

Mapping the Territories of Privacy: Textual Analysis of Privacy Frames in American Mainstream News

Federica Fornaciari
University of Illinois at Chicago
email: fforna3@uic.edu

Abstract

In the attempt to shed light on the multifaceted complexity of privacy, this paper explores the frames that emerged in American coverage of privacy since the 1980s. Informed by framing theory, this study assumes that media frames represent an important component of how society approaches and discusses issues. The author collected 2,473 articles covering privacy published in three timeframes. The author identified seven frames of privacy and developed dictionaries to automate frame detection. Then, the author explored the occurrence and co-occurrence of frames combining qualitative and quantitative textual analysis techniques. Results reveal that American media consistently implement four main frames: the value of truth, expected flow, fundamental privacy, and trading privacy. Three secondary frames emerge: privacy is dead, relationships, and users' responsibility. Results also reveal that the framing of privacy as a fundamental value is declining whereas the portrayal of the commercial value of personal data is increasing.

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1. Introduction

"A map does not just chart, it unlocks and formulates meaning; it forms bridges between here and there, between disparate ideas that we did not know were previously connected."

— Reif Larsen, *The Selected Works of T.S. Spivet*

The present research aims to identify the frames of privacy that developed in mainstream news coverage of privacy in the last few decades. It does so for three main purposes. First, media frames reflect (and may influence) how society approaches and defines

complex issues and concepts. A study of media frames of privacy, thus, contributes to understanding how the complexity of privacy has been rendered in mainstream media. Its findings suggest how modern American society is likely to approach privacy. In fact, we often understand reality through individual or collective frames that emerge in different social planes, including mainstream media. Second, this study identifies frames of privacy in media coverage and it develops dictionaries that enable to structure and direct the study of privacy frames in larger corpora of texts. Thereby, it provides useful tools that enable future research to implement textual analyses of privacy frames within and beyond mainstream media text. Third, this study provides a novel methodological approach to mapping (and studying) privacy from a bottom-up perspective, as suggested in Solove [1]. It thereby sheds light into how media discourse approaches privacy, reflecting or contributing to reshaping the societal understanding of such an important issue [2].

Existing scholarship has increasingly explored the unfolding of definitions of privacy, encompassing its different shapes and features from a number of fields and perspectives. However, research has not yet investigated how frames of privacy emerge, co-occur and develop in media discourse. The current project addresses this gap.

Informed by the assumptions of framing theory [2, 3] and of content and semantic network analysis [4], this study explores media coverage to map the terrains of privacy [1] during the last few decades. In particular, this study implements content analysis and semantic network analysis to investigate and visualize the implementation of frames of privacy in 2,473 editorial articles published in the New York Times and in the Washington Post during three timeframes (1985-1989, 1996-2000, and 2006-2010). These were selected using the keyword "privacy."

This paper is structured as follows. First, the author outlines existing theoretical approaches to privacy and suggests the value of a pragmatic approach [1]. Second, the author discusses the role of framing theory, content analysis, and semantic network analysis

for the scope of the current study. Through a combination of qualitative and quantitative work on a subsample of the articles, the author identifies seven frames of privacy and develops dictionaries to automate frame detection. Using the software Automap, the author investigates occurrence and co-occurrence of frames in the whole sample. Last, the author interprets the implications of the findings and suggests directions for future research.

1.1 (Scattered) Maps of Privacy

In the attempt to highlight the importance of one's control over unwanted eyes through retrieval into an intimate space, Warren and Brandeis [5] brought into focus the value of privacy, defining it as the "right to be left alone." They argued that such a right is a fundamental requisite to enjoy life as it safeguards "sacred precincts of private and domestic life" (p. 195) and allows retreat from society. And yet, privacy is a multi-layered and ever-evolving concept difficult to uniquely define. In fact, social, cultural, political, and economic changes often encompass new practices, needs, and rights [5]. Similarly, the development of technology, often, urges rethinking social practices such as disclosure, information management, and desire for privacy.

