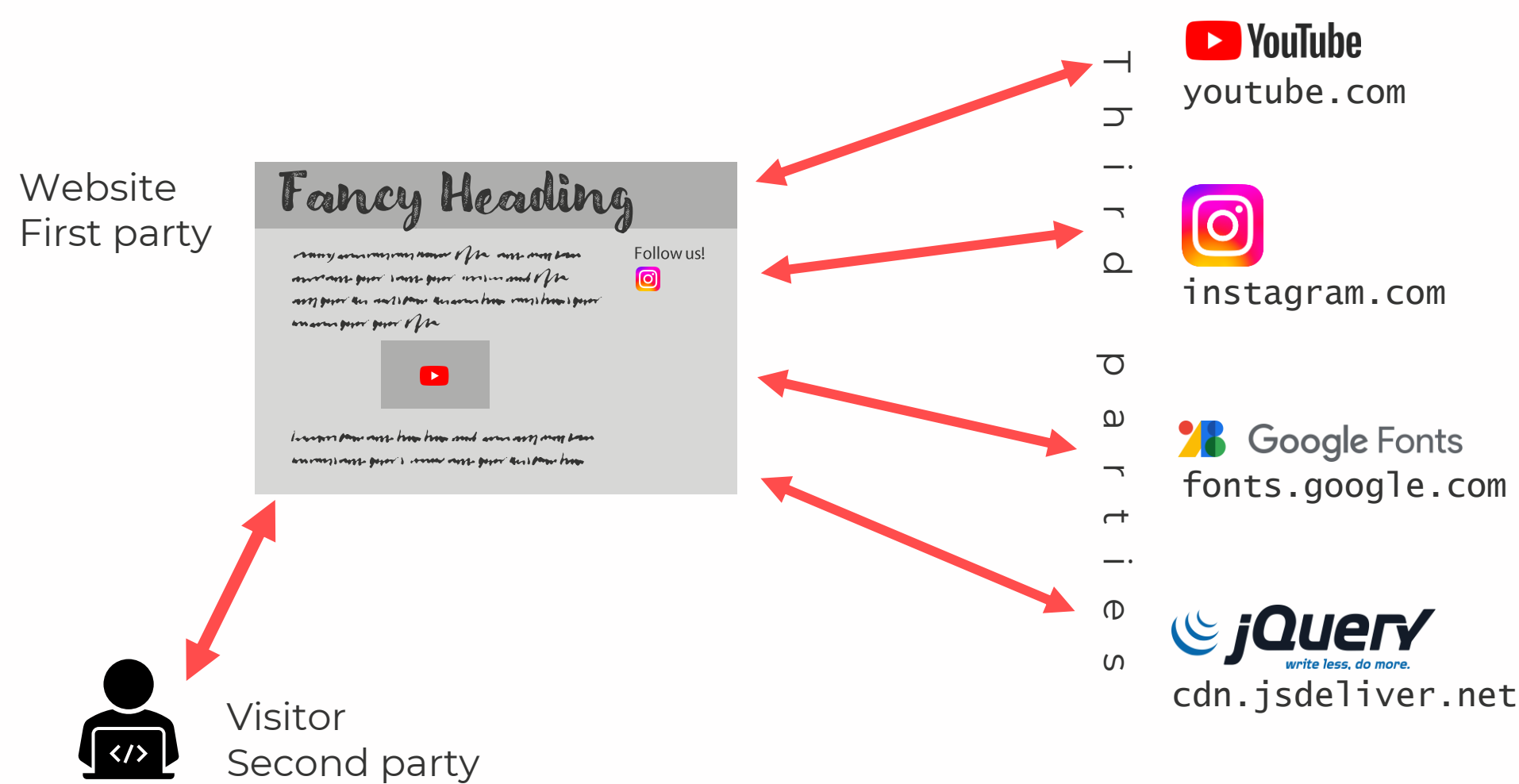


PRIVACY RARELY CONSIDERED: EXPLORING CONSIDERATIONS IN THE ADOPTION OF THIRD-PARTY SERVICES BY WEBSITES

Christine Utz, Sabrina Amft, Martin Degeling, Thorsten Holz, Sascha Fahl, and Florian Schaub

MOST WEBSITES INCLUDE THIRD-PARTY SERVICES THAT TRACK YOU...

