Beyond privacy: longitudinal ZMET analysis of thoughts and feelings

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Abstract

Purpose: Consumers increasingly reveal more than they intend online yet clamor for privacy protection, saddling businesses with costly strategic and legal challenges. This study aims to reveal what drives consumers' thoughts and feelings about privacy, and what has changed over a decade.

Design/methodology/approach: This study used the Zaltman Metaphor Elicitation Technique (ZMET) to conduct qualitative interviews in 2008 and 2019 and identified the deep metaphors revealing consumers' thoughts and feelings about their privacy concerns (PCs).

Findings: Metaphor analysis revealed organizational justice theory (OJT) as the overarching theoretical framework. A two-timepoint comparison showed that consumers who once wanted balance in their relationship with firms now want control over their own resource (information) in response to the unmet need for fairness reflected in increasing PCs. The three OJT dimensions – distributive, procedural and interactional justice emerge as a framework for the data and helps develop privacy-related subdimensions.

Research limitations/implications: This study extends OJT beyond employee–organization settings to consumer-firm relationships and develops privacy-specific OJT dimensions and subdimensions as a theoretical baseline for future comparative and empirical testing.

Practical implications: Managers should widen their narrow focus on PCs to encompass consumers' entire information-related experiences, ensuring equitable value exchange, just procedures and respectful interactions to mitigate resistance to information acquisition/use.

Social implications: By reframing privacy as fairness, the study highlights pathways to restore consumer confidence, reduce anxiety and inform policy debates around equitable data practices.

Originality/value: A longitudinal ZMET provides rare insight into evolving thoughts and feelings about privacy, offering a novel, justice-based framework for understanding and addressing PCs.

Keywords: Privacy, Information, Fairness, Organizational justice theory, Distributive justice, Procedural justice, Interactional justice, Qualitative, Zaltman metaphor elicitation technique (ZMET), Thoughts, Feelings, Exchange theory

Introduction

A white, 46-year-old male research participant shared a picture of 5 arrows pointing in different directions. He titled it "suspicious" and said "The five Ws and an H … who, what, when, where, why, how? (I am) questioning: What's being collected? Who's collecting it? Where does it get stored and where does it go? When does it get used? Why are they doing it? And how are they using it? It aptly illustrates the uncertainty and fear that have made consumer privacy one of the most contested areas in the digital economy over the past two decades. Here, we focus on informational privacy which we define as *a consumer's ability to control a company's acquisition/use of their personal information* (Goodwin, 1991; Westin, 1967).

Privacy concerns (PCs) have become a hot-button issue with the rise of big data, social media, artificial intelligence (AI) and ubiquitous connectivity. Scholars have noted the emergence of "surveillance capitalism" (Zuboff, 2019) and a mounting tension between consumer autonomy and corporate data practices. A striking 92% of Americans report data PCs (Dourer, 2024), spurring policymakers and advocacy groups to enact protections, such as the California Consumer Privacy Act (CCPA) and, in the European Union, the General Data Protection Regulation (GDPR) (AMA, 2025). However, the privacy paradox is that despite high consumer PCs, information disclosure remains high; for example, social media use has increased from 10% in 2008 to an estimated 86% in 2025 (Edison Research, 2025). Thus, personal information is simultaneously a source of consumer vulnerability, consumer benefit and corporate advantage, requiring an understanding, not only of what consumers *do,* but also how they *think and feel*.

To better understand this, we delve into the psychology of PCs which remains understudied due to marketers' focus on firm behavior rather than the consumer psyche (Martin and Murphy, 2017). The exchange-based consumer/firm relationship (Bagozzi, 1975) must also be reevaluated given that consumer information is increasingly valuable but what firms provide to consumers in return for their data is less clear. Prior research has examined a variety of factors (e.g. permission and trust) that increase willingness to disclose information (c.f. Alkire *et al.*, 2019; Featherman *et al.*, 2010) but not the fundamental emotional/cognitive drivers of consumer PCs nor an overarching theoretical explanation. Moreover, the changes in consumers' privacy-related thoughts and feelings over time warrant a closer look due to the technological advances (e.g. social media, big data and AI) that are amplifying consumers' information acquisition, use and disclosure. Bolton (2020) emphasized the need for further examination of the impact of emerging technologies within complex service ecosystems, particularly their impact on privacy, trust and transparency.

Addressing these gaps requires more than measuring attitudes or intended behaviors based on self-reported survey data and requires avoiding the negative bias associated with the word *privacy*. We identify a theoretical framework through these research questions:

RQ1. What do consumers think and feel about companies acquiring and using their personal information with or without their knowledge?
RQ2. Why do consumers experience PCs?
RQ3. How have these sentiments changed over time?

Qualitative research has long been recognized as remediating the "depth deficit" of large-scale quantitative surveys (Mulvey and Kavalam, 2010) and Hancock and Foster (2020) call for increased use of the Zaltman Metaphor Elicitation Technique (ZMET) in services marketing research. We used ZMET to capture the rich, contextualized dimensions of subconscious customer thought (Lakoff and Johnson, 1980) that surveys cannot. In ZMET, participants' self-selected projective stimuli (images) help to uncover deep metaphors – universal structures that shape their sense of individual experience (Zaltman, 2003).

We find that consumers' thoughts and feelings about privacy have shifted from trying to achieve balance in the firm-consumer relationship, to regaining *control* over their resource (information). This alluded to the concept of fairness in an exchange relationship, leading us to emphasize the need for an explicit discussion of what constitutes value for consumers and the applicability of organizational justice theory (OJT), which encompasses distributive, procedural and interactional justice (Colquitt *et al.*, 2001, 2023), as the most fitting explanatory framework for privacy. Rather than imposed *a priori*, OJT surfaced organically from the metaphors identified in respondents' narratives. ZMET interviews were conducted in 2008 and 2019, allowing us to examine how consumer attitudes toward privacy evolved during a period of rapid technological change. Key differences included exacerbation of the conflict between companies and their consumers; in 2008, consumers sought balance/fairness, while in 2019, they sought control over their personal information. The power-play over the key resource (information) heightened emotions and increased negative purchase and information-related outcomes.

This research makes three key contributions. First, it identifies the central drivers of consumers' PCs as the need for control and balance in the information exchange, thereby reframing PCs as holistic judgments about fairness, which are aptly explained by OJT. Exchange relationships must include not just a fair price paid by the consumer for goods/services, but also fair value explicitly provided by firms to the consumer for their information. Second, methodologically, the use of ZMET is a novel approach for revealing complex mental models rarely captured by traditional research methods. Third, by comparing consumer sentiments at two timepoints spanning a decade of technological advancement, this study provides insight into the evolution of privacy perceptions. Consumer attitudes are dynamic and driven by the changing environment and we found that although the negative thoughts and feelings regarding privacy remained deeply entrenched and their fundamental drivers largely remained the same, their intensity was amplified.

Literature review

Bagozzi's Exchange Theory (1975) posits a value exchange between organizations and consumers, typically understood as goods/services provided for a fair price (Casteran, 2024), but little has been discussed about consumers receiving fair value from companies acquiring/using their information. The pricing fairness complications arising in services due to such characteristics as intangibility, also apply to consumer data. In today's economy, consumer information is extremely valuable for companies (Anant *et al.*, 2020), but in a trust-

based exchange, consumers must perceive receiving value for their contribution (information) and be free to accept or reject the firm's offer (Bagozzi, 1975).

