"I'm Literally Just Hoping This Will Work"

Obstacles Blocking the Online
Security and Privacy of Users with
Visual Disabilities

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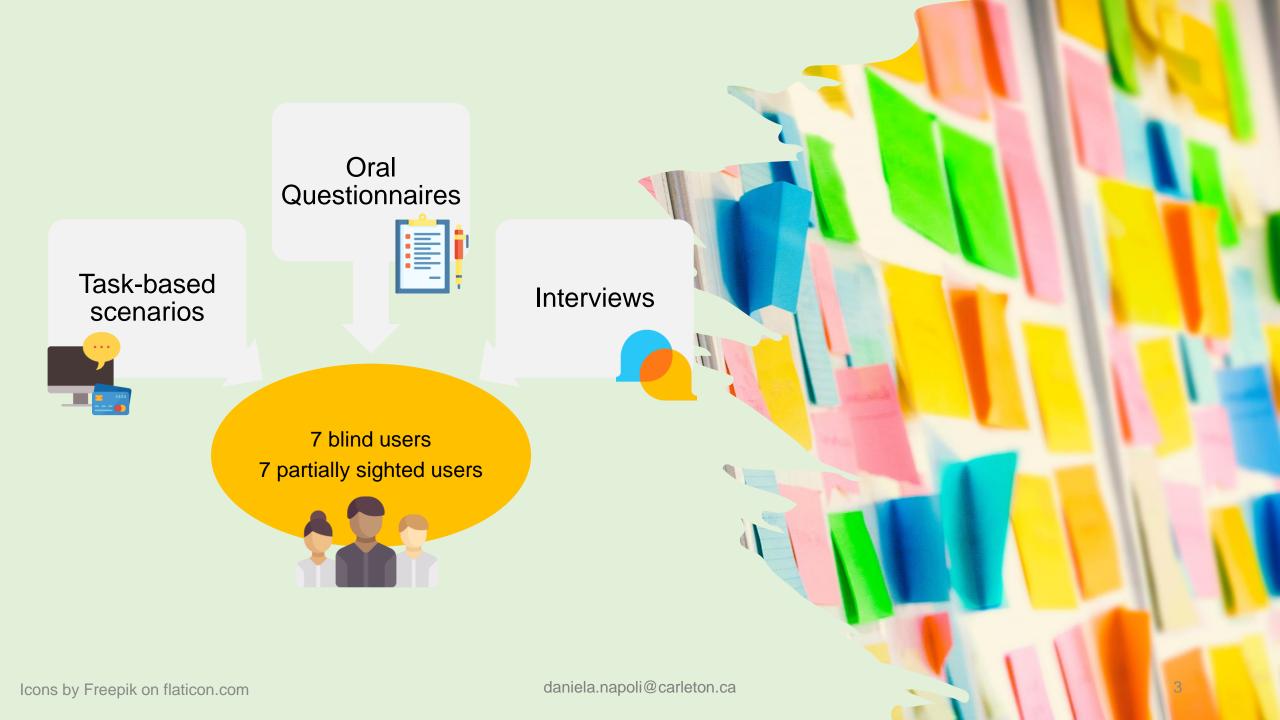






Summary

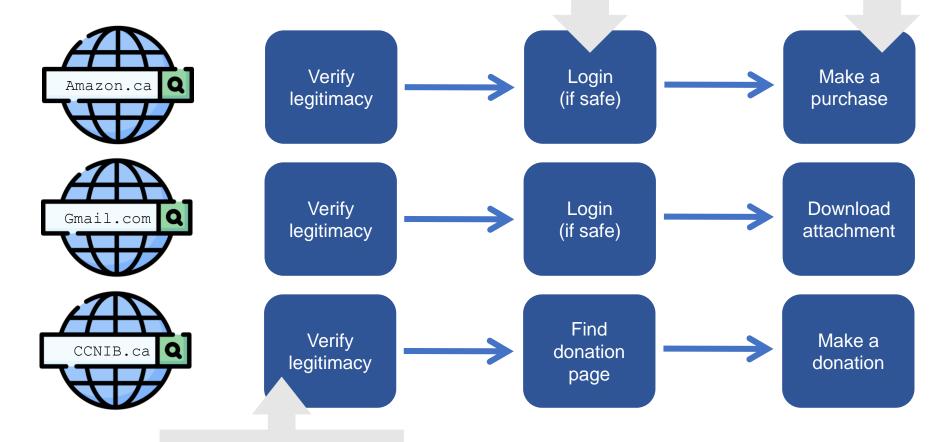
- Poor usability impeded: logging in, checking URLs, knowing whether PII is on screen, understanding effects of default options
- Mental models of websites and trust in security advice weakened
- User security management strategies adapt as S&P awareness fluctuates across contexts and challenges faced



Task-Based Scenarios No audible feedback

No audible feedback confirming account access.

Recommended options with unclear implications.



No one detected the spoofed website.

