WHY CONTENT MATTERS. ZUCKERBERG: *VOX MEDIA* AND THE CAMBRIDGE ANALYTICA DATA LEAK

POR QUE O CONTEÚDO IMPORTA: ZUCKERBERG, *VOX MEDIA* E O VAZAMENTO DE DADOS DA CAMBRIDGE ANALYTICA

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ABSTRACT

Following a major data breach scandal, Facebook CEO Mark Zuckerberg found himself at the center of a heated privacy row. The personal Facebook profiles of over 87 million users were unethically "harvested" by a Cambridge professor, using a deceptive personality quiz app and a web "scraper." The rich data set was then transferred to Cambridge Analytica, a British political consulting firm, which used it to build models of voting behavior and influence voters in Donald Trump's 2016 Presidential Campaign. Zuckerberg was held accountable for the leak. He offered vague apologies for the "breach of trust" that had occurred but refused to take the blame for data misuse. This article examines his line of defense and subtle evasion tactics, from a cognitive linguistics and gesture studies perspective.

KEYWORDS

Discourse strategy; ontological metaphor; conceptual reification; abstract gestures; Cambridge Analytica.

RESUMO

Após um grande escândalo envolvendo o vazamento de dados, o presidente do Facebook, Mark Zuckerberg se viu no centro de uma acalorada discussão a respeito do incidente. Os arquivos pessoais do Facebook de mais de 87 milhões de usuários foram usados de modo antiético por um professor da Universidade de Cambridge, por meio de um teste de personalidade enganoso e um "coletor" da web. Esse rico conjunto de dados foram transferidos para a Cambridge Analytica, uma empresa de consultoria Britânica, que usou tais dados para construir modelos de comportamentos de voto e utilizou tais dados para influenciar eleitores na Campanha Presidencial de Donald Trump em 2016. Zuckerberg foi apontado como culpado pelo vazamento. Ele ofereceu desculpas vagas com relação ao ocorrido e se recusou a levar a culpa pelo mal uso dos dados. Este artigo examina sua linha de defesa e táticas evasivas sutis pela perspectiva do estudo de gestos na abordagem da linguística cognitiva.

PALAVRAS-CHAVE

Estratégia discursiva; metáfora ontológica; reificação conceptual; gestos abstratos; Cambridge Analytica.

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1 INTRODUCTION

In April 2018, Mark Zuckerberg[1] was severely criticized over data misuse in the Cambridge Analytica data scandal. Millions of Facebook profiles were improperly mined to build a software program capable of influencing votes in Donald Trump's 2016 presidential campaign. Digital consultants worked on personal data that had been harvested and processed by Cambridge Analytica[2] to predict and influence voter behavior.[3] The revelation was made in March 2018 by the *New York Times* and two respected UK papers: the *Observer* and the *Guardian*. Politicians and the press, on both sides of the Atlantic, instantly rose to challenge the ethics of selling personal data in an unauthorized way. The entire business model of Facebook was challenged, and the company was soon "thrust into its biggest crisis ever" (CONFESSORE, 2018). After a "week of shame" (ADAMS, 2018), Mark Zuckerberg finally agreed to discuss Facebook's responsibility in the scandal, but his belated response struck commentators as evasive and noncommittal.[4] Tension increased when the CEO of Apple Inc., Tim Cook, made some critical comments in an MSNBC interview (March 27, 2018).[5] Cook squarely accused Facebook of trading privacy for profit[6] and held Zuckerberg accountable for it. His remarks drew a sarcastic response from Zuckerberg in an interview that appeared in *Vox Media*, a few days later (KLEIN, 2018).[7] The interview was conducted by the American political commentator Ezra Klein, and was the subject of much media attention. The 5905-word transcript, on which the present study is based, was the object of intense scrutiny. Eventually, Zuckerberg agreed to testify under oath before the Senate (April 10, 2018) and the House of Representatives (April 11,2018). As Facebook CEO, he faced pointed questions on the data and privacy policies of his company.

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[1] Chairman and Chief Executive Officer of Facebook.

[2] On May 2, 2018, Cambridge Analytica officially announced that it was "ceasing all operations and filing for bankruptcy." However, it maintained the claim that it had been "the subject of numerous unfounded accusations" and had unfairly been "vilified for activities that are not only legal, but also widely accepted as a standard component of online advertising in both the political and commercial arenas."

[3] The data of some 87 million Facebook users was first obtained by a University of Cambridge Professor, who used an automated program known as a "scraper." The data set was then sold and transferred to Cambridge Analytica, a political consulting firm, which used it to build the psychological profiles of voters and design targeted advertisements in the Trump presidential campaign. A free personality quizz app (named "thisisyourdigitallife"), which requested access to people's Facebook profiles, greatly facilitated the data breech. Many users thought they were providing information about themselves and their social networks for non-profit scholarly research.

[4] "When Zuckerberg did eventually come out to try to explain (the data breech), his crafted statement was another effort to make the exploitation of the 50 million profiles seem like a technical problem, a glitch" (ADAMS, 2018).

[5] "We could make a ton of money if customers were our product. We have elected not to do that."

[6] "Apple sells products to users, it doesn't sell users to advertisers" (reported by Ezra Klein in the *Vox Media* interview).

[7] "At Facebook, we are squarely in the camp of the companies that work hard to charge you less and provide a free service that everyone can use (…) I think it's important that we don't all get Stockholm syndrome and let the companies that work hard to charge you more (like Apple Inc.) convince you that they actually care more about you. Because that sounds ridiculous to me."

Zuckerberg's *Vox Media* response to Cook's critique (April 2, 2018) is officially an attempt at clarifying "the company's values, ambitions, business model," yet dodges embarrassing facts, and makes abundant use of indefinite catch-all terms like "people", "world", "community," "things," "content" and "issues." These keywords stand out as the salient nouns in the interview (Appendix 1). Zuckerberg's general assumption is that making the world a "more open and connected" place is bound to make things better for humankind. Yet, he admits that the company's proclaimed idealism[8] has been "sorely tested" in the last years. As Ezra Klein notes, Facebook has been widely and perversely used to spread "hatred" and "violence" on a "mind-boggling scale," while election meddling and "organized disinformation campaigns" have been mounted by authoritarian regimes and radical pressure groups. Thus, the reality of the social networking service provided by the company is clearly at odds with the official "mission" and "philosophical" stance of Facebook: "giving everyone a voice"; "building up long term relationships (that foster) long-term well-being"; promoting "civic engagement" locally while encouraging "global cooperation"; in short, "setting up a more democratic and community-oriented process", while "making sure that the time people spend on Facebook is time well spent," to quote Zuckerberg's own words in the *Vox Media* interview.

Relying on his *puer aeternus* looks and casual dress style, posing as the constant philanthropist in the face of serious accusations of data mishandling, Zuckerberg casts himself in the role of the *ingénue* who should have known better. His defense strategy is little more than a claim of lost innocence: "When we started, we thought about how good it would be if people could connect, if everyone had a voice. Frankly, we didn't spend enough time investing in, or thinking through, some of the downside uses of the tools. So for the first 10 years of the company, everyone was just focused on the positive." It is of course hard to take Zuckerberg's plea for little else than face-saving rhetoric. How could the smart founding father of Facebook have been so naïve for so long? How can the seasoned executives in his "team" still behave like the young, inexperienced Harvard students who designed the system for campus use in 2004, before going global in 2006?

Interestingly, a substantial part of Zuckerberg's defense strategy hinges on his use of the word "content" (Appendix