"You Have to Ignore the Dangers": User Perceptions of the Security and Privacy Benefits of WhatsApp Mods

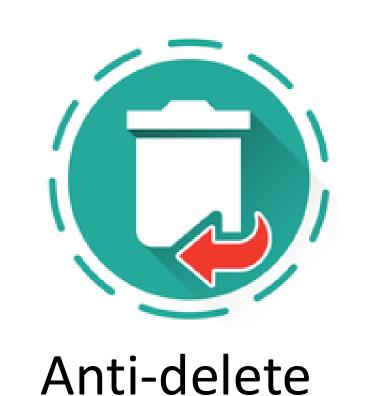
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Motivation and Research Questions

WhatsApp is the most popular messaging app and mods are common



Mods offer features that have clear security and privacy implications







Disable calls Hide ticks

Download status

Main Research Questions

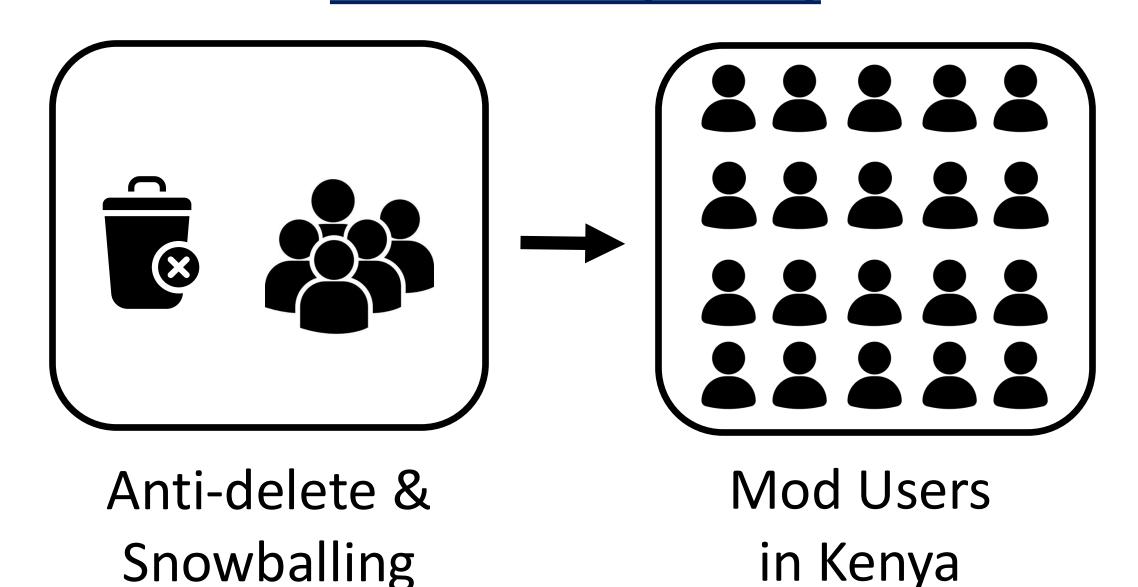




Methods, Results, and Takeaways

We interviewed mod users in Kenya and analyzed common mods to contextualize user sentiments

Interviews (N=20)



Interview Results



Participants learn about and get mods directly from their friends, family, and colleagues.

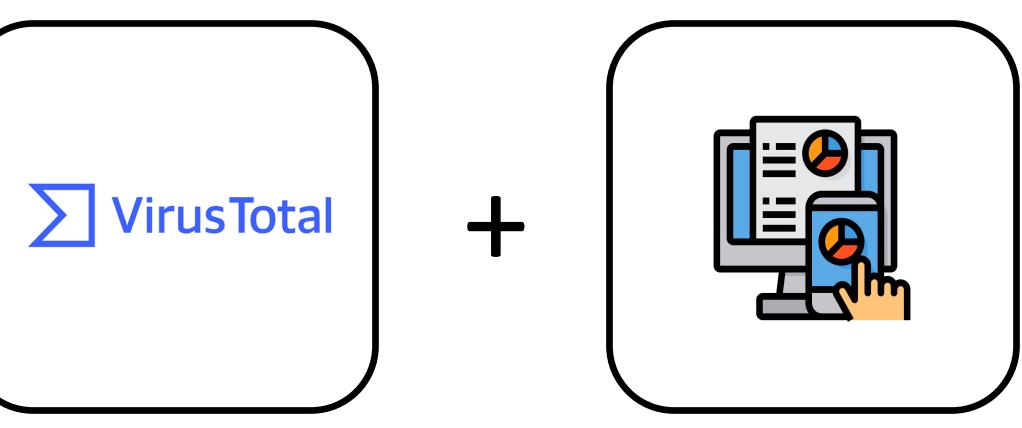


Participants use mods to protect their privacy while undermining the privacy of other people.



Participants view WhatsApp mods as more trustworthy than the official WhatsApp.

App Analysis (N=10)



Permissions & Malware

Feature Testing & Traffic Analysis

App Analysis Results



Mods request 7 additional permissions, including ability to edit settings and draw on apps.



Two WhatsApp mods were found to be malicious by Virus Total (i.e., by at least 10 AVs).



WhatsApp mods contact 52 additional advertising and tracking domains.

Takeaways and Conclusions



Mod users vulnerable to malware and advertisers.



Users of official app have misplaced trust.



Mods introduce a power imbalance.