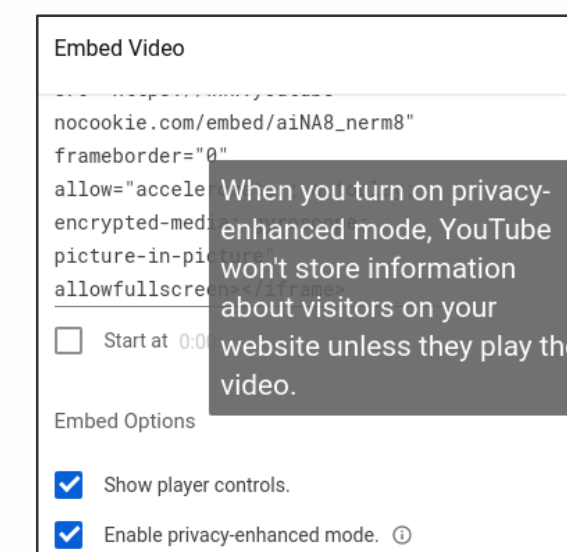


- Later visits to other websites that embed the same 3P allow the 3P to learn the visitor's browsing habits
- Especially worrisome for websites about sensitive topics

... EVEN THOUGH THERE ARE ALTERNATIVES!

Websites could...

- **Select** a different way to integrate the desired functionality (e.g., self-hosting, 3P that collects less visitor data)
- **Configure** the 3P service to collect less data (e.g., privacy-enhanced embed mode on YouTube)

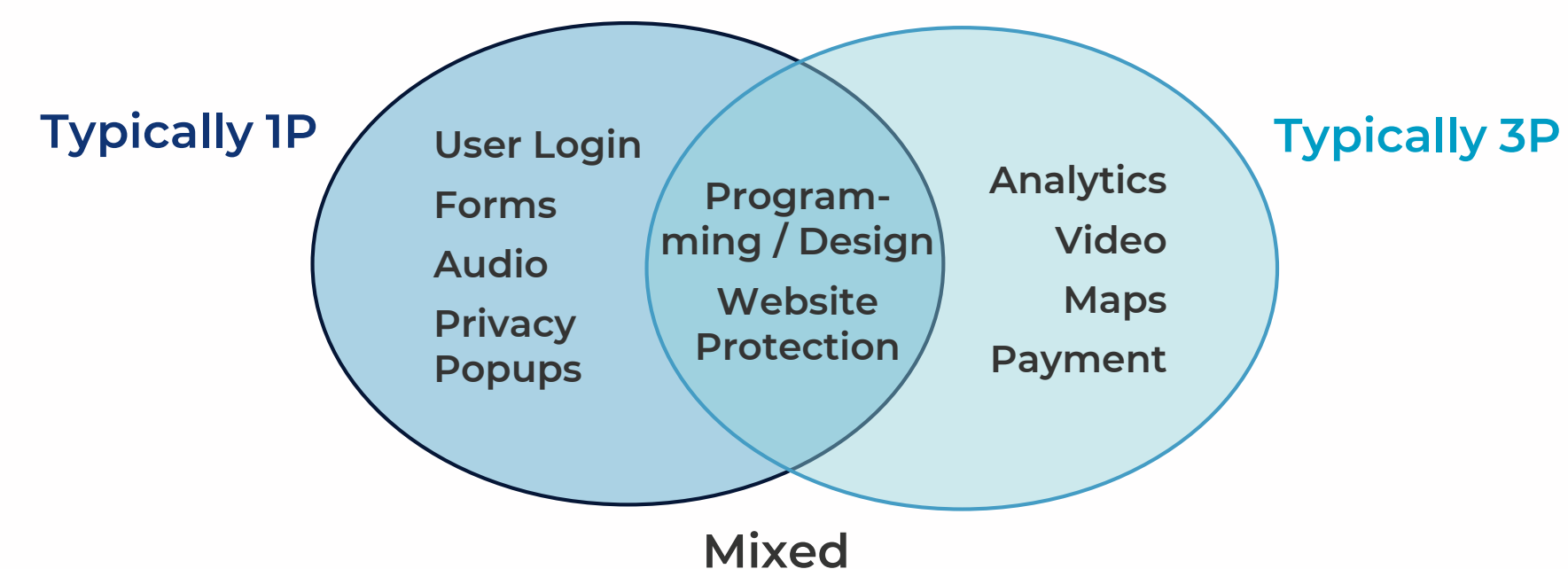


INVESTIGATING MOTIVATIONS

- **Online survey** in Nov-Dec 2020
- **395 participants** with technical responsibility for a website (web developers, admins, social media managers, ...)
- Asked about **10 types of website functionality** on a website they recently worked on, e.g.:



INTEGRATION TYPES USED BY PARTICIPANTS



CONSIDERED ALTERNATIVES

- Integration decision typically **between 1P integration or 3P solution**, rarely between different 3P offerings
- Top **reasons** for ...
- ... selecting the given solution: ease of integration, features, cost
- ... considering alternatives: ease of integration, resources
- ... not considering alternatives: familiarity with solution