Multiple theoretical frameworks have been suggested for explaining aspects of consumer privacy across various contexts. Chellappa and Sin (2005) use social exchange theory to predict customers' usage of online personalization from the tradeoff between a customers' value of personalization and their concern for privacy. Malhotra *et al.* (2004) use social contract theory to create and test a scale to measure internet users' information PCs in e-commerce. Acquisti *et al.* (2013) use behavioral decision theory in a field experiment to show that consumers' valuation of privacy is sensitive to contextual and non-normative factors. These studies focus primarily on consumers' willingness to disclose information, an essential outcome from the firm's perspective, but they do not capture other potential outcomes. Culnan and Bies' (2003) conceptual paper proposed using justice theory in examining how perceived fairness of information practices affects consumer privacy concerns, and while some empirical works reference parts of social justice theory in select contexts, none have taken an organizational justice perspective. The distinction is important, as we will discuss later. Also, to the best of our knowledge, no one has conducted comprehensive, context-free, empirical tests of the applicability of all three justice dimensions to privacy (see Martin and Murphy, 2017, for a summary of research streams in privacy.)

Other theories have emerged to explain the implications of privacy policies in specific business contexts. Zeng *et al.* (2020) use motivation theory and find that PCs mediate the effects of privacy assurance and personalization on purchase responses. Song *et al.* (2021) use a technology-acceptance model to explain the success of personalization in e-commerce based on usefulness, the accuracy of recommendations and consumer concerns and preferences. Quach *et al.* (2022) use structuration theory with service-dominant logic to explore the role of digital technologies in firms' strategies and consumers' privacy risk. However, no overarching theoretical framework holistically explains consumers PCs across a variety of contexts while also providing an organizing framework for the many triggers of privacy that prior research has identified. Adopting a different approach, we delve into the psychology of privacy, revealing consumers' subconscious thoughts and feelings to identify an underlying theoretical explanation.

In prior quantitative research, privacy concerns have been measured as a proxy variable for consumers' thoughts and feelings about their privacy (Martin and Murphy, 2017). Rather than exploring why consumers experience PCs, they focus on what triggers it or its effect on outcomes, primarily willingness to disclose. Some identified triggers are demographics, like higher age; situational factors, like banking information; newer or more intrusive technology (Milne, 2000); lack of trust (Milne and Boza, 1999); personality traits, like lack of openness (Bansal *et al.*, 2016); and lower risk orientation (Taylor *et al.*, 2015).

Comprehensive meta-analyses of the empirical literature on privacy concerns have been conducted. Okazaki *et al.* (2020) find that the retail channel and data sensitivity moderate the negative effect of customer PCs on retail outcomes. Others find that PCs reduce the usage of online services and information sharing in general, but this does not hold for social networking sites (Baruh *et al.*, 2017); and that PCs influence disclosure intention but not actual disclosure (Yu *et al.*, 2020). Lee and Pan (2023) find that PCs aggravate technostress, leading to resistant behaviors and negative word-of-mouth in the context of the adoption of mobile payment technology based on facial recognition. Hsieh and Li (2021) explore PCs as a mediator between service-privacy fit and mobile application adoption, finding that benefit messages and privacy

assurances reduce PCs. Although quantitative studies provide valuable insights into triggers of PCs being barriers to adoption, they do not explain why consumers care about their privacy.

Privacy research has been methodologically hampered by an overreliance on context-based surveys focused on a specific industry or certain types of information or benefits (Smith *et al.*, 2011) and on self-reported scales (c.f. Malhotra *et al.*, 2004) that use words such as *privacy*, *concern* and *unauthorized use*, that may prompt overreporting of PCs (Bélanger and Crossler, 2011). Recent qualitative work addressing these issues includes Alkire *et al.* (2019), who find that Facebook users initiate privacy protection behaviors based on experiences, uncertainty and literacy rather than threats. Paluch and Tuzovic (2019) find that perceived value, PCs and perceived fairness influence the assessment of, and intention to, adopt wearables. Both studies are limited to specific contexts and a single time-period.

In summary, based on methodological constraints, privacy research lacks an overarching theory to explain consumers' PCs that is independent of context, time-period and methodological constraints. Our qualitative methodology, ZMET, overcomes these limitations by being applicable across information acquisition/use contexts and being conducted over an 11-year period of rapid technological change.

Method

The Zaltman metaphor elicitation technique (ZMET)

ZMET is a projective, image-based, qualitative method designed to surface the often-unconscious mental models individuals use to understand the world. It posits that 85% of human thought manifests as subconscious images (Zaltman, 1996; Zaltman and Coulter, 1995). As such, it offers more psychologically grounded access to the mental models underlying consumer beliefs and behaviors than the surface-level insights expressed in typical interviews (Berry *et al.*, 2006; Ji and King, 2018). Hancock and Foster (2020) present a comparison of qualitative methods including ZMET (see Web Appendix 1 for an adapted table).

Snowballing yielded a purposive sample (2008, $n = 20$ from a large and a mid-sized city in Southern US; 2019, $n = 10$ from a large city in Southeast U.S). Participants came from various backgrounds to maximize the scope and range of information obtained, rather than representation by maximum variation (Lincoln and Guba, 1985). Redundancy in identifying constructs was achieved by the eleventh respondent in 2008 and the tenth respondent in 2019. The additional respondents in 2008 were interviewed for variation (see Table 1 for demographics).

Table 1. Respondent sample demographics

Respondent summary demographics		**2008**	**2019**
Total sample size		***n* = 20**	***n* = 10**
		%	**%**
Gender	Male	45	40
	Female	55	60
Race / ethnicity	White	65	50
	Black	15	30
	Hispanic / latino	10	10
	Asian	10	10
Age	18–24	30	30
	25–34	25	10
	35–44	10	40
	45–54	25	0
	55+	10	20
Education	High school/ some college	60	50
	Bachelors	25	40
	Masters +	15	10

At both time points, respondents were compensated for participation. They received the following brief a week in advance, so they arrived at the in-person interview at an advanced stage of thinking:

> Companies often have information about you. Sometimes you are aware of this and sometimes not. I am interested in your thoughts and feelings about companies having information about you. When you think or hear about this, what thoughts and feelings come to mind? About a week before our meeting, gather 4-6 pictures that represent these thoughts and feelings and bring them to the interview. For example, in another project concerning making investments, a person brought in a picture of a military tank to illustrate the importance of safety.

Note the brevity of the prompt, the lack of specific context and the intentional exclusion of words that could bias participants, such as *privacy* or *concern.*ZMET uses emergent design that follows up on respondents' own thoughts and feelings instead of conventional discussion guides that project the interviewer into the narrative. Each in-person interview lasted about 90 min, was audio-taped and transcribed.