Privacy, in modern democracies, is a wide-ranging, blurry concept. Scholars from various disciplines have addressed privacy, yet always encountering difficulties in drawing a definition that would encompass all aspects, nuances, and variations of such a moving target. Allen [6] emphasized that privacy is a "uniquely" and "notoriously elastic" term that emerges at the intersection with other valued interests. For example, privacy is a temporary means that protects individuals and groups from the eyes of society granting limited access to the self [7] or, more narrowly, enabling one to manage and control personal and intimate information [8]. But privacy is also a collective issue that refers to what society considers appropriate to protect [1]. Enabling limited and protected communication [9], privacy is a shield that safeguards one's dignity [10], facilitates social relationships [8, 11], counteracts misrepresentation, and prevents one from being judged out of context [12, 13]. Privacy, overall, is functional as it contributes to psychological and social well-being; it fosters personal autonomy, emotional release, self-evaluation, as well as self-realization [9].

Needless to say, privacy inherently entails a social dimension as it presumes a certain degree of information sharing. Its management is the result of a dialectical tension between the actions of opening and closing one's boundaries to others. Privacy, thus,

depends on people's interaction and social exchange as well as on the physical nature of the interaction [14]. In Westin's [9] work, privacy emerges as a composite construct that combines various degrees of solitude (freedom from observation), intimacy (small group seclusion that allows for deeper and more meaningful relationships), anonymity (freedom from identification), and reserve (decision to limit disclosure).

Existing privacy theories are often sorted in two macro-categories: descriptive and normative [15, 16]. Descriptive theories, usually, present privacy as a repository of information that can be diminished or lost, but not violated or intruded, as these terms involve the breach of an existing and shared set of rules. The normative dimension of privacy, instead, is generally right-based. In fact, most normative theories of privacy deal with intrusion, and entail a regulated right [16] rooted in ethical, legal, or conventional norms [17]. A normative account of privacy, for example, may be embedded in contextual expectations and deal with appropriate flow [12, 15], protection against breach of confidentiality, or betrayal of trust [16].

Ethical, legal, and conventional norms evolve with society. They undergo constant reshaping to fit socio-cultural, political, economic, and technological changes [1, 14, 17, 18]. New technologies, for example, often generate context-collision and prompt reconsidering expectations and norms. They do so by contributing to blur the boundaries between social situations and thereby encourage new practices of sociability [19]. For example, online platforms challenge trust as they create relatively unfamiliar environments, entail flexible and often unverifiable identities, involve disembodiment as the participants are not physically present, and call into being inscrutable contexts in which role definition may become problematic [20].

In addition, new technologies reshape the features of the communication environment, the "infosphere" [18]. Information technologies, in particular, "grease" [17] the information facilitating its retrieval and its migration from the context of delivery. The understanding and management of privacy in new and evolving technological domains become particularly problematic and require constant renegotiations of privacy against other values. New trade-offs emerge in response to evolved contexts, attitudes, norms, institutions, and technological domains [1]. As a consequence, privacy too undergoes constant redefinitions.

Instead of striving for an overarching and abstract conceptualization of privacy, Solove [1] suggests adopting a pragmatic approach to it. Informed by the work of philosophers such as Ludwig Wittgenstein and

John Dewey, Solove [1] argues that some concepts are better understood through the actual and historical instances of life, through a contextual bottom-up conceptualization that draws from a pool of characteristics and applications of the concepts as they emerge in different societal domains, in different uses or practices. These contextual characteristics develop overlapping networks of interconnections and co-occurrences, of similarities and relationships, of Wittgensteinian “family resemblances.” To effectively understand, describe, and protect privacy, for example, Solove [1] suggests undergoing two steps. First, one should explore how each violation of privacy interacts with specific practices by disrupting, inhibiting, or destroying them. Second, one should investigate how the value of privacy emerges in practices of different social importance. This approach allows referring to different conceptions of privacy, choosing the one that is most suitable to each specific context. A value-laden attitude also enables a normative account of privacy, which is necessary to determine what the law should protect.

