

# Caring about Sharing: User Perceptions of Multiparty Data Sharing

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## Beyond Two-Party Advertising

Microsoft and Providence St. Joseph Health announce strategic alliance to accelerate the future of care delivery - [bloomberg.com](https://www.bloomberg.com) Stories

5-6 minutes  
July 8, 2019 | Microsoft News C  
Google and Mastercard Cut a Secret Ad Deal to Track Retail Sales

Double-double tracking: How Tim Hortons knows where you sleep, work and vacation

James McLeod June 15, 2020 In: Canada Privacy 1,169 11 min read

## Research Questions

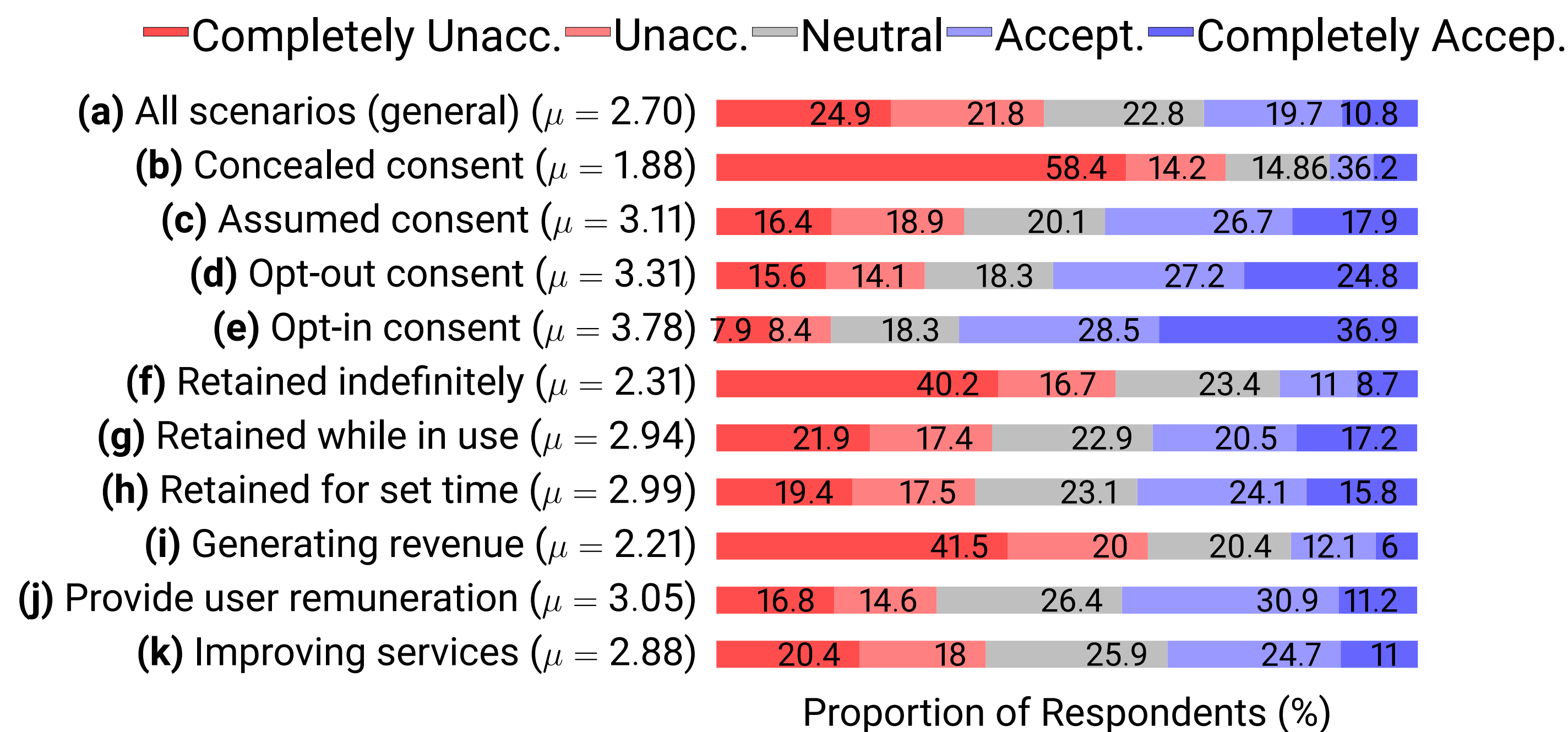
- RQ1:** How does the overall acceptability vary across different types of multiparty collaborations? How do the types of companies involved further impact it?
- RQ2:** How does acceptability vary in multiparty data sharing for different user controls (consent, purpose, retention)?

