

# WHY IS USABLE SECURITY HARD? AND WHAT SHOULD WE DO ABOUT IT?

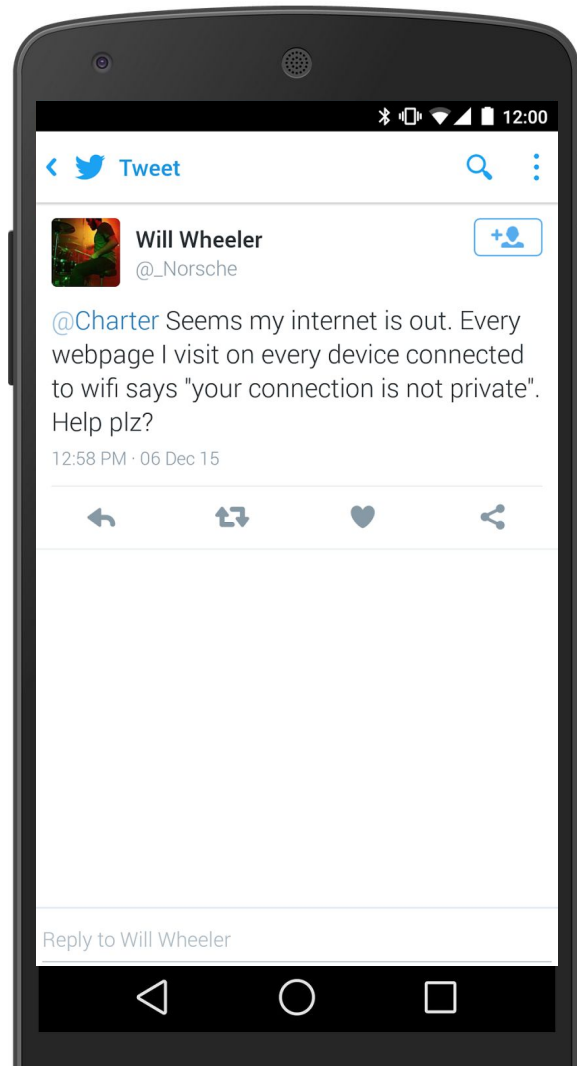
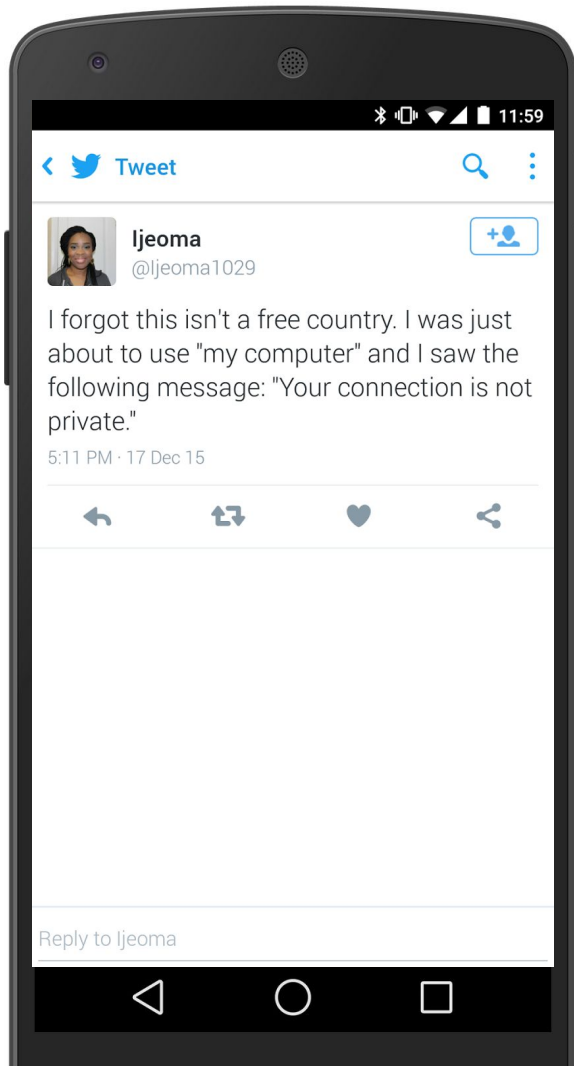
Adrienne Porter Felt, Google



A security feature should be...

**invisible** when you don't need it,  
**helpful** when you do





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Security [March

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@guyroberts, Jan 26, 3:30pm PST. See you there!