Informed by Solove’s [1] pragmatic approach to privacy, this study investigates the practices of privacy by mapping the semantic networks of frames that emerge in mainstream media coverage of privacy during different timeframes since the 1980s. Solove’s pragmatic approach, in fact, lends itself to mapping privacy through semantic network analysis. The next section explores framing theory and explains its relevance in informing this project.

1.2. Framing

Goffman [3] explained that individuals approach the complexity of reality developing or borrowing primary frames, or “schemata of interpretations,” based on abstract principles that organize, untangle, and simplify reality. Frames emerge through symbolic forms of expression and provide structures that enforce preferred interpretations of the social world. Frames may be individual or collective [21], and emerge within different occurrences of the communication process: the communicator, the text, the receiver, and the culture itself [22]. Available frames are either consciously recognized or unconsciously processed, often influencing how people understand, assess, remember and discuss issues. Frames are not powerful forces that change public opinion, instead, they are available toolkits that one may use to experience, understand and discuss reality [23]. Individuals’ frames of thoughts, in fact, result from the complex connection between texts, artifacts, cultural frames, power relationships, and practices of consumptions [24]. Frames’ role and ability to structure the social

world become particularly salient when frames are socially shared and persistent over time [21].

Clearly, mainstream media are important platforms for sharing social meaning over time. They are repositories of history and culture and essential informants enabling us to understand and experience current and past events and issues. When reporting on the news, the media constantly engage in a process of emphasis and selection through which they communicate - and frame - existing aspects of reality [2, 3]. In particular, practices such as repetition, placement, and reinforcement enable some frames to become more easily available and accessible than others [2]. These practices influence the retrievability, rhetorical force, resonance, and institutional retention of cultural objects, affecting their potential to influence public opinion [25]. For example, mainstream media may reveal practices of privacy by discussing particular instances of privacy loss, and by suggesting what it means to be private under different circumstances. As such, mainstream media emerge as possible informants for studying the practices of privacy that developed in different historical times within different social, cultural, economic, political, legal, and technological contexts.

Applying framing to the longitudinal study of privacy practices in mainstream media allows exploring whether the concept of privacy has evolved in different timeframes, and whether certain or all frames have persisted in media discourse thus maintaining longitudinal “institutional retention” [25]. Retention is particularly important as it strengthens the framing effects. Finally, using framing to investigate media coverage of privacy helps understanding how our society is likely to address, process, and discuss privacy. The next section shortly examined existing approaches to content and semantic network analysis and explains how their assumptions contributed to shaping the method adopted in this research project.

1.3. Content and Semantic Network Analysis

Content analysis is the “objective, systematic, and quantitative description of manifest content of communication” [26, p. 18] aimed at understanding social mechanisms and practices. There are three main assumptions behind such a definition. First, that one can validly make inferences about the intent and the effects of content, as content reflects motives and intentions. Second, that quantitative description of communication content is meaningful and allows the researcher to draw justified conclusions. Third, that in the study of the manifest content the meaning intended by the author, analyzed by the researcher, and understood by the audience somewhat correspond [26].

Semantic network analysis is a specific type of automated content analysis that investigates text to explore the networks that emerge from the occurrences and co-occurrences of concepts [27]. In such a way, semantic network analysis allows drawing conceptual maps as they emerge in text. Semantic network analysis shares the assumptions of content analysis and adopts an additional one, also referred to as the “abstraction gap” [28]. The abstraction gap assumes that the occurrence and co-occurrence of words may be used out of context as pointer or signifier for higher-level overarching concepts. As the abstraction gap may become a problem when adopting automated semantic analysis, the current study combined quantitative semantic network analysis [4, 29, 30] with a qualitative process of manual categorization and sorting [28]. The qualitative approach was undertaken to understand how words are defined by their context of use, and thereby draw and test dictionaries that may be imputed into textual analysis software for further processing. The qualitative components enabled the author to validate, contextualize, and strengthen the results obtained through automated analyses [28].