ZMET data analysis entails identifying metaphors used in everyday language, to form themes aimed at finding "deep metaphors" that guide thinking and behavior (Zaltman, 2003). Zaltman *et al.* (2008) identified seven key deep metaphors that account for 70% of all deep metaphors identified in consumer research: balance, transformation, journey, container, connection, resource and control. Each deep metaphor represents a fundamental structure of human thought, shared across cultures and contexts. Table 2 describes the deep metaphors, with examples of their role in the privacy context. These deep metaphors are not mutually exclusive; multiple metaphors may be activated simultaneously and interact to shape the consumer's mental model.

Table 2. Deep metaphors, explanations and examples

Metaphor	Example in privacy context
***Balance*- Reflects the human desire for equilibrium, fairness and stability. It is often used in contexts involving trade-offs, justice and the resolution of tensions**	Consumers may seek a fair exchange between the data they provide and the benefits they receive, expressing concerns about asymmetrical power or perceived inequity in firm-consumer relationships
***Transformation*- Involves a change in state, identity or form. It signifies growth, evolution or loss, and is often linked with notions of improvement, betrayal or deception**	Consumers may be concerned that their data will be altered, repurposed or used in ways they did not authorize, resulting in a transformation of intent or meaning. Concerns are often accompanied by heightened emotions, which are also an example of transformation
***Journey*- Conveys life as a path or process, involving stages, movement, goals and obstacles**	Consumers may perceive their interactions with digital platforms or firms as part of a broader journey of building trust, managing risk or achieving self-actualization. Privacy concerns may arise when the journey feels disrupted or manipulated
***Container*- Organizes thinking around inclusion and exclusion, inside versus outside and boundaries**	Privacy is often conceptualized through this metaphor – as a boundary around the self or personal information. When firms intrude or "leak" data, consumers feel as if their container has been breached, evoking vulnerability or loss of control
***Connection*- Highlights relationships, attachments and belonging**	May be reflected in how consumers feel linked – or disconnected – from brands, communities, or technologies. While personalization may foster a sense of connection, over-surveillance can reverse this by making consumers feel exposed or over-monitored, thereby undermining the firm-customer relationship
***Resource*- Represents utility, value or scarcity**	Consumers may view their personal data as a resource to be protected, shared selectively, or even monetized. Relevant when privacy is framed in economic terms – where information is "traded" for services or benefits
***Control*- Represents agency, dominance and influence over outcomes**	Consumers want control over how their information is collected, stored and used. A perceived loss of control can evoke feelings of helplessness, anxiety or resistance

Author 1 conducted the ZMET interviews in 2008 and 2019, a period when data acquisition and consumer awareness of privacy changed drastically (see Table 3 for comparison). Respondents created a title for each picture they brought and discussed how each picture related to companies having/using information about them, why this was important and the feelings it evoked. Their ideas, emotions, attitudes, goals and values emerged during storytelling, which educed a networking/laddering of concepts, their antecedents and consequences. They imagined the picture with a wider frame, used colors and other senses (touch and sounds) to describe their thoughts/feelings and applied the senses of touch and hearing (Christensen and Olson, 2002).

Table 3. Privacy changes in society

YEAR	2008	2019
	(Emerging awareness of privacy implications)	**(Wide awareness of privacy implications)**
Name of era	Beginning of "Web 2.0." Shift to user generated content on the internet (Madden *et al.*, 2007)	Late stages of "Web 2.0." User generated content continues to exponentially increase (see Data Sphere Size)
Social media	Emergence of social media (29%) (Madden *et al.*, 2011)	Well established social media usage (69%) (Perrin and Anderson, 2019)
Consumer awareness of data privacy	First experiences and awareness of "Digital Footprint." Majority of internet users not yet concerned about their information online (Madden *et al.*, 2007)	Consumers are widely aware that companies have and use their personal information. (Auxier *et al.*, 2019)
Firm current events	Increased prevalence of online shopping, but concerns about sending personal and credit card information over the internet (Horrigan, 2008)	Large Data breaches become common (Auxier *et al.*, 2019). Discussions about Responsibility of Big Data (Harvard Business Review Staff, 2014)
Data sphere size	Less than 2 zettabytes (Taylor, 2025)	41 zettabytes- (Taylor, 2025)

In 2008, social media was just emerging, and consumers were just becoming aware of their "digital footprint." By 2019, consumers were widely concerned about privacy. Data had become embedded in most company decisions, interactions and processes and companies were taking steps to respond to increased privacy requirements and consumer expectations (Anant *et al.*, 2020). This was reinforced by the 2020 COVID-19 pandemic which forced customers and businesses to rapidly adopt online modalities. Although both data acquisition/use and consumers' PCs have continued to increase since 2019, we argue that it is unlikely that the reasons why consumers care about their privacy (the focus of this qualitative investigation) have changed since 2019. This study is a baseline study which sets the stage for consumer perceptions of privacy in the initial phase of rapid digital technology adoption between 2008 and 2019.

The 30 interviews (a total of 288,434 words) were interpreted manually through a hermeneutic process, which considers not only the literal words or gestures, but their context, the speaker's intent and the broader implications (Zimmermann, 2015). Analysis moved continuously from the individual transcript to the entire textual data set and between the personal and socio-cultural contexts (Fournier, 1998).

Data analysis was conducted in two stages. In both stages, as new ideas emerged, similar concepts were grouped and regrouped informing the creation of the coding chart iteratively. In stage 1 the narratives were coded to identify deep metaphors (Christensen and Olson, 2002) following Table 2 as the coding chart that emanated from the data. The metaphor analysis including the ranks/importance of each pointed to OJT as an underlying theoretical framework. In the second stage, the data was re-coded to identify constructs supporting the theory as a test of its fit. Following the iterative process described above, a coding chart was developed (see Table 4) for OJT, valence and outcomes. The data coded to each OJT dimension lent itself to further grouping and re-grouping. Appropriate constructs were identified for each of the subgroups which we subsequently labeled as subdimensions.

Table 4. Coding Chart – organizational justice theory dimensions and subdimensions

Coding guidelines	Expressions of negative valence	Expressions of positive valence
Distributive justice		
Financial	Financial loss; identity theft; financial risk; insufficient compensation	Saving money; receiving cash/coupons/discounts; financial benefit; adequately compensated
Functional	Information is incorrect; irrelevant for satisfying my need or resolving my problem; misused; used incorrectly; was misused; and sold to third party etc.	Information is used well; used as per my desire; used for satisfying my needs or resolving my problem
Social	Negatively viewed by others; negative impact on others	Positively viewed by others; positive impact on others
Psychological	Feel bad about self; shame; poor self-esteem	Feel good about self; price; high self-esteem
Temporal	Waste of time; inconvenient	saves time; avoids inconvenience; ease etc.
Procedural justice		
Information security	Information not kept securely puts you at risk	Information kept securely and not risky to you
Policy or systems	Secret monitoring; taking or using my information without consent or awareness; not being honest; information is irrelevant to my use of their product; data not properly recorded	Ask permission before taking or using any information; be honest; the information is relevant to your use of their product; record the data properly
Reputation	Has a bad reputation for the company and its products/brands	Has a good reputation for the company and its products/brands
Relationship	Short term or poor relationship	Long term or good relationship
Trust or motive	Firm is untrustworthy irrelevant unhelpful; no trust or low trust in company or product; firms are out to maximize profits; not caring about the consumer	Firm expresses trust, care; has helpful attitude; high trust in firm/product brand/company
Interactional justice		
Contact	Did not use preferred mode of contact, e.g. email phone store format etc.; spamming; over contacting; treated badly by sales/service employee; mode of contact not preferred, e.g. online vs in person	Used a preferred mode of contact, e.g. email phone store format; not spamming; treated well by sales/service employee; preferred mode contact, e.g. online vs in person
Informational	Either no/opaque privacy notices; not certified as being trustworthy; does not communicate relevant information to me; not saying why they want it and what they will do with it	Privacy notices available and easy to understand; certification to show company is trustworthy, e.g. privacy seals or trust seals; communicates relevant information to me; tells me why they want it and what they will do with it
Outcomes		
Emotional	Negative health consequences, negative emotions	Positive health consequences, positive emotions
Purchase	Will not buy from that company	Will buy from that company
Informational	Offensive – Attacking or retaliating and complaining Defensive – Protecting my information from companies	Willingly share/provide information to the company