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The call for poster deadline for #SOUPS14 is approaching. For

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USENIX CONFERENCE

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• Conference Network Policy

• Statement on Environmental Responsibility Policy

## It's a Hard Lock Life: A Field Study of Smartphone (Un)Locking Behavior and Risk Perception

Authors:

Marian Harbach, *Leibniz University Hannover*; Emanuel von Zeschwitz, *Andreas Fichtner*, and Alexander De Luca, *University of Munich (LMU)*; Matthew Smith, *Rheinische Friedrich-Wilhelms-Universität*

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arxiv.org

Cornell University Library

arXiv.org > cs > arXiv:1501.04454

## Computer Science > Cryptography and Security

### "They brought in the horrible key ring thing!" Analysing the Usability of Two-Factor Authentication in UK Online Banking

Kat Krol, Eleni Philippou, Emiliano De Cristofaro, M. Angela Sasse

(Submitted on 19 Jan 2015)

To prevent password breaches and guessing attacks, banks increasingly turn to two-factor authentication (2FA), requiring users to present at least one more factor, such as a one-time password generated by a hardware token or received via SMS, besides a password. We can expect some solutions -- especially those adding a token -- to create extra work for users, but little research has investigated usability, user acceptance, and perceived security of deployed 2FA. This paper presents an in-depth study of 2FA usability with 21 UK online banking customers, 16 of whom had accounts with more than one bank. We collected a rich set of qualitative and quantitative data through two rounds

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Kat Krol

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October 2015,

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Mohamed Alsh

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Outline

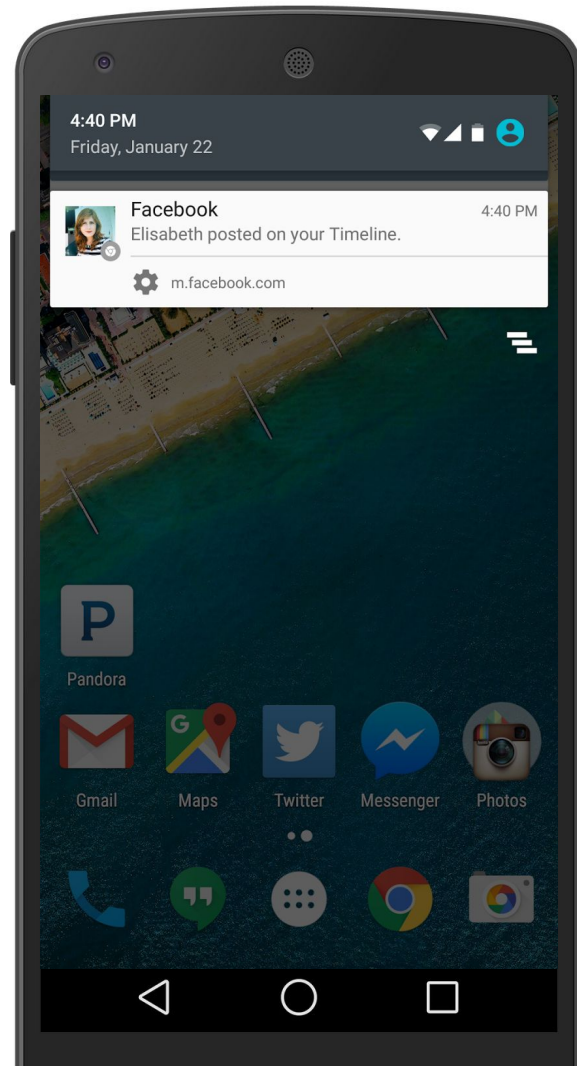
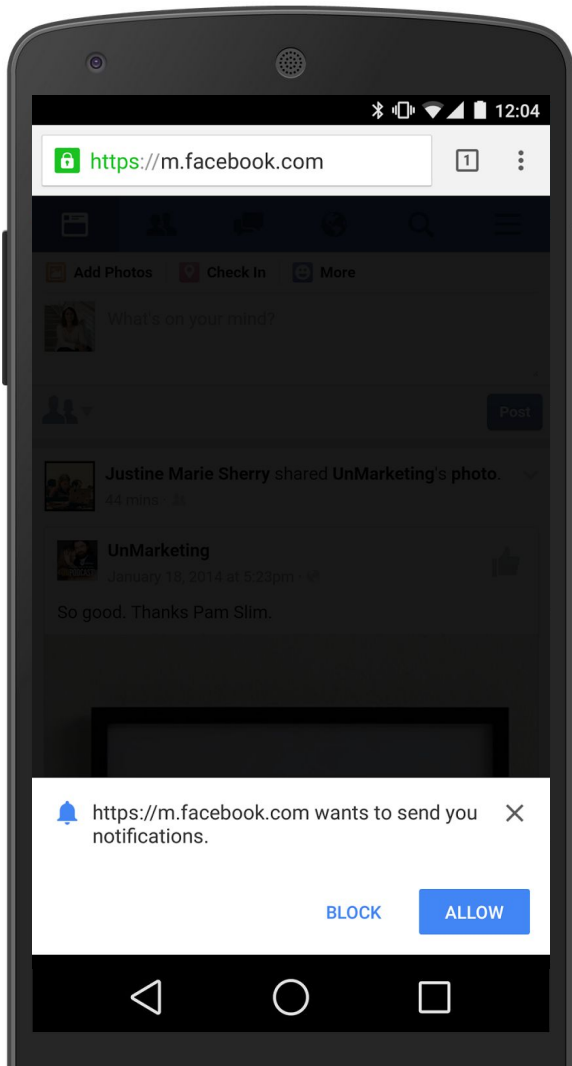