2. Research questions

Informed by Solove’s [1] pragmatic approach to privacy and adopting the assumption of framing theory, content analysis and semantic network analysis, this study addresses the following research questions:

RQ1: What frames of privacy prevail in U.S. press coverage of privacy since the 1980s?

RQ2: How do these frames intersect?

RQ3: How do the frames of privacy implemented in different timeframes compare?

RQ4: How do the frames of privacy implemented in different media outlets compare?

3. Method

To explore the frames of privacy that emerge in mainstream news discourse, this study implemented a mixed-method approach. In particular, it combined qualitative and quantitative techniques of textual analysis of editorial articles published in two U.S. newspapers: the New York Times and the Washington Post. These papers have large readership and are considered opinion leaders able to set the agenda for other outlets [22, 31, 32, 33]. In addition, these outlets have different readership-base. In particular, the Washington Post tends to adopt a national scope whereas the New York Times has influence nationally and internationally [32]. Considering the novel and

exploratory nature of this study, the sample analyzed included only Op-ed articles, as these have been considered a vehicle that fosters divergent opinions and thus enables a broader and more comprehensive understanding of important issues [34].

Three different timeframes were selected. The first included Op-ed published between 1985 and 1989 and was aimed at capturing frames of privacy related to the wide spread of computers, credit cards, and databases. These technologies developed and spread during the 1970s and 1980s to the point that, in 1983, Time magazine elected the computers “man of the year” [35]. The second timeframe included articles published between 1996 and 2000. During these years the internet became available to the general audience, embodying an information superhighway and thus enabling the de-contextualization of information and enhancing privacy risks related to handling and sharing data. The third timeframe explores articles published between 2006 and 2010 to investigate the discourse around privacy developed after the implementation of social network sites that culminated with the introduction Facebook in 2005 and Twitter in 2006 [36]. Social media, in fact, further facilitated the migration of information from the context of delivery, at times also blurring the boundaries and feature of one’s audience and thus generating privacy concerns.

While driven by the evolution of technology, the choice of these three timeframes is also aimed at providing a longitudinal perspective that may help capturing changes in the conceptualization of privacy due to evolutions of the American socio-cultural, legal, political, and economic overarching contexts. A longitudinal analysis, in fact, enables to explore the persistence and retention (or the change and evolution) of frames across social, cultural, political, and economic changes.

The sample was retrieved from LexisNexis using the keyword “privacy” and included all articles published in the editorial sections. Duplicate articles were excluded from the analysis. All remaining articles were used for analysis. The refined sample included 2,473 op-ed pieces (Table 1). The length of the articles in the sample ranged from 41 to 2811 words, with an average of 553 words (M = 531, SD = 301).

Table 1. Number of op-ed articles analyzed

	1985-1989	1996-2000	2006-2010	Tot
NYT*	295	595	478	1,368
WP**	261	464	382	1,107
Tot	556	1059	860	2,473

*NYT is the abbreviation for the New York Times

**WP is the abbreviation for the Washington Post

Initially, the dictionaries of privacy were developed using a two-steps approach. First, a subset of 60 randomly selected articles (10 per outlet per timeframe) were used to detect frames of privacy as they emerged in media discourse and thereby develop a preliminary dictionary of privacy, as suggested in van Atteveldt [28]. To do so, the author carefully read and reread the articles. Overarching frames were identified through a qualitative work on these articles to allow a pragmatic bottom-up identification of frames. These preliminary readings, also informed by existing privacy research, allowed the identification of seven main frames and of related dictionaries (including keywords and key-sentences). In the second step, all the articles of the sample were imputed in the software Automap [4] and a complete list of frequencies was created.