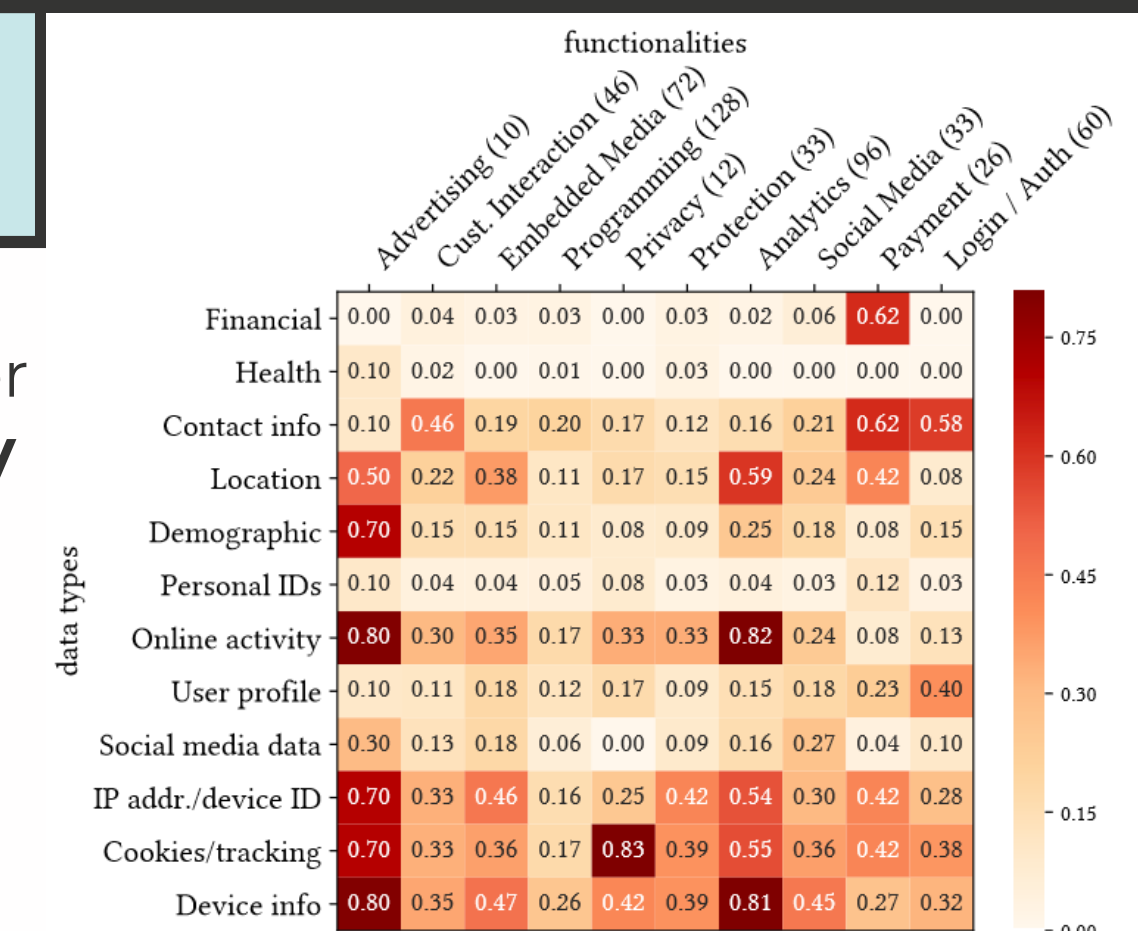
PRIVACY-FRIENDLY CONFIGURATION

Integration Solution	n	%
Analytics		
Google Analytics	158	45.0
Google Analytics w/ IP anonymization	24	6.8
Privacy-friendly (Matomo/Piwik)	15	4.3
Only privacy-friendly	11	3.1
Video		
YouTube	74	21.1
Vimeo	12	3.4
Privacy-friendly (YouTube-nocookie)	16	4.5
Only privacy-friendly	6	1.7

- **Analysis of participant-provided websites** shows some efforts at privacy-friendly configuration.
- **Top privacy protection measures:** data minimization efforts, security mechanisms, 3P settings
- **Top reasons not to make adjustments:** reportedly no data collection by the website, no requirement in the development process, trust in 3P

AWARENESS OF 3P DATA COLLECTION

- Awareness of a 3P collecting certain data points is higher if they are closely tied to the service's **main functionality** (e.g., financial data for payment, online activity for analytics)
- Limited awareness of collection of **IP addresses** or technical parameters



FULL PAPER

Privacy Rarely Considered: Exploring Considerations in the Adoption of Third-Party Services by Websites
 Christine Utz¹, Sabrina Amft¹, Martin Degeling², Thorsten Holz¹, Sascha Fahl¹, and Florian Schaub³
 In: Proceedings on Privacy Enhancing Technologies (PoPETs) 2023 (1), pp. 5-28
¹CISPA Helmholtz Center for Information Security, Saarbrücken, Germany
²Ruhr University Bochum, Bochum, Germany
³University of Michigan School of Information, Ann Arbor, MI, USA



CISPA
 HELMHOLTZ CENTER FOR
 INFORMATION SECURITY