Usable security is **science**,

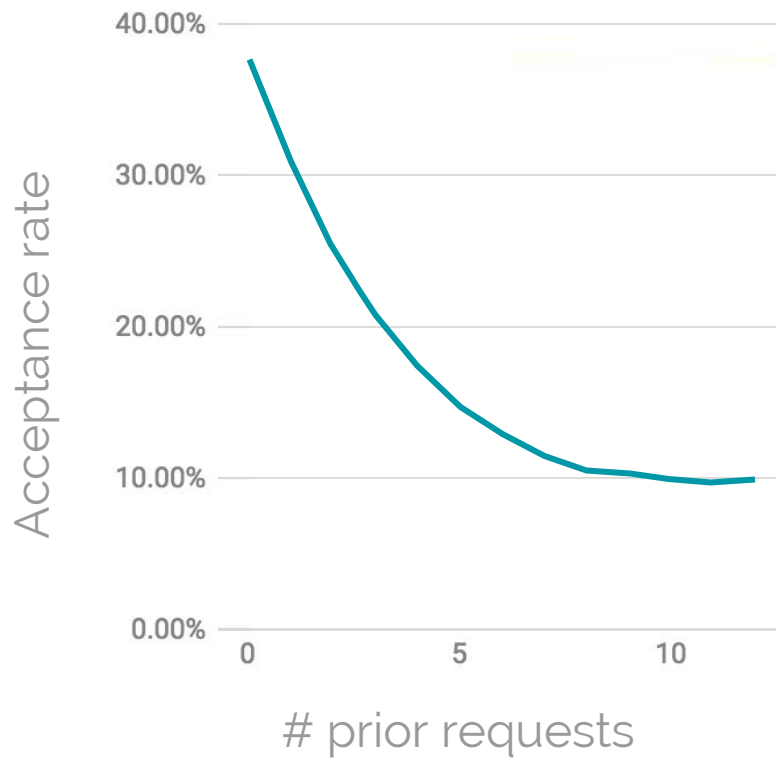
BUT NOT ENOUGH PEOPLE TREAT IT LIKE SCIENCE