Using Automap, the frequency list was refined by deleting non-content bearing elements such as articles, conjunctions, and other noise from the text [4]. The list was further refined by deleting words with overall frequencies lower than 50. Remaining words were manually processed to qualitatively assess their contexts of use. In particular, manual text searches and qualitative judgments were used to add meaningful and recurring expressions to the dictionaries previously created. In this way, detailed dictionaries were developed through the combination of qualitative and quantitative bottom-up approaches. Subsequently, the resulting dictionaries were further tested and refined through a number of manual searches aimed at verifying their effectiveness. Finally, the dictionaries of privacy were imputed in Automap and used to explore the occurrence and co-occurrence of concepts in the texts analyzed. The semantic networks of frames co-occurrences were visualized using the software Gephi.

4. Results and discussion

4.1. Frames and dictionaries

From a preliminary reading of a subsample of articles, the author identified the following seven frames: *expected flow*, *fundamental privacy*, *privacy is dead*, *relationships*, *trading privacy*, *users' responsibility* and *the value of truth*.

In particular the frame “expected flow” emerges in sentences that emphasize the role of situational norms and expectations in relation to privacy. Articles discussing this frame approached some aspects of what Nissenbaum [15] would define the “contextual integrity” of information. Contextual integrity, in other words, is the idea that information disclosed is tagged with expectations of appropriate flow that depend upon the context of delivery. The dictionary for this frame

includes words and combinations of words such as confidentiality, patient, voyeurism, boundaries, academic records, and contextual right. The dictionary for this frame included 97 expressions.

“Fundamental privacy” is a right-related frame that deals with the idea that privacy is a fundamental human right comparable to freedom and dignity or, at least, a vehicle necessary to achieve fundamental values that include autonomy, self-esteem, and liberty [9, 10, 12]. This frame emerges from expressions such as human right, civil liberty, ideal of freedom, dignity, and self-respect. The dictionary for this frame included 65 expressions.

“Privacy is dead” is a dystopian frame that develops the idea that modern technologies and new communication environments have increasingly made it difficult for one to control information about the self. The dictionary for this frame includes expressions such as the followings: get over it¹, privacy is dead, ubiquitous surveillance, Orwell, and Echelon (the latter is described in Campbell [37] as an automated system of surveillance of global telecommunications). The dictionary for this frame included 59 expressions.

“Relationships” is an individual frame that cultivates the idea that people engage in a tradeoff weighing the potential to gain social capital against the risks of privacy infringements. Doing so, they evaluate the costs and benefits of disclosing in terms of possibilities for ties-strengthening and community-building. Articles implementing this frame describe privacy as a necessary element of social relationships [8, 11]. This frame emerges from expressions such as social interaction, community, and social achievements. This frame only marginally emerged in the subsample of texts analyzed. Its dictionary included 49 expressions.

“Trading privacy” is an economic frame that entails the idea that personal information has become a modern commodity that may be collected, sold, traded, and used for profit. Articles adopting this perspective describe the instrumental value of privacy [17] and contribute to the idea that privacy, in modern Western societies, is increasingly turning into a consumerist good [38]. This frame was evident in expressions such as valuable data, selling information, and behavioral advertising. The dictionary for this frame included 81 expressions.

“Users’ responsibility” is an individual frame suggesting that people are responsible for their privacy losses, and should engage in informed disclosure to avoid misunderstandings and unrealistic expectations

¹ Quote from Sun Microsystems Inc. CEO Scott McNealy, as reported in Matt Hamblen’s article McNealy calls for smart cards to help security. Available at www.computerworld.com

of privacy. In other words, this frame promotes personal awareness and encourages users to take responsibility as a way to foster internet safety and privacy safeguard [39]. In this frame, privacy literacy is discussed as an individual responsibility. The dictionary includes expressions such as responsible disclosure, informed decision, personal responsibility, and informed citizens. Similarly to the relationships frame, users' responsibility also emerged as a secondary frame in the 60 articles included in the preliminary sample. Its dictionary included 41 expressions.