## Survey Overview

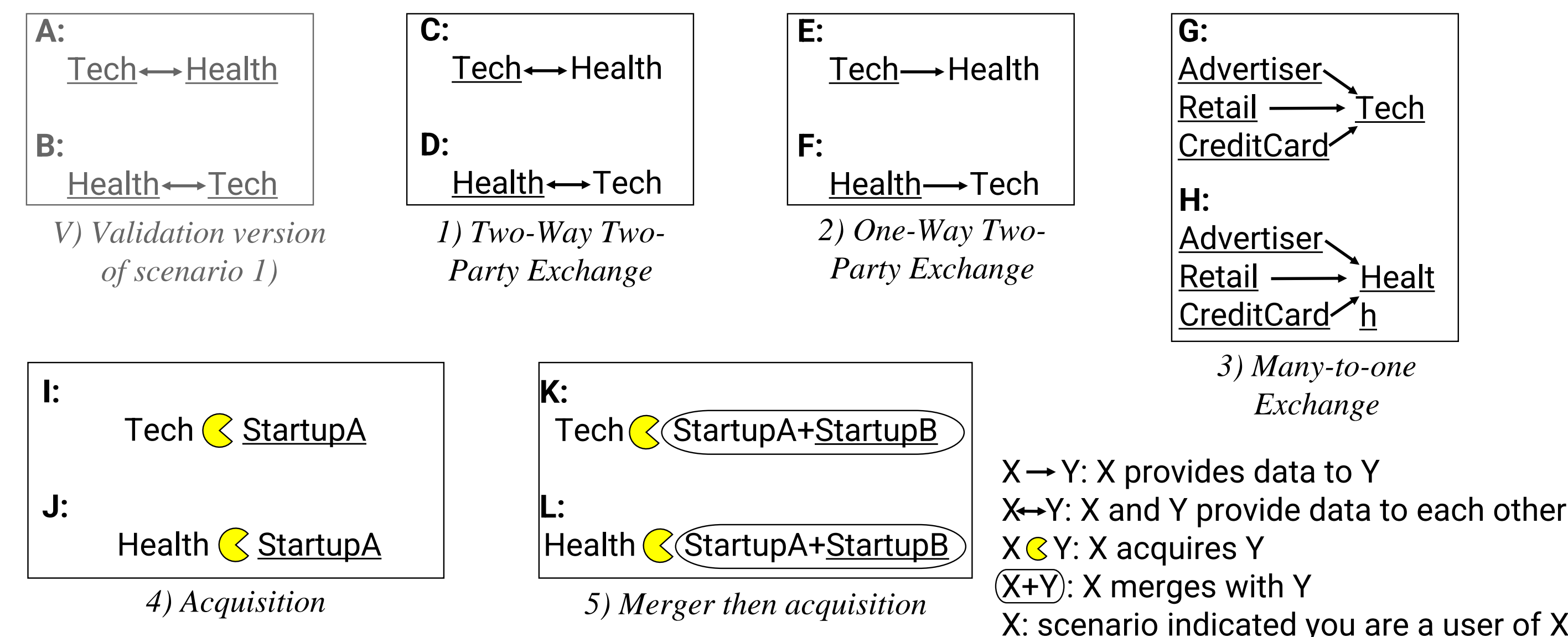
- 1025 responses collected via SurveyMonkey (final  $N = 916$ )
- Each participant receives: 1 of 12 scenarios and a series of user controls and privacy mechanisms questions

E.g., Scenario C, "TechForYou is a large internet company that offers a search engine, email accounts and smartphone platforms to users. GoodHealth runs a chain of hospitals across the country and stores health data for millions of patients during its day-to-day operations. TechForYou and GoodHealth will share the customer data they hold with one another. You are a customer of TechForYou".

## Acceptability Across Scenarios



## Data Sharing Scenarios



## Acceptability by Collaboration Type

	Type 1	Type 2	Type 3	Type 4	Type 5
(a) All scenarios	2.63	2.51	2.34	2.96	2.93
(b) Concealed consent	1.96	1.71	1.77	1.84	2.00
(c) Assumed consent	3.00	2.91	2.99	3.34	3.34
(d) Opt-out consent	3.20	3.15	3.19	3.53	3.49
(e) Opt-in consent	3.71	3.63	3.69	4.00	3.96
(f) Retained indefinitely	2.34	2.27	2.10	2.42	2.51
(g) Retained while in use	3.04	2.79	2.87	2.95	2.87
(h) Retained set time	3.12	2.72	2.81	3.17	3.07
(i) Generating revenue	2.14	2.04	2.27	2.23	2.36
(j) Provide user remuneration	3.02	2.85	3.11	3.21	3.13
(k) Improving services	2.81	2.70	2.78	2.91	3.11

Average Acceptability Score

## Consent Across the Board

P58310: I think companies after having **acquired data as an asset** has one intention and it's making money through **exploitation**"

P20322: "I'm not happy about it because **if you do agree you can't choose** who it will be shared with. **If you don't agree, you can't use the service**"

P53560: "I hate it. Cookies and data thieves. **Opting out** often renders the website **unaccessible**- so it's **coercion/entrapment**. Data breaches wouldn't really happen if data wasn't retained"

P41281: "Information collected, with the users permission, **should never be shared** with another company **or assumed to be the property** of said company if they merge with another company. This would be true regardless of whether the original company remains in the same business, or moves into a different service."

P09262: "...**specific consent** is received from the customer to **where/what** the information is shared to, as well as **why**"

P19193: "If they make people **aware** (in **BIG print**, not small, easy-to-miss print) then it's fine"

P66884: "It's inappropriate unless the user consents **explicitly** and should **never be a requirement for use**"

## Summary

- Overall acceptability is lower for non-reciprocal data sharing, and even lower with the inclusion of a health company.
- Consent is the most volatile user control preference between sharing types and emphasized in free-form responses

**Full paper:** B. Kacsmar, K. Tilbury, M. Mazmudar, F. Kerschbaum. Caring about Sharing: User Perceptions of Multiparty Data Sharing. The 31st USENIX Security Symposium, 2022.

Access:

