
KOR	11		



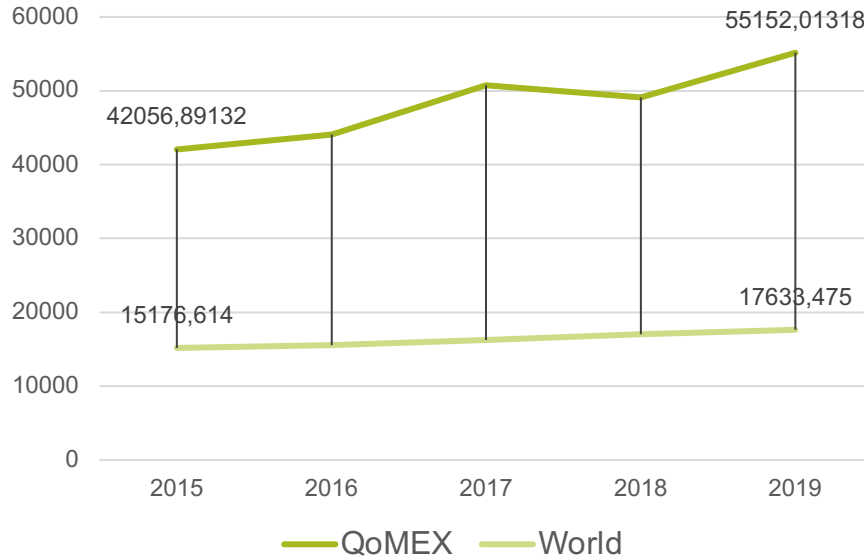
Exemplary results

Country	N	Country	N
DEU	338	FIN	8
FRA	107	SRB	8
GBR	74	CZE	7
AUT	67	HUN	6
CHN	62	AUS	5
IRL	56	SGP	5
BEL	52	DZA	4
CHE	52	ISR	3
USA	50	POL	3
GRC	44	TUR	3
NOR	40	TWN	3
HRV	38	ARE	2
PRT	38	BIH	2
SWE	34	FRA/CZE	2
ITA	33	HKG	2
CAN	32	MKD	2
ESP	32	IRN	1
JPN	26	PAK	1
NLD	22	SAU	1
DNK	17	SVK	1
IND	13	TSE	1
BRA	11	VNM	1
KOR	11		



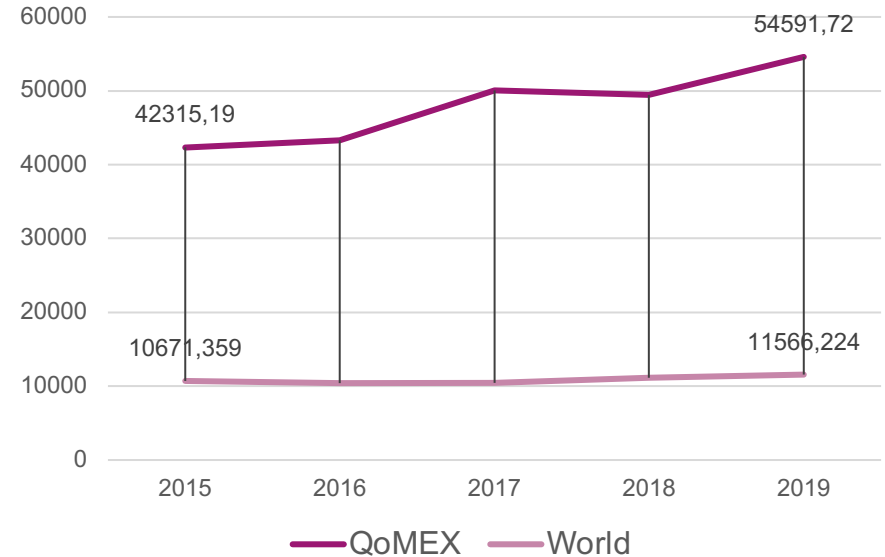
Development over time: industrialized and rich