Finally, "value of truth" is a political frame of privacy. It entails the idea that the value of truth and transparency are more important than that of privacy when international, national, local, and individual securities are at stake. This frame justifies the infringement of privacy as a necessary step for the protection of citizens and the fight against terrorism, corruption, and abuses of privacy. This frame supports the freedom of the press as well as the right of citizens to know. This frame emerges from expressions such as public good, gun control, abuses of privacy and domestic violence. Its dictionary included 65 expressions.

All seven frames implemented a discussion of privacy in normative terms, suggesting the right-based dimension of privacy and focusing on the ethical, legal, and social-normative aspects of privacy [16, 17].

4.2. RQ1 - What frames of privacy prevail in U.S. press coverage of privacy since the 1980s?

The first aim of this study was to identify the frames developed in mainstream media coverage of privacy in the last few decades. Table 2 shows the percentage of articles that implemented the different frames in both outlets analyzed.

Table 2. Implementation of frames

	% of articles*
Value of Truth	39.72%
Expected Flow	22.84%
Fundamental Privacy	19.20%
Trading Privacy	14.87%
Privacy is Dead	2.55%
Relationship	0.62%
Users' Responsibility	0.20%

* Percentages take into consideration only the frame with higher frequency within each article

4.3. RQ2 - How do these frames intersect?

The second research question investigated the co-occurrence of frames within an article across all sample. The results of the network analysis are illustrated in Figure 1. The diameter of each dot represents the overall presence of each frame in the whole sample. The thickness of the lines connecting them represents the number of times two frames co-occur. The strength of the relationships between frames, measured as number of co-occurrences of frames within the article, is also outlined in Table 3.

Figure 1. Network of frames co-occurrences.

Table 3. Frames co-occurrences*

frame 1	frame 2	# of co-occ.
Value of Truth	Fundamental Privacy	372
Value of Truth	Expected Flow	250
Expected Flow	Trading Privacy	182
Expected Flow	Fundamental Privacy	145
Value of Truth	Trading Privacy	129
Fundamental Privacy	Trading Privacy	93
Value of Truth	Privacy is Dead	70
Privacy is Dead	Fundamental Privacy	39
Privacy is Dead	Expected Flow	33
Privacy is Dead	Trading Privacy	20

*The table includes only co-occurrences equals or higher than 20

4.4. RQ3 - How do the frames of privacy implemented in different timeframes compare?

The third research question for this study investigated whether the implementation of identified frames of privacy varies across timeframes. To answer this question, the researcher compared the independent variable "timeframe" and the continuous variable "tf-idf" (defined later) through one-way between groups ANOVA. Tf-ids is the term-frequency of inverse documents frequency. It measures the relative importance of a word or combination of words to a document. Table 4 illustrates the general frequency analysis.

Table 4. Frame occurrence per timeframe*

	1980-1985	1996-2000	2006-2010
Value of Truth	40.75%	35.41%	42.99%
Expected Flow	19.40%	27.75%	21.36%
Fundamental Privacy	28.17%	13.43%	15.79%

Trading Privacy	9.89%	20.63%	13.80%
Privacy is Dead	1.67%	2.30%	3.54%
Relationships	0.00%	0.36%	1.35%
Users' Responsibility	0.12%	0.13%	0.20%

* Percentages take into consideration only the frame with higher frequency within each article

Statistically significant differences at the $p < .05$ level were only found between timeframes 1 and 2 for the frames “expected flow” (sig. = .042) and “trading privacy” (sig = .036). Yet, the lack of other significant differences may be a consequence of the relatively small sample analyzed and requires further research.

4.5. RQ4 - How do the frames of privacy implemented in different media outlets compare?

The fourth research question for this study investigated whether the implementation of identified frames of privacy varies across media outlets. To answer this question, the researcher compared the independent variable “media outlet” and the continuous variable “tf-idf” through independent sample t-tests. Table 5 illustrates the general frequency analysis. Even though general differences emerge, none was found to be statistically significant.

Table 5. Frame occurrence per media outlet*

	NYT	WP
Value of Truth	41.59%	37.84%
Expected Flow	22.01%	23.67%
Fundamental Privacy	18.27%	19.99%
Trading Privacy	13.61%	15.94%
Privacy is Dead	3.57%	1.43%
Relationships	0.66%	0.49%
Users' Responsibility	0.21%	0.10%

* Percentages take into consideration only the frame with higher frequency within each article

5. General discussion

This study implemented a bottom-up pragmatic approach to explore frames of privacy in American mainstream news coverage. With such an approach, privacy, as well as its value, was conceptualized contextually and concretely rather than in abstract terms [1]. The development of frames, rooted in actual coverage of privacy, was also informed by existing scholarship and theoretical definitions of privacy. This enabled integrating a bottom-up perspective with existing - more abstract - accounts in the attempt to

develop a mutual exchange between bottom-up and top-down approaches to understanding privacy.

In general, the analysis reveals the adoption of four predominant frames (value of truth, expected flow, fundamental privacy and trading privacy) that have large resonance as well as consistent institutional retention. In fact, their presence and predominance are fairly stable across timeframes and across media outlets. The longitudinal persistence of these frame, as well as their large adoption, meaningfully enhance their potential to influence and structure the social world and the public opinion on privacy [21]. Also, this study reveals the marginality of three additional frames (privacy is dead, relationships, and responsibility) that are rarely discussed in the sample analyzed. Both presence and absence are interesting findings for the scope of this study.

The predominance and persistency of the *value of truth* frame is particularly striking (40% articles in the whole sample implemented it). American mainstream media, in other words, present the value of truth as a core aspect of modern society, suggesting that the value of privacy should always be negotiated against the need for international, national, local, and individual security and safety. Undoubtedly truth, safety, and security are important aspects of a democratic society. However, to engage in a rational and informed negotiation between the respective values, it is necessary to contextualize and evaluate each instance in which privacy infringements are justified through the “seeking of truth.” Schauer [40] provides a particularly fruitful consideration suggesting that the value of truth is not inherent and categorical but rather contingent and instrumental. The importance of truth, in other words, needs to be motivated (for example by actual risks for safety and security) rather than considered intrinsically good. The negotiation-laden approach suggested by Shcauer [40] emerges from those articles in which the “value of truth” was mitigated by the presence of alternative frames such as “fundamental privacy” and “expectations of flow.” In fact, the presence of alternative frames suggests the need for a contingent negotiation between “truth” and other values, emphasizing the importance of contextual case-by-case considerations. And yet, it is important to notice that the frames “expectation of flow” and “fundamental privacy” co-occur with the “value of truth” only in a subset of the articles analyzed (cumulatively in 622 articles over 982, which is the 63%). In the remaining articles, truth is presented without a counterpart, perhaps emerging as an inherent and categorical value whose value is always superior to that of privacy. Further qualitative analysis may be implemented to strengthen this inference.

The second most implemented frame is the “expected flow.” The large adoption of this frame reveals that the contextual integrity of information is a fundamental aspect of mainstream media coverage of privacy. In particular, Nissenbaum [15] used the expression “contextual integrity” to emphasize that the appropriate flow of information should be evaluated using a three-dimensional contextual scale that includes actors (sender and intended audience), space (situation of delivery and contextual norms), and information (degree of sensitivity). Such a careful deconstruction of the distinction between private and public information might allow one to address the complexity of expectations of privacy. It may also contribute to evaluating and managing the conditions that influence the desired flow of personal information [15]. Media coverage of privacy discusses a number of contextual aspects that come into play when determining the appropriateness of information flow. As the large presence of this frame suggests, “context” is often used to explain the complexity of privacy protection. From a longitudinal perspective, its overall use slightly increases (from 19.4% to 21.36%, see Table 4). Further research adopting a finer grain is necessary to investigate the implementation of this frame in media coverage and thereby develop further considerations. In particular, one could investigate what dimensions of contextual integrity (actors, space, and information) are predominant in media discourse and whether and how they emerge, evolve, and co-occur.