Oral Questionnaires

Use software from official sources
Use antivirus software
Do not open unexpected attachments
Think before clicking a link
Use strong passwords
Use multi-factor authentication methods
Use unique passwords between different sites
Frequently update software and systems
Only use websites with "HTTPS"
Enable automatic updates
Use a password manager

Effectiveness of advice						
0	0	0	2	12		
0	0	0	3	11		
0	0	0	3	11		
0	0	2	1	11		
0	0	0	4	10		
0	1	1	2	10		
0	1	1	5	7		
0	1	3	4	6		
1	2	2	4	5		
0 0 0 0 0 0 0 0 1	0 0 0 0 1 1 1 2	0 0 0 2 0 1 1 3 2 7 4	2 3 3 1 4 2 5 4 4 3 4	12 11 11 11 10 10 7 6 5 3		
2	2	4	4	2		
V. Ineffective	Ineffective	Neither	Effective	V. Effective		

Likelihood to use advice							
0	1	0	3	10			
0	1	0	2	10			
0	3	0	2	9			
0	0	1	4	9			
0	0	0	5	9			
0	4	1	5	4			
2	3	2	2	5			
0	1	3	3	7			
0 0 0 0 0 0 2 0 0 2 5	1 3 0 0 4 3 1 5 1	0 0 0 1 0 1 2 3 4 3 3	3 2 2 4 5 5 2 3 2	10 10 9 9 4 5 7 3 7			
2	1	3	1	7			
5	3	3	1	2			
. Unlikely	Unlikely	Neither	Likely	V. Likely			

Access to financial information	
Stolen identity	
Activity tracking	
Stolen information about you/family	
Infected with virus or malware	
Public disclosure of personal information	
Online scam or fraud	
Hacked email account	
Key-stroke logging software	
Installing malware unknowingly	
Surveillance	
Eavesdropping	

Participants were most concerned about their info, and the health of their devices.

Participants tend to follow advice that they believe is effective.*

*Except for using multi-factor authentication

Level of concern

Neither

Concerned

V. Unconcerned

Unconcerned

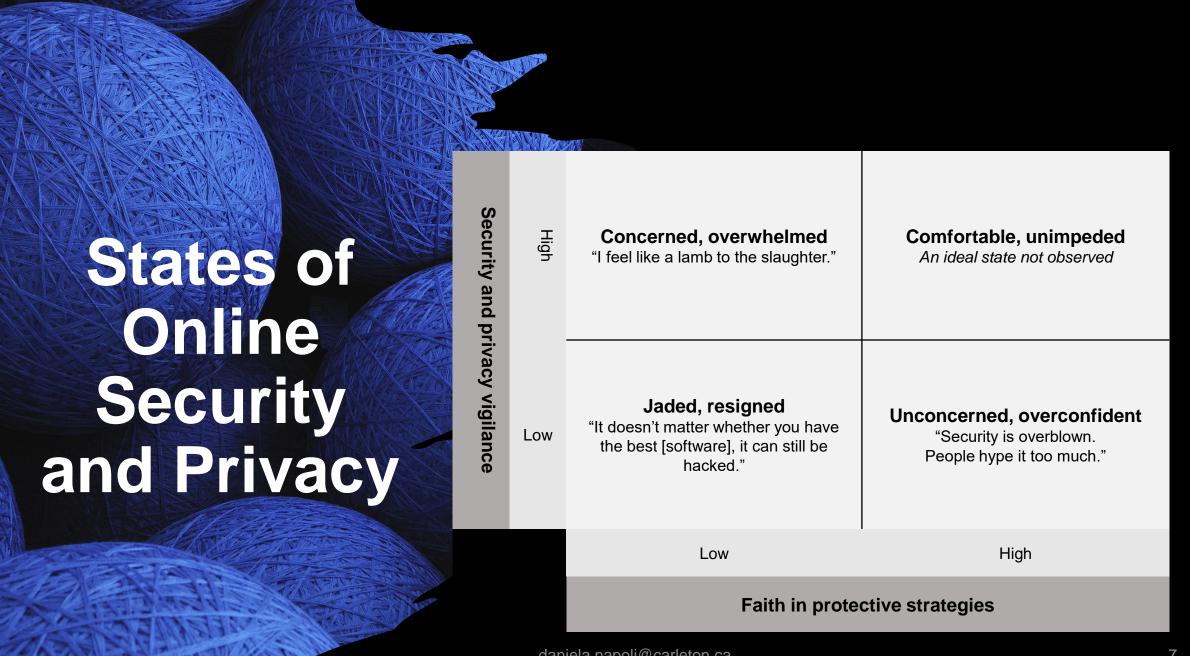
2

3

2

Interviews "I have to act like a typewriter and go very close and back and forth while reading." U02 "It's telling me that there's Personal abilities Design of websites a problem. It's been and attributes or security mechanisms marked with a red something. Let's see if VoiceOver will tell me what it is." U04 Usability, accessibility Obstacle compensation Guesswork obstacles or workarounds "I'm going to touch the "I can unload JAWS and screen and hopefully that reload it to fix the will work." U04 problem." U10 Learned Mental models Role of expectations functionality of websites "People are smart and "It's easier and quicker to know what form fields TAB around a page." U13 should sound like." U05 "Security is overblown, people hype it too much." U03 Understanding External Security and influences privacy attitudes of threats "It says Amazon "I assume my personal so it should information has be legitimate." U07 almost no value." U12 Security management techniques

Figure 2: Relationships between the main codes formulated during our thematic analysis of **participant interviews and feedback comments**. Example excerpts are also included.



Thank you!

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