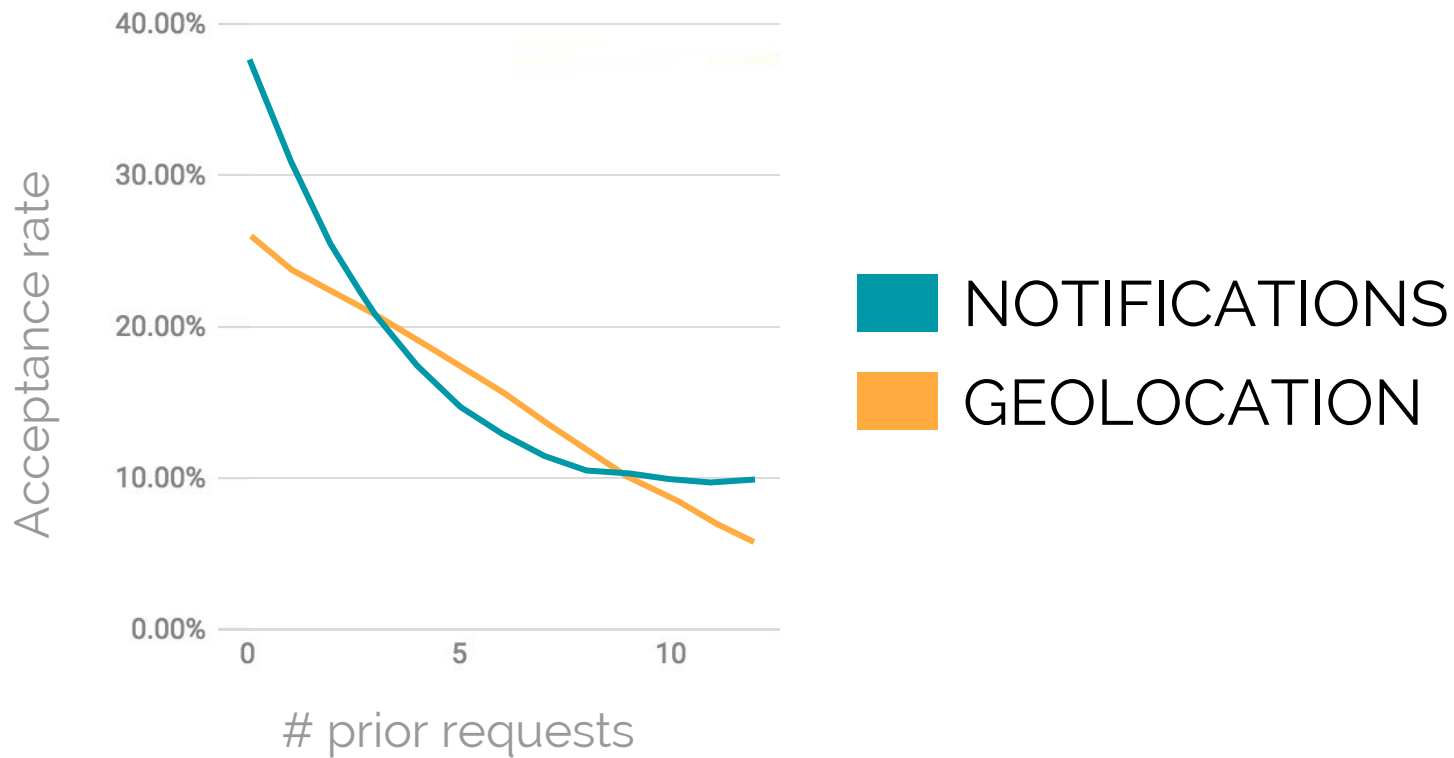




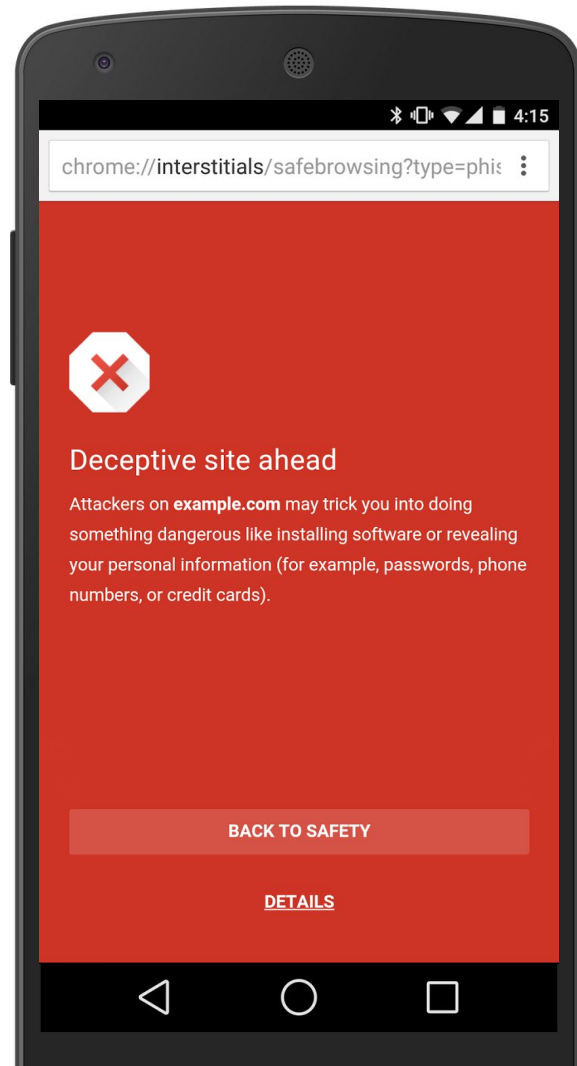
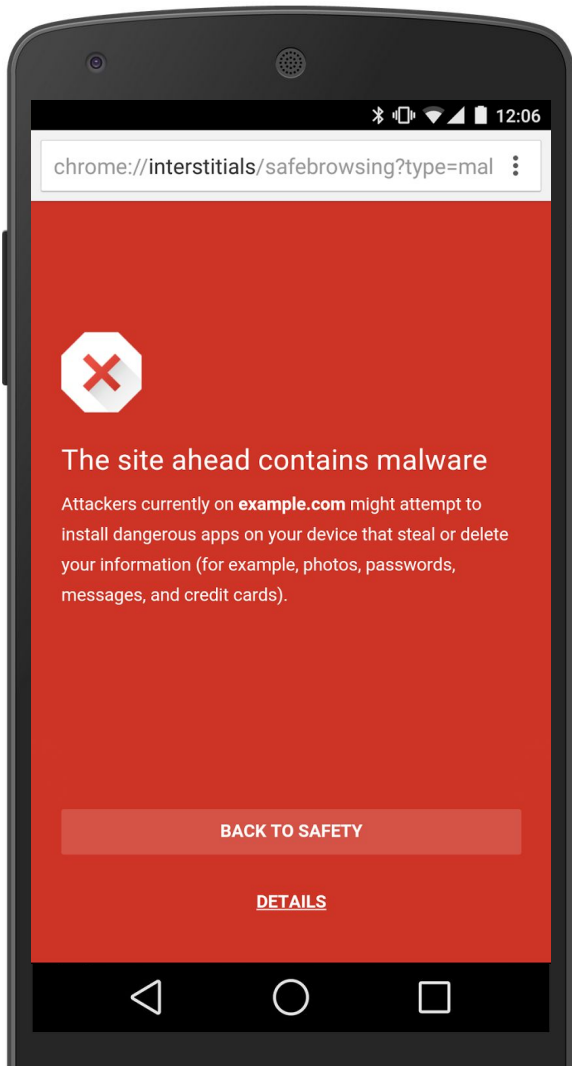