The third and fourth most adopted frames are “fundamental privacy” and “trading privacy.” Even though in absolute terms “fundamental privacy” is more prevalent in media coverage than “trading privacy” (19.2% against 14.9%, see Table 2), the implementation of these frames seems to evolve in opposite directions. In particular, even though “fundamental privacy” is more frequent, its adoption decreases longitudinally (from 28.2% to 15.8%, see Table 4) whereas the implementation of the “trading privacy” frame increases (from 9.9% to 13.8%, see Table 4). Further research is necessary to confirm and further investigate this trend. However, the findings of this study seem to suggest that mainstream media discussion of privacy is shifting its focus from the intrinsic value of privacy to the instrumental value of data protection. Recognizing privacy as a core value - at the same level of life, freedom, security, ability, knowledge, and resources - would mean suggesting that a sustainable society needs to acknowledge the importance of privacy as something that humans need for survival. Such an approach would make it easier to justify the protection of privacy [18]. Unfortunately, though, it is plausible (and worrisome) that modern

Western societies increasingly frame information as a commodity (as the findings of this study suggest). Doing so, the media may contribute to stimulating a “reconceptualization of privacy in the consumer’s mind from a right or civil liberty to a commodity that can be exchanged for perceived benefits” [38, p. 588].

Last, the dystopian frame “privacy is dead” was only marginally implemented in media discourse. As expected, its use increased longitudinally (from 1.7% to 3.5%, see Table 4), perhaps as a consequence of the introduction of new technologies that progressively challenge privacy protection and control over information. However, the absolute value of frame implementation is marginal when compared to the four frames discussed thus far. This phenomenon can be explained through the argument suggested in the previous paragraph, which is the shifting of attention from the fundamental value of privacy to its instrumental and commercial counterpart. In fact, if we accept that privacy is undergoing a process of reconceptualization, than we could argue that the intrinsic value of privacy is slowly decreasing, and that our society is increasingly considering a new definition of privacy whose value emerge in more practical, commercial terms. Such a reframing is just an alternative and perhaps more delicate way of saying that “fundamental privacy” is perhaps not yet dead, but most certainly declining.

6. Limitations and future research

The author recognizes limitations of the current study, mainly due to its novel and exploratory nature. These limitations though, together with the findings of the study, open up interesting directions for future research.

The main limitation of this study, is its dependence upon the accuracy of the dictionaries used to detect different frames. The author also recognizes that the uneven number of words in different dictionaries may have partly influenced the prevalence of a frame over others. However, as it can be observed in the results, only at times frames whose dictionaries included higher number of words prevailed above others. In addition, the longitudinal perspective should still be considered valuable as it measures variations across timeframes thus comparing a frame with its historical counterpart (both measured using the same dictionary). Similar considerations apply to the comparison of frames emerging across outlets.

In addition, it is understood that the dictionaries developed and utilized in this study need to be further expanded and tested in larger corpora of text. And yet, the author believes that this study provides valuable

tools that may be used to automate the investigation of privacy frames in a variety of textual domains.

Finally, the author believes that this study provides a very fruitful methodological framework that can be used to develop cross-cultural comparisons of privacy frames. Such a future direction – challenging and yet fascinating - may further contribute to emphasizing and understanding the role of socio-cultural, legal, economic, political and technological contexts in the conceptualization and reconceptualization of privacy.

7. References

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