

# Voice of the Users:

## *A study of software feedback differences between Germany and China*

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# Motivation

## *Why study cultural differences?*

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- Online channels popular around the world
- Culture impacts communication
- However, limited Studies



App stores  
Forums  
Social media

# Background to Study

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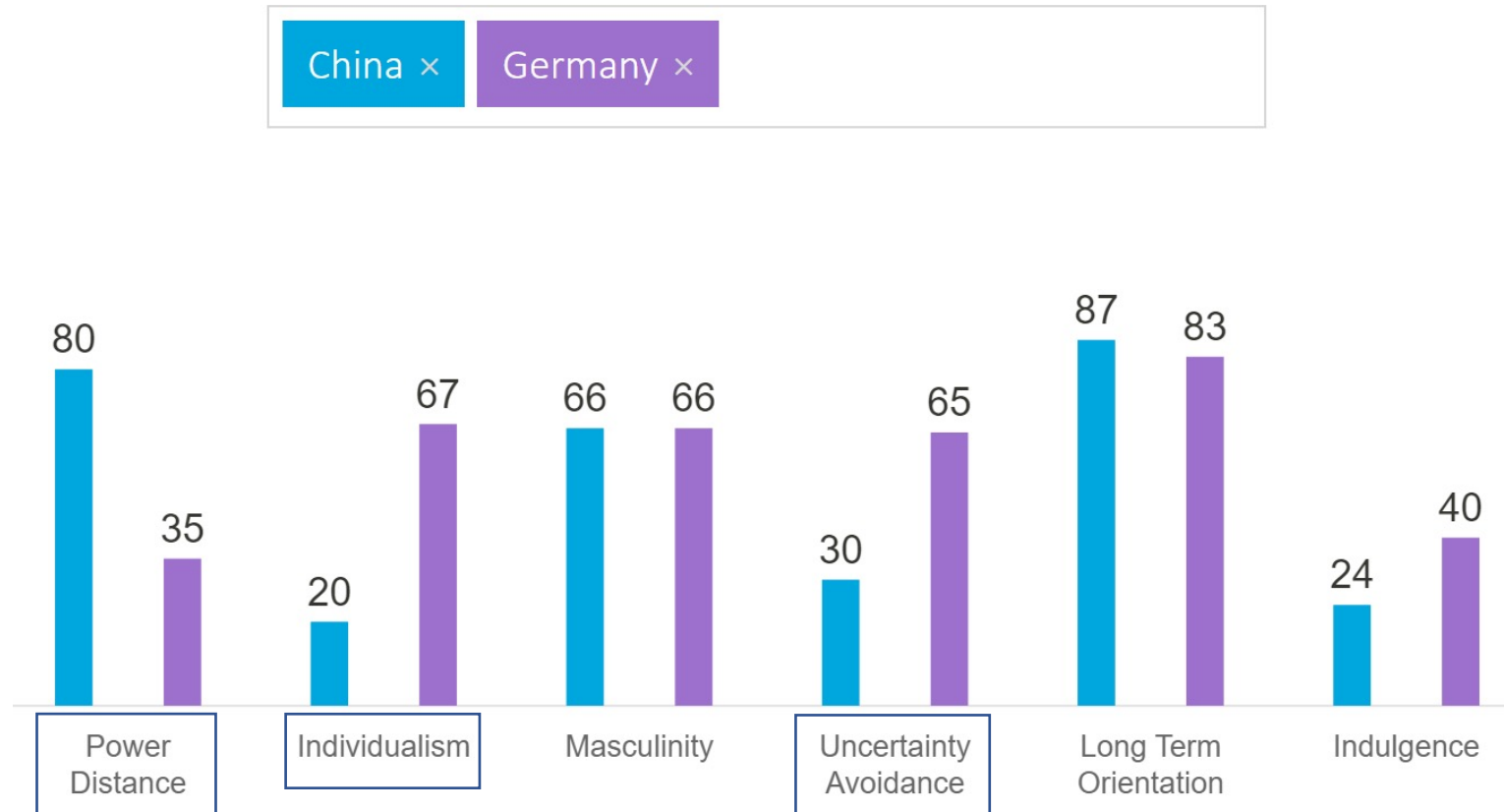
- Two previous surveys
  - *Who gives online feedback?*
  - *Reasons not to give feedback?*
- Significant number of previous responses:
  - *KIT (Germany)*
  - *Zhejiang University (China)*