All data were coded by author 1 and a trained graduate assistant using the same coding protocol, yielding intercoder reliabilities of 81% in 2008 and 87% in 2019. Discrepancies were resolved

through dialog, and no data was discarded. Data and codes were transferred to NVivo15 for tabulation, frequency comparison and identification of *verbatim* quotes illustrating the deep metaphors and theoretical framework.

Results

Overall, in 2008, 71% of the quotes coded for valence were negative, a high baseline given the nascency of privacy awareness, and by 2019, this increased to 80%. The percent of negative valence also increased for the deep metaphors, dimensions of the theoretical framework and outcomes, as detailed below. The increase in negative valence mirrors the increase in PCs during this period. In stage 1, the ranking of the metaphors led to identification of OJT as an apt framework for explaining PCs. In stage 2, transcripts were re-analyzed to assess the applicability/fit of the OJT framework to the data. Overall, between 2008 and 2019, the percent of quotes coded for OJT demonstrate that the need for equitable (a) processes (PJ) increased from 47% to 51%; (b) interactions (IJ) increased from 13% to 16%; and (c) outcomes (DJ) dropped from 41% to 33%. This suggests that in return for their information, consumers wanted more fairness in processes and interactions, not just in outcomes.

Table 5 summarizes results for the valences, and the two stages separately. Below, samples of *verbatim* responses are italicized and in quotation marks, and, when lengthy, identified by alias-gender-race-age-interview year. The percentage of quotes of each metaphor is provided in the text as (Year: % quotes for that factor). For OJT dimensions and outcomes, valence information is included as [Year: % quotes for that factor (% negative valence).

Table 5. Findings and comparison

Study year	**2008 (%)**	**2019 (%)**
Valence analysis % of valence quotes that are negative		
Overall quotes	71	80
Deep metaphors	74	80
Distributive justice	69	76
Procedural justice	74	83
Interactional justice	77	87
Outcomes	63	79
Stage 1: deep metaphors of total metaphor quotes		
Balance	21	9
Resource	19	32
Control	15	31
Container	19	6
Journey	11	5
Transformation	6	11
Connection	9	6
Metaphor total	*100*	*100*
Stage 2: organizational justice theory dimensions & subdimensions of total justice quotes		
Distributive	41	33
Functional	43	44
Financial	23	22
Social	7	14
Psychological	18	13
Temporal	9	7
Subdimension total	*100*	*100*
Procedural	47	51
Policies/systems	25	34
Security	21	26

Trust /motive	37	21
Relationship	12	13
Reputation	5	6
Subdimension total	*100*	*100*
Interactional	13	16
Contact	71	51
Informational	29	49
Subdimension total	*100*	*100*
Outcomes of total outcome quotes		
Information actions	74	38
Emotional reaction	4	37
Purchase action	22	25
Subdimension total	*100*	*100*

Stage 1: Metaphor analysis findings

In Stage 1, transcripts were analyzed to identify deep metaphors expressing the cognitive and emotional drivers of PCs and indicating a theoretical explanation. In 2008, balance was the most evoked metaphor, followed closely by container and resource. By 2019, resource rose significantly to become the most evoked metaphor, followed closely by control. Overall, metaphors with negative valence increased from 74% in 2008 to 80% in 2019. From this analysis, OJT emerged as a theoretical framework.

Resource (2008:19%; 2019:32%) Respondents considered their information a valuable resource, making it the predominant metaphor identified, rising from second to first place in 2019 with a big margin. One respondent was "[…] angry that companies are bullying us" in acquiring/using their information. Another questioned their motive:

> Does it just profit you because that was the transaction we made or is it profiting you because you're selling my information? If you're gonna sell my information, that was my product. (Mary-F-W-51-2008).

Although infrequently, respondents also acknowledged:

> […] the double-edged sword […] I do trust them with my data because I feel like that's their responsibility for their consumer, but on my part, it is my responsibility to do my due diligence to research them. (Linda-F-W-23-2019).

Balance (2008:21%; 2019:9%) By 2019, respondents prioritized balance/fairness far less than the need for control. Lack of balance was viewed negatively:

> […] trying to find the middle ground of enough information that consumers for the most part feel okay with it out there, and also the companies have enough information to properly analyze who their markets are, so they are able to better target those consumers that they want to market towards. (Cathy-F-W-36-2019).

Control (2008:15%; 2019:31%) The doubling of support for control over their information from 2008 to 2019 suggests consumers no longer aspired for balance/fairness. Respondents complained about companies "having too much power," "lurking one step behind you" to gather information and "using it to shove products down my throat" because of pure "self-interest" and "narcissism" leaving you:

> […] kind of stuck. You HAVE to check the box to move forward […] don't have a choice and don't know what they're doing, where your information is going […] like grabbing a raw egg […] a big, slimy mess. (Cathy-F-W-36-2019).

The need for control (gaining dominance/power) has long been considered in conjunction with balance (seeking fairness/justice) (Lakoff and Johnson, 1980). Accordingly, in privacy research as well, control has been recognized as the basis of consumers' PCs, but we find an interplay with balance, described as:

> […] a tug of war between me and the company holding my data, with the company winning because they're this, like, huge, huge thing. I'm this tiny little person trying to take my data back, but they're just, like, ha-ha-ha, yeah, sure, we'll give it back, but they have it all stored and backed up somewhere […] even if they pretend to give it back, it doesn't really matter because they still have it. (Aashi-F-A-22-2019).

Container (2008:19%; 2019:6%) Container metaphors decreased significantly by 2019, likely due to greater recognition or even resignation that their data is "leaky," or "you're in this bubble that feels like it's closing in on you." One respondent described it as:

> Almost as if you saw someone watching you from outside your window, like a peeping Tom sort of feeling […] like having to lock the doors on your phone […] even when I think I've shut everything off, something gets through. (Chris-M-W-22-2019).

Transformation (2008:6%; 2019:11%) By 2019, transformation-associated metaphors almost doubled, reflected in words like "angry," "vulnerable," "exposed," and "frustrated." One respondent said, "(It's) the brave new world. It just seems like here you lose your soul, lose your humanity" (Cain-M-W-23–2008). Another equated it with "science fiction, where you can't even go into your fridge without watching an ad first." Yet another felt "Being rolled into a statistic endangers my health and my freedom."

Connection (2008:9%; 2019:6%) Anxiety about connection decreased by 2019, as reflected in, "I don't want them to know me. I don't want them to keep tabs on me and figure out what I want." It also refers to connections with others:

> You accept the paranoia that comes from knowing someone is always watching and in a widely interconnected world, there's no standalone. Unless you're in a remote village somewhere, you're not isolated no matter how hard you try. Everything is connected in day-to-day life. [Shawn-M-W-42-2019].

Journey (2008:11%; 2019:5%) Halving by 2019, respondents by then knew that technology has made it "easier to target people, to share information—as opposed to 20–30 years ago, before the Internet," which, in turn, affects policy; some were "[…] thankful for the restrictions that are currently in place and maybe may come into place in the future to hold these companies in check," in the way that Europe's "GDPR is holding US companies accountable."

In search of a theory

In 2008, balance ranked first, and resource and container ranked a close second, but by 2019, resource rose to first place, with control doubling to a close second place. Balance fell to fourth place, superseded slightly by transformation. Balance would exist if companies and their consumers share control over information acquisition/use equally, but the findings suggest that by 2019, consumers recognized the value of their resource (information) and demanded more control over it. We argue that balance and control metaphors must be viewed jointly. In 2008, they totaled 36% of the quotes, but increased to 40% by 2019, indicating consumers' loss of faith in fair treatment (balance) resulting in increased demand for control. Many respondents evoked the lack of control alongside the need for balance/fairness:

> […] anytime you use data to manipulate people for profit, it's not ethical. Your marketing and business should be about the services you provide, and how they supersede or differentiate between other companies. (Kelly-F-B-40-2019).

The combined emphasis on balance and control, and the simultaneous increase of resource must be viewed in the context of quotes explicitly stating moral or ethical expectations that companies "have values" and "honor their word." These align with principles of "just" use of information (Caudill and Murphy, 2000) that have been associated with greater disclosure (Culnan and Armstrong, 1999). However, to the best of our knowledge, thus far, there is no comprehensive, context-free examination of fairness in the privacy context.

By 2019, the perceived need for transformation was higher than balance, suggesting heightened negative emotions. The higher ranking of control over balance, and the large decrease in container references suggests that consumers no longer believe their information can be contained, and the associated rise in negative feelings explains the near doubling of transformation quotes and a giving up on fairness (balance) in favor of gaining control over information acquisition/use.

Prior privacy research has not yet considered all three dimensions of justice together. To the best of our knowledge, only one service recovery study (Choi *et al.*, 2016) found their joint importance in recovering from a data breach. Further, when justice has been considered, it has been in the form of social justice theory (SJT) which positions privacy as a broad, value-based societal problem related to systemic disparities (Pang *et al.*, 2024) rather than an organizational problem. Like SJT, OJT is rooted in fairness based on the same three dimensions: the distribution of outcomes (distributive justice [DJ]), the processes used to determine these outcomes (procedural justice [PJ]), and the quality of interpersonal treatment and information shared (interactional justice [IJ]). They have similar results for example, OJT suggests that when individuals perceive a lack of fairness in any of these domains, especially related to control and balance, they may respond with distrust or disengagement (Colquitt *et al.*, 2001, 2013). However, OJT is behavior-driven and focuses not on a general societal problem, but on what companies can do to address their consumers' PCs. OJT has been used to build effective relationships with employees (Adamovic, 2023), but its application to customers has been limited (c.f. Grant *et al.*, 2023).

As Greenberg (1990) notes, fairness perceptions are central to individuals' sense of predictability and order in organizational life—underscoring why balance and in this case, control, were dominant themes. Colquitt *et al.'s* (2001) seminal work validated a multidimensional structure of justice perceptions, and their 2013 meta-analysis synthesized over a decade of empirical research to show that justice perceptions are robust predictors of trust, commitment and organizational citizenship behavior. Together, these works provide a strong theoretical foundation for interpreting participants' concerns about fairness, balance and agency in information environments. Stage 2 applies this theoretical foundation to the data.

Stage 2: Assessing fit of theoretical framework

We coded the transcripts again using OJT's three dimensions to assess its fit with the data. For each dimension, we grouped similar quotes and drew on prior literature to name each subdimension that emerged to customize OJT to the privacy context.

In 2019, DJ quotes decreased from 41% in 2008–33%, with negative sentiments increasing from 69% to 76%. PJ quotes increased from 47% to 51%, with negative sentiments increasing from 74% to 83%. IJ quotes increased from 13% to 16%, with negative sentiments from 77% to 87%. The ranking of the subdimensions for IJ remained the same but changed for DJ and PJ, as detailed below.

Distributive Justice [2008:41% (69% negative); 2019:33% (76% negative)] DJ refers to perceived fairness in distributing rights and resources, or risk and reward; in a privacy context, a fair trade of data for meaningful benefits. However, consumers may not always associate what they are receiving with some information they may have given or had been taken earlier and wonder, "Are they helping the consumer, or are they helping the companies? I don't know."

We parsed this economic trade-off (Smith *et al.*, 2011) further as functional, financial, psychological, social, physical and temporal based on Jacoby and Kaplan's (1972) risk framework. These subdimensions fit the data well, and we use them as subdimensions of DJ for not just risks but also rewards.

Functional (2008:43%; 2019:44%) This subdimension, which, to the best of our knowledge, has not been examined, refers to consumers' belief that their data is used to meet their needs, such as improved services. Among functional risks, respondents feared that the information collected was not used or not used for their benefit; some didn't know what reward they got; and some didn't want their information used at all:

> I don't want them to know me […] or keep tabs on me and figure out what I want […] after getting all this information about me, they come at me with all these products […] they're everywhere. I don't like them telling me what I want. (Aashi-F-A-22-2019).

Financial (2008:23%; 2019:22%) Monetary rewards in exchange for personal data should seem fair. Consumers expressed that "my information is my product" and they are upset when:

> […] my information is being used, not for my benefit, but for somebody else's benefit, and all I got is two packs of cigarettes out of it. Of course, I feel used (Nabeel-M-A-26-2008).

While some appreciated "coupons/freebies," others felt, "I really don't want anything back, but I don't want them getting my information either." These varied responses may account for mixed results in prior research on the effectiveness of rewards for providing information (e.g. Milne and Gordon, 1993; Ward *et al.*, 2005).

Social (2008:7%; 2019:14%) Social rewards referred to social standing based on others' perceptions, doubled: having something to "brag about" or feeling like a "helpful citizen." Risks included "losing face," "people thinking she's a simpleton […] so gullible you could sell her a paper bag":

> There are so many gullible consumers. Organizations are coming to get the consumer because they can and because we live in a capitalist society where money is God. People and organizations with money have power, and people that don't have money don't have power. Laura (F-W-32-2008).

Psychological (2008:18%; 2019:13%) Psychological risks are related to self-perception or personal values included feeling "like a failure" because "I'm a mouse, and I took the bait" and got "scammed" and "suckered." Rewards could take the form of benefits that increase

information disclosure like personalization (Chellappa and Sin, 2005; Tezinde *et al.*, 2002) or participation in market research that may increase self-esteem. For example:

> I know that my opinion is important to them. It's a good feeling […] makes me feel important, part of something making a difference. (Andrew-M-W-21-2008).

Temporal (2008:9%; 2019:7%) Rewards that save the consumer time, like providing easy one-step check-out or login (Nam *et al.*, 2006) or other efficiencies, reduce PCs. Losing time in settling disputes or scrolling on social media poses risks:

> They might know that I lean politically one way or the other. So, I might start out with a video of pasta, but it might take me to[…] political speech […] and keep going and going, and you literally have to stop it […] it won't stop. (Gonzalo-M-H-23-2019).

Procedural Justice [2008:47% (74% negative); 2019:51% (83% negative)] Procedural justice pertains to consumers' expectations that organizations' information-related activities and decisions are based on fair policies and procedures. Prior research has found greater disclosure when fair information practices like giving consumers voice and control, build trust (Culnan and Armstrong, 1999; Henn, 2014). PJ subdimensions were developed from grouping similar ideas and drawing on prior research to name them. The top three in 2008 were 1) trust/motives, 2) policies/systems, and 3) security; in 2019, they were 1) policies/systems, 2) security, and 3) trust/motives, suggesting that consumers might be losing hope of building trust and instead demanding better data policies/processes and security.

Policies/Systems (2008:25%; 2019:34%) Company procedures/practices, such as using anonymized data, is appreciated by many but can spark anger at becoming "faceless like sardines in a can," or "[…] flowing into a sea where everybody is the same, everyone's a number, everybody's on the same plane." The increase of mentions of this subdimension underscores the importance of fair policies.

Security (2008:21%; 2019:26%) Data hacking and breaches pose serious threats to loyalty, despite the projected $220bn cybersecurity spending in 2025 (Balasubramanian, 2025). The acknowledgment that "we're very much in a bits-and-bytes-data-flying-everywhere world. We can see it being weaponized […] you protect yourself as best you can," does not absolve companies from expectations to secure data: "Organizations should honor their word. A man's word is the best thing he has," so that data is not "slippery like Jello."

Trust/Motives (2008:37%; 2019:21%) Prior research has established that trust reduces privacy concerns (c.f., Milne and Boza, 1999; Tezinde *et al.*, 2002). Uncertainty about data acquisition/use, where "vulnerability becomes the cost of doing business," was seen as "stepping in mud and not knowing if there's a sharp rock underneath." Questioning motives may explain the loss of trust between 2008 and 2019.

Relationships (2008:12%; 2019:13%) The negative outcomes of service failures, such as data breaches, are more pronounced for customers who have deep relationships with the provider and feel betrayed (Wanjugu *et al.*, 2022). Some respondents feel "[…] on their guard—like, is this guy trying to get me or not?" Others feel the relationship is "[…] pretty equitable, because it helps them make better business […] and have the product that I want."

Reputation (2008:5%; 2019:6%) Respondents perceived organizations as "sneaky" because their data collection techniques change constantly, like an "amoeba," and consumers "remain

in the dark." Given the general distrust, companies with a poor reputation will struggle even when they try to be transparent about data use/acquisition and the actual benefits consumers accrue.

Interactional Justice. [2008:13% (77% negative); 2019:16% (87% negative)] IJ refers to the touchpoints between companies and consumers. Its increase in importance was accompanied by a large increase in negative sentiments.

Contact (2008:71%; 2019:51%) With technological advances, the number and methods of customer contact have increased, but perhaps because they are more surreptitious, or consumers are more aware, its importance dropped steeply from 2008 to 2019, despite retaining first rank. One respondent accepted responsibility for the use of cross-platform cookies for targeted advertising:

> All of those likes on Facebook that we thought was so cool in, like, 2007? Brands know exactly what we told them. We're telling them what we like. (Kelly-F-B-40-2019).

Overmarketing; failing to seek consent; and repeated, mistargeted or misleading marketing messages are costly for organizations and a harmful misallocation of society's scarce resources (Petty, 2000).

Informational (2008:29%; 2019:49%) Privacy notices tend to obfuscate or mitigate unethical data handling practices (Pollach, 2005). The large increase in this subdimension's importance suggests that consumers resent not knowing the fate of their data and being forced to accept the legalese of privacy notices to get the desired service:

> They KNOW what they're doing. People sign contracts all the time—they're not going to read terms and conditions thoroughly, and that's what companies are hoping for. (Quincy-M-B-25-2019).

Outcomes Of the total quotes coded for outcomes, 63% were negative in 2008, rising to 79% in 2019. In prior privacy research, willingness to disclose information has been the primary outcome variable of interest, which we find to be only one of several key outcomes. We grouped outcomes into information actions, purchase actions and emotional reactions. Between 2008–2019, the large drop in information actions, evidenced by high disclosure rates and lack of active self-protection, was paralleled by the drastic increase in predominantly negative emotional outcomes and slightly increased purchase intentions.

Information Actions (2008:74%; 2019:38%) Our findings suggest that resignation in the face of the overwhelming escalation of information acquisition/use accounts for the halving of information actions across the decade. Apart from willingness to disclose we identified and categorized other information action variables, such as attacking/going-on-the-offensive; for example, complaining to consumer bodies, flaming or taking legal action; and defending/protecting; for example, withholding information, providing incorrect information, using privacy protection software or firewalls or blocking. Describing her picture of a castle with a moat, Carey(F-W-55–2008) said, "I want to thwart what they are doing. So, do you want my phone number? I'll give you the wrong phone number." Of privacy notices, Aashi (F-A-22–2019) observed, "We're so used to just checking that box to go to the next page […] it forces you […] whether you read it (privacy notices) or not."

Emotional Reactions (2008:4%; 2019:37%) Emotional reactions have increased nine-fold in a decade, but to the extent of our knowledge, they haven't yet been fully considered in privacy

research. Risk perceptions included, not just fear of online or offline stalking, but intensely negative emotions, such as "anxiety," "anger," "hostility," even "revulsion," in response to "ominous, omnipresent" companies. Experiences like, "When they have all your private information, I feel like a gauge that is lost and empty," were likened to "scratching on a chalkboard" and "the color red because organizations are "sucking" the blood out of you." The intense anxiety expressed here could threaten health:

> When firms take my information, they invade my privacy and I feel violated as a result of that […] just like if a girl is raped, you know, that's the innermost feelings. (Jane-F-W-55-2008).

The rare positive remarks cited happiness/relaxation. One respondent likened information-related interactions to the colors "green for a bubbling brook" and "blue for calm."

Purchase Actions (2008:22%, 2019:25%) Purchase actions – or inactions, given the dominance of negativity – are understood as intention to purchase or participate, and they increased marginally between 2008 and 2019. While benefits like coupons, personalization or the ability to connect with friends on social media can spur positive action, overconsumption considerations can be a deterrent:

> Social media and highly targeted ads make them spend money on stuff that they don't necessarily need or puts them in an unbelievable depression, trying to keep up with, not only one person, but thousands of people that you have on there with their perfect lives. (Gonzalo-M-H-33-2019).

Table 6 presents additional quotes.