■ NOTIFICATIONS







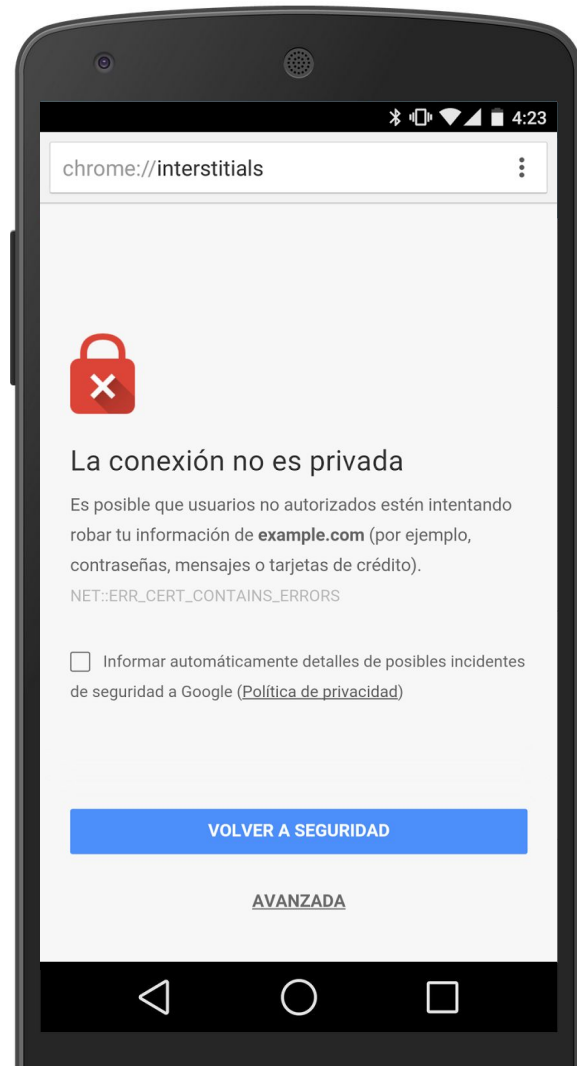
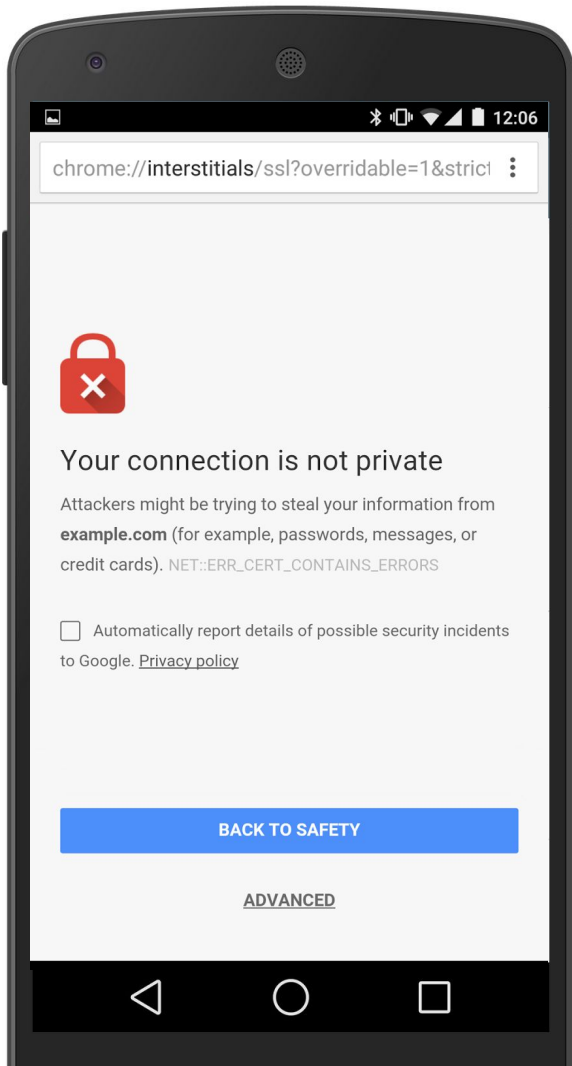




Control	<b>The website ahead contains malware!</b>	
	The website ahead contains malware! Go back!	
Control	<b>This file is malicious.</b>	
	This file is malicious. Discard this file to stay safe.	
	This file is malicious. To stay safe, don't run it.	
	This file is malicious. To stay safe, discard it.	