GDP per capita



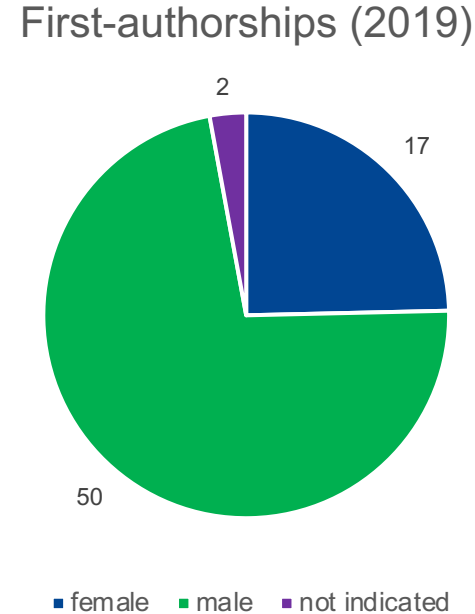
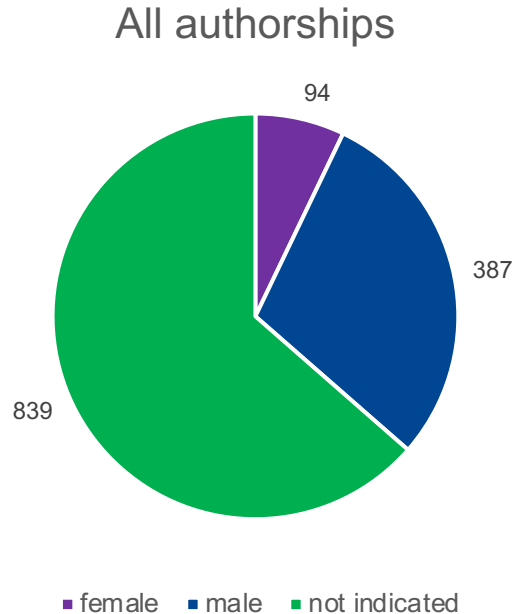
$r = .343, p < .001$

GNI per capita



$r = .357, p < .001$

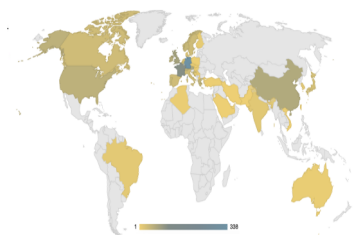
Gendered differences: authorship



$\chi^2(2) = 25.446$,
 $p < .001$,
Cramer's $V =$
.216,
 $p < .001$

Female authorships also more often students

What do the findings indicate?



- Scientific debate at QoMEX more and more dominated by privileged groups
- High WEIRDness of QoMEX, especially in terms of “Western”, “Industrialized” and “Rich”
- Female authorship is underrepresented, less likely to be the first authorship, and more likely to be associated with an early-career status

Follow-up work

Aim: Inform measures that can **increase diversity awareness**, increase **non-WEIRD participation** and push more **diversity-sensitive user research**

- Systematic analysis: coding of all conference years (authorships) and sample information for selected years (studies), reviewer diversity
- Broader span of diversity dimensions
 - Age, Ethnicity and Culture, Gender and Sex, Mental abilities, Physical abilities, Race, Sexual orientation, secondary diversity dimensions (see Himmelsbach et al., 2019)
- Best practices: collecting and analysing diversity-sensitive information

There is no “*god trick of seeing everything from nowhere*”

– Donna Haraway (1988, p. 581)

References

Himmelsbach, J., Schwarz, S. et al. (2019). Do we care about diversity in Human-Computer Interaction? A comprehensive Content Analysis on Diversity Dimensions in Research. CHI 2019.

Linxen, S., Sturm, C. et al. (2021). How WEIRD is CHI? CHI 2021.

Himmelsbach, J., De Moor et al. (2021). The WEIRDness of QoE research: The Diversity of QoMEX Authorship Considering Locality and Gender. QoMEX 2021.

Haraway, D. (1988). “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” *Feminist Studies*, vol. 14, no. 3, pp. 575–599, 1988.