# Cultural differences

## *Hofstede*

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# Cultural differences

## *Channels used*

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USER FEEDBACK WITH COUNTRY

	Germany	China
App Store (%)	18.20	24.53
Forums (%)	12.01	8.02
Social Media (%)	5.07	22.73

- *Anonymity encouraging social feedback?*



# Cultural differences

## *Motivations*

MOTIVATIONS TO GIVE FEEDBACK WITH COUNTRY

	App Store (%)			Product Forums (%)			Social Media (%)		
Motivation	Chinese	German	<i>Chi2 (p)</i>	Chinese	German	<i>Chi2 (p)</i>	Chinese	German	<i>Chi2 (p)</i>
Show appreciation	55.77	67.01	2.22	55.88	28.13	6.15 (*)	66.67	55.56	0.78
Show dissatisfaction	54.81	42.27	2.68	41.18	17.19	5.52 (*)	66.67	51.85	1.55
Influence improvement	40.38	64.95	11.17 (*)	29.41	56.25	5.39 (*)	31.11	70.37	13.15 (***)
Recommend	31.73	25.77	0.60	35.29	20.31	1.89	45.93	18.52	5.88 (*)
Discourage	22.12	14.43	1.49	23.53	6.25	4.66 (*)	22.96	11.11	1.26
Get help	20.19	9.09	4.87 (*)	55.88	70.91	0.07	22.22	31.82	0.03
Connect/socialise	4.81	1.03	1.34	17.65	21.88	0.05	26.67	37.04	0.74

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p \leq 0.05$

# Cultural differences

## *Reasons not to give feedback*

REASONS NOT TO GIVE FEEDBACK, AGREEMENT LEVEL BY COUNTRY

	App Store			Product Forums			Social Media		
	Germany (%)	China (%)	Chi2 (p)	Germany (%)	China (%)	Chi2 (p)	Germany (%)	China (%)	Chi2 (p)
Alternative app	82.7	73.5	2.67	58.4	62.8	2.28	67.5	72.1	0.25
Existing answer	72.9	81.6	15.08 (***)	89.1	68.1	14.26 (***)	83.1	75.2	1.68
To long	72.7	84.6	16.09 (***)	66.3	64.4	0.44	46.6	73.3	80.25 (***)
No resolution	51.1	47.5	0.31	41.6	37.2	0.02	56.1	51.1	0.82
Not aware	30.6	67.6	150.69 (***)	33.7	47.6	17.53 (***)	50.1	60.0	13.75 (***)
Won't influence	28.0	30.3	0.02	26.6	26.2	0.01	37.5	39.2	0.04
Confusing	6.2	35.5	165.48 (***)	30.9	19.9	5.87 (*)	7.8	19.1	41.11 (***)

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p \leq 0.05$

# Cultural differences

## *Encouragement*

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### METHODS TO ENCOURAGE FEEDBACK (AGREEMENT LEVEL)

	Germany	China	<i>Chi2</i> ( <i>p</i> )
Financial incentive	77.6	86.9	16.39 (***)
In-app rewards	61.0	70.2	19.57 (***)
Smart assistant	15.0	37.4	80.58 (***)
Audio feedback	11.4	24.0	38.61 (***)
Video feedback	6.9	16.0	24.70 (***)

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p \leq 0.05$



# Cultural differences

## *Hofstede*

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- Collectivism/Individualism:
  - *Chinese more motivated to encourage/discourage other users*
- Power distance:
  - *Germans more motivated to influence improvement (uncertainty avoidance?)*
  - *Chinese not aware they can influence improvement*

# Cultural differences

## *Implications and future work*

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- Encourage Chinese feedback
  - *Features to share opinions with others*
  - *Incentives and alternative feedback methods*
- Encourage German feedback
  - *Show impact of feedback (track record of improvements)*
  - *Quick response to show feedback is received*
- Chinese respondents really not giving improvement suggestions?

# Thanks!

*If you're interested:*

Previous journal paper



Tizard, J., Rietz, T., Liu, X. and Blincoe, K., 2021. Voice of the users: an extended study of software feedback engagement. *Requirements Engineering*, pp.1-23.

Cultural paper



Tizard, J., Rietz, T., Liu, X. and Blincoe, K., “Voice of the Users: A study of software feedback differences between Germany and China”, *2021 5th international workshop on crowd-based requirements engineering (CrowdRE)*



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