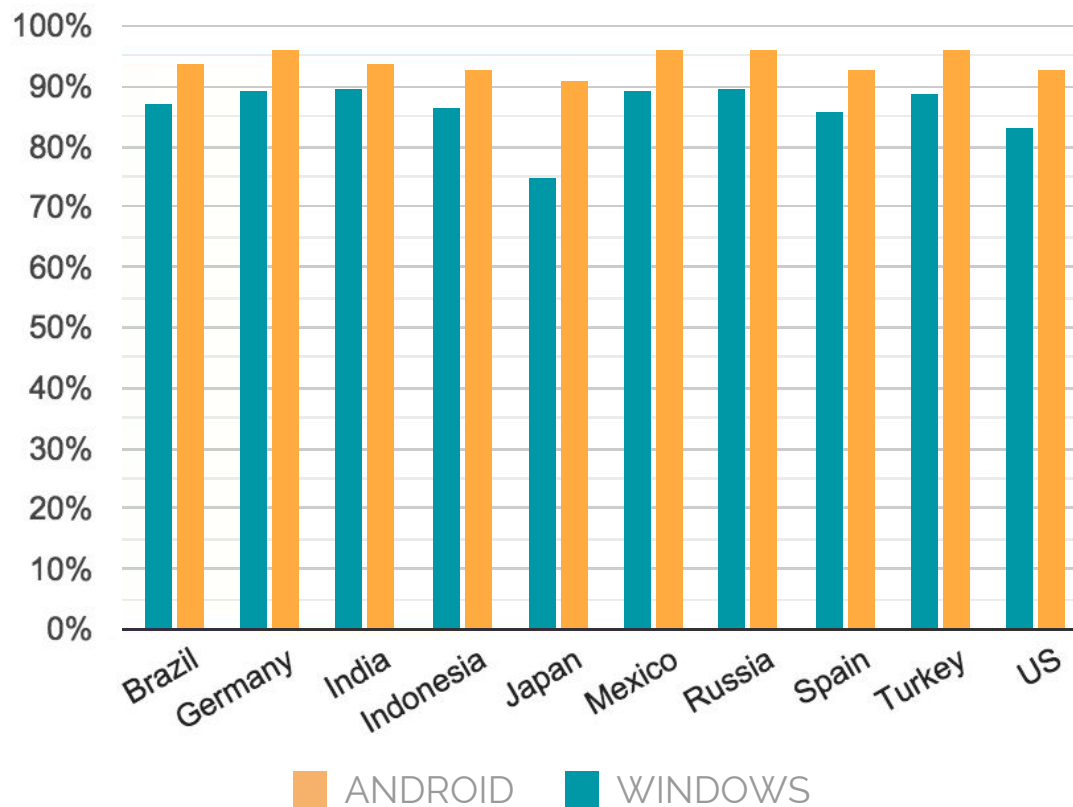
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	The website ahead contains malware! Go back!	<b>82%</b>
Control	<b>This file is malicious.</b>	<b>77%</b>
	This file is malicious. Discard this file to stay safe.	<b>76%</b>
	This file is malicious. To stay safe, don't run it.	<b>78%</b>
	This file is malicious. To stay safe, discard it.	<b>74%</b>



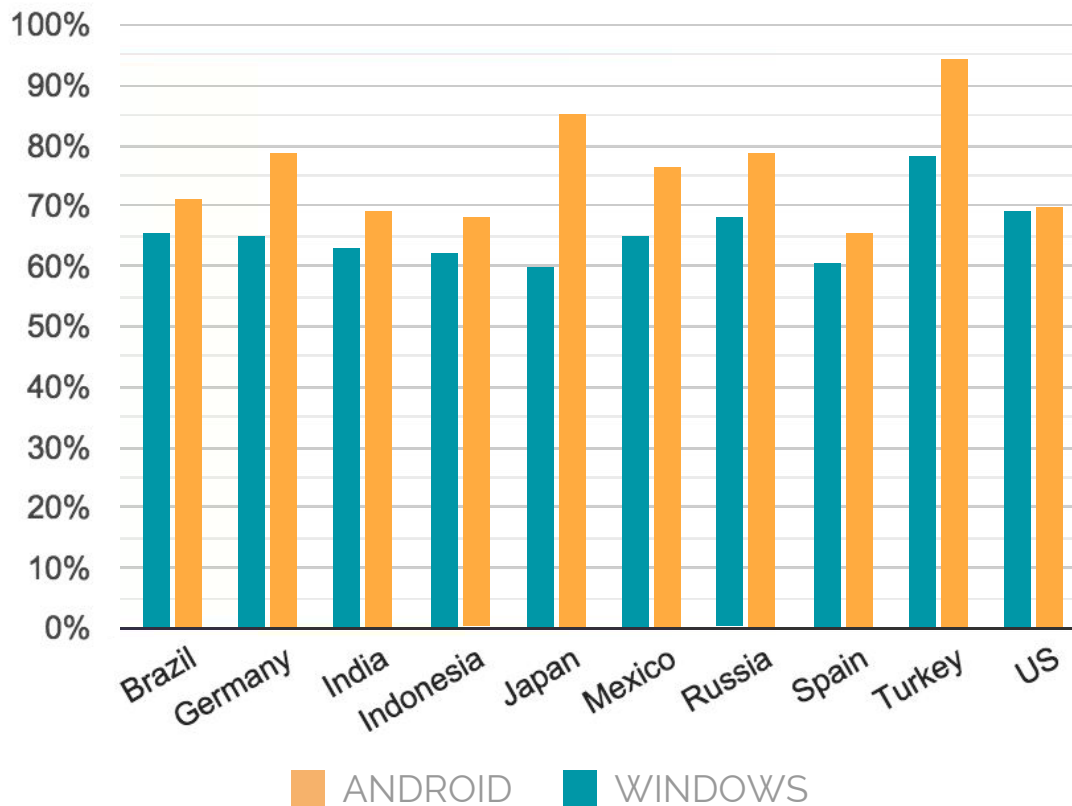




# MALWARE WARNINGS



# HTTPS ERROR WARNINGS







Usable security is **science**,

SO DO GREAT SCIENCE & SHARE IT WITH EVERYONE