Table 6. Sample of respondent pictures and verbatim comments**

Picture title (Alias-Gender-Race-Age-Study year); Dimensions-Subdimensions; outcomes	**Respondent's verbatim quote**
Informants. (Quincy-M-B- 25–2019). METAPHORS- Resource, Control, Transformation, Journey, Container. OJT-DJ-Financial, Functional; PJ-Policy, Security; IJ-Contact; OUTCOMES-Emotional, Purchase	Scared because your privacy and who you are, is being constantly tapped into. I've had a conversation with a friend about McDonald's…you go on Instagram, YouTube, and the web banner on the side is for McDonald's---that stuff is scary…you can't even turn off your cable box. it's listening to you---trying to get information, trying to help out alexa with the diction and make her more articulate by listening to your conversations. Then they suggest things [to buy]
World's best thief (Gonzalo-M-H-61–2019). METAPHORS-Resource, Container, Control; OJT-DJ-Financial, Social; PJ-Policy, Security, Trust; IJ-Contact; OUTCOMES-Emotional	It's a guy that's in a hoodie with a matrix in front of him, and he's all dark, you can't see his face, and he's behind the computer. And these represent all of the bad organizations and people that are waiting to get all this valuable information from the companies that have our data…we've talked a lot about social media, but data comes in a lot of different forms…[not protected because] they don't have the right people, don't invest enough money into it, they're not staying ahead of the game….We make it easier to steal money than to make it…I try not to worry
Gotcha (Luis-M-H-44–2008). METAPHORS-Control, Connection, Transformation. OJT-DJ-Financial, Psychological. PJ-Trust, Policies, Relationship; IJ-Contact. OUTCOMES-Emotional, Purchase, Information	The doll is me. The child is the powerful company…She's got me! We are on different sides of the fence… If I need their product I have to go to them with my money and information
FIGHTING BACK (Cain-M-W-23–2008) METAPHORS-Control; Balance.	They have millions of dollars at their disposal… The fighter planes represent the force of the firms… They are everywhere

Transformation. OJT-DJ-Psychological; PJ-Security; Relationship; IJ-Contact. OUTCOME-Information Action	and I can't get away from it… I feel helpless, frustrated… what am I going to do? I would want to get some fighter planes so I could shoot back… but I guess I'm going to have to hide
Helpless (Mary-F-W-51–2008). METAPHORS-Control, Resource, Balance, Transformation; Journey. OJT-DJ-Functional; Psychological; PJ-Trust/Motive; Policies; Relationship. IJ-Contact. OUTCOME-Emotional	They take information for collecting it… like a habit… It's almost like them being a bully and ousting you. So, you're demanding something from me you don't need, you don't want, you're not even going to use, but you want me to give it to you to do a transaction
Going incognito (Aashi-F-A-22–2019). METAPHORS-Resource, Control, Balance, Transformation, Container, Journey . OJT-DJ-Financial; PJ-Policy; Trust; Security. IJ-Contact; OUTCOME-Information	…deleting cookies. This is where I went incognito mode from Google. I usually use this for when I'm browsing for things like flights or hotels because I think when companies see you search for something once…like let's say that you want to fly somewhere and they see that. The next time you visit that site to book the tickets they might hike those prices up because they saw that you already want to go there. So that's when I would use an incognito mode to hide it [my browsing], so the prices are lower

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Discussion

Our research revealed the underlying drivers of consumers' thoughts and feelings about companies' acquisition/use of their personal information with or without their knowledge and analyzed changes over a decade of drastic technological change. Our novel methodology delved into respondents' subconscious reactions, avoiding the biasing terminology of previous privacy research. We identified and demonstrated the relevance of a theoretical framework, demonstrated its applicability/fit and developed subdimensions to broaden it. Overall, we present a case for considering a multifaceted information experience beyond mere PCs.

Research findings

Our analysis revealed the importance of all seven deep metaphors, with the awareness of information as a valuable *resource* almost doubling by 2019. Not meeting consumers' concomitant need for fairness (*balance*) and power (*control*) heightens negative sentiments (*transformation*) as inevitable technological changes (*journey*) threaten the security of their information (*container*) and strain their trust in the company (*connection*). In 2008, consumers yearned for mutual benefits (*balance*), but by 2019, companies lost that opportunity because consumers prioritized control/dominance- likely due to losing hope of being treated fairly. We posit that consumers' rising concern for privacy protection is actually an expression of resistance to companies' control over their personal information and surrendering hope of mutual benefits *(balance*). Left unaddressed, this would likely exacerbate, and consumers could reject overtures of fairness in the future. By providing fairness companies would be seen to be ceding control to consumers, and this might lead consumers to reverse their demand for control in favor of mutually-favorable exchanges.

The joint role of balance and control pointed to OJT with regard to resources (consumer data). Viewing the data with the lens of prior research helped create relevant subdimensions that reframe information acquisition/use as a fairness rather than privacy issue. Using the OJT framework to recode the data revealed the source of the increase in negative sentiments. Consumers cared much more about procedural justice than distributive justice, and their call for interactional justice also increased. Subdimension rankings remained the same for DJ. By

2019 consumers demanded better information-related policies and data security with trust taking a backseat (PJ). In addition, the importance of the modes/frequency of contact diminished and the importance for informational IJ (transparent disclosure) increased, with both being valued almost equally.

These changes have had negative effects on the broadened range of outcomes: purchase actions, information actions and emotional reactions. While purchase action increased slightly over time, emotional reactions increased nine-fold. The halving of information actions suggests consumers' resignation; they believe they cannot manage/control companies' acquisition/use of their information.

Theoretical contribution

Our findings show that consumers' expression of high privacy concerns reflect their negative thoughts and feelings about company's information acquisition/use because they do not perceive being treated fairly. The privacy issue is better understood as a fairness issue holistically explained by OJT which encompasses how information is acquired/used (PJ), what value is exchanged (DJ) and what is the effect on the touchpoint experience (IJ). The OJT dimensions and subdimensions are: PJ evaluations focus on company policy, security, trust - building/motive, relationships and reputation; DJ addresses risk-and-reward evaluations of functional, financial, psychological, social and temporal factors; and IJ evaluations focus on the fairness of company/consumer interactions, including the suitability and frequency of contact, the clarity and accessibility of privacy notices and the respect conveyed.

Our privacy-specific subdimensions extend prior work. First, consumers assess distributive justice by considering whether companies' motives are trustworthy, and the information exchange is fair. Prior theories postulate the positive impact of trust and fairness on disclosure intentions (e.g. Culnan and Bies, 2003; Martin and Murphy, 2017), but our findings explore perceived motives – consumers react negatively when they sense opportunism or hidden agendas. In addition, while prior research acknowledges privacy as a value exchange (Acquisti *et al.*, 2013), our study explicates the many ways that value can be provided – financial, functional, psychological, social and temporal.

Second, for procedural justice, consumers scrutinize organizational policies and systems to judge their fairness. Prior research finds that transparent policies and strong safeguards improve perceptions of procedural fairness (Bélanger and Crossler, 2011; Pavlou, 2011; Smith *et al.*, 2011) but we go further in specifying that consumers expect companies not only to declare their policies but to actively demonstrate secure handling. We find that reputation and relationship function as procedural fairness cues. We also find that trust aligns closely with perceived motive with lack of trust resulting in suspicion about motives.

Finally, for interactional justice, the way firms communicate their data practices significantly affects perceived fairness. Consistent with Milne and Culnan (2004), our participants evaluated fairness based on the clarity of disclosures, such as privacy notices. However, our study highlights the equal importance of suitability and frequency of contact. Consumers judge fairness, not only by disclosure, but by whether the mode (e.g. email, app notifications) and frequency of such interactions respect their autonomy. Martin and Murphy (2017) confirm that overly frequent or complex notices erode, rather than build trust.

Taken together, these subdimensions show that consumers' PCs are multifaceted fairness judgments. They align with prior literature on a variety of triggers of PC such as lack of trust and transparency while extending the scope of OJT into value signals, procedural safeguards and interactional dynamics specific to the consumer/firm privacy context. Beyond its traditional application to employer/employee relationships, OJT can inform the realm of consumer/firm interactions. We expand OJT's conceptual footprint and show how its dimensions can be operationalized in digital contexts. Our findings provide a foundation for future research in this as well as adjacent domains – such as service failures and technology-enabled exchanges, where fairness perceptions shape consumer responses.

Methodological contribution

This study makes an important methodological contribution by demonstrating the value of the Zaltman Metaphor Elicitation Technique (ZMET) in exploring complex and sensitive issues like consumer privacy. While prior privacy research generally relies on quantitative survey methods to capture the *what* and *how* of disclosure behaviors (Acquisti *et al.*, 2013; Smith *et al.*, 2011), ZMET accesses consumers' subconscious thoughts and feelings to address the deeper *why*. Our study responds to calls for more interpretive approaches that can uncover the psychological and emotional foundations of privacy attitudes (Hancock and Foster, 2020; Martin and Murphy, 2017).

Using ZMET, we analyzed 30 in-depth interviews at two timepoints, offering a qualitative, longitudinal perspective rarely used in privacy research. By conducting the first interviews during the early years of Web 2.0, when social media and digital platforms were still nascent, and the second a decade later, when data breaches and surveillance had become pervasive, we could trace how consumers fairness judgments moved from seeking balance to seeking control. The deep metaphors uncovered pointed to OJT as the explanatory framework for companies' information acquisition/usage. This methodological design also contributes by showing how qualitative longitudinal analysis can surface theoretical insights not easily captured by cross-sectional or survey-based approaches. In contexts where consumers often lack real choice – since opting out of providing data is rarely feasible – ZMET explains how feelings of disproportionate corporate power translate into fairness demands and control-seeking behaviors. It shows strong potential to elucidate other domains where subconscious metaphors shape consumer/firm relationships, ranging from service failure and recovery to technology adoption.

Managerial implications

Widening the privacy-protection lens to encompass fair treatment across the dimensions of distributive, procedural and interactional justice carries important implications. Transparent communication of fairness practices is likely to be more effective than attesting compliance or enumerating security measures. Many firms already adhere to aspects of OJT but fail to make it visible to consumers. As prior research notes, perceived unfairness in privacy practices can erode trust and encourage resistance behaviors, while perceived fairness fosters trust and strengthens relationships (Bélanger and Crossler, 2011; Culnan and Bies, 2003; Martin and Murphy, 2017). Our findings extend this logic by suggesting that organizations should consider and operationalize all aspects of fairness to reassure customers using the OJT subdimensions we develop.

Strategically, companies must also recognize the risks of defensive consumer actions, such as withholding information or blocking cookies, and offensive actions, such as public complaints and social media activism. Both can limit firms' ability to personalize services and, when amplified, may prompt regulatory responses. Indeed, legislative scrutiny of privacy issues has often followed public outcry (Acquisti *et al.*, 2013). To mitigate this, firms should adopt proactive OJT strategies that treat privacy as a question of fairness to pre-empt consumer backlash and stricter regulation.

Finally, managers should acknowledge that consumers' PCs are complicated by their bounded rationality and tendency to discount future costs or benefits (Acquisti, 2004). While this may limit the effectiveness of assurances regarding future data use, it underscores the need for firms to act now, visibly and credibly, to address fairness concerns. In minimizing reputational and regulatory risks, they will strengthen the long-term sustainability of their consumer relationships.

Societal implications

This study shows that consumer calls for privacy protections are demands for fair and respectful treatment. When companies mishandle consumer data, the harm extends beyond individual transactions to society at large by eroding trust in digital technologies and amplifying consumer anxiety. Reframing privacy as fairness carries implications for consumer well-being, public confidence in markets and broader debates on data ethics.

A practical illustration is Olay's Decode the Bias initiative (Shacknai, 2021). The US skin- care company invited independent auditors to examine its AI-powered Skin Advisor, which based recommendations on consumer images and personal data. The audit revealed unfair outcomes—better performance for lighter-skinned and younger consumers—reflecting inequitable distribution of benefits from data use. In response, Olay increased transparency, adjusted its algorithms and invested in diversity initiatives, demonstrating how procedural justice (fair processes in handling data) and distributive justice (equitable outcomes across consumer groups) intersect with informational privacy. Consumers shared sensitive data with the expectation of fair treatment, but trust and privacy were undermined.

Such cases underscore the societal stakes of data practices. Prioritizing fairness not only reduces consumer distress but also strengthens societal trust in digital platforms and informs public policy discussions. By embedding fairness in their data strategies, organizations can help to ensure that the digital economy contributes to both consumer well-being and social cohesion.

Limitations and future research

We recognize several limitations of our research. We study subconscious thoughts and feelings instead of actual behavior. The 2008 and 2019 data sets were coded by different graduate research assistants, although the first coder remained author 1, and both coders used the same analytical framework, codebook and coding protocol to ensure thematic alignment across time periods. Given space constraints, we were unable to share more of the rich data that support our findings and bolster our arguments. Although the interview prompt did not contain the word privacy, the unrelated example included a safety prompt that may potentially have influenced the findings. Percentages are only a rough measure used here given that qualitative coding is a subjective art not easily amenable to quantitative analysis. To that extent, our

numerical findings are suggestive rather than conclusive. Although our longitudinal design offers unique insights into a period of rapid technological change, it does not capture post pandemic developments, including the potential impact of AI on data acquisition/usage. Our small sample of regional US participants limits statistical generalization and cannot capture cultural and regulatory variations affecting consumer perceptions. As with most qualitative methods, ZMET provides deep insight into subconscious thoughts and feelings, but small sample sizes limit statistical generalizability. Our research focuses exclusively on consumer perceptions.

Areas for future research include empirical testing of the concepts and relationships we identify and the differential impact of its dimensions and subdimensions on emotional, purchase and information-related outcomes. Replication would determine whether and how post pandemic trauma, generative AI and cross-cultural differences are changing perspectives. Large-scale, mixed methods and cross-disciplinary approaches could be deployed to complement our qualitative method and to examine organizational practices designed to operationalize fairness-based privacy strategies. Future studies could document consumer behavior in reaction to company acquisition and use of personal information and to assess the impact bias, which suggests that people overestimate the impact of an imagined versus experienced event (Monga *et al.*, 2012). Researchers might evaluate the degree to which individual consumers value each OJT dimension and subdimension and explore whether OJT strategies can be customized at the individual level and scaled.

Sheth and Sisodia (2006) argue that overlooking marketing's societal impact hinders its value-creating potential. This study shows it can also spark consumer backlash and limit the field's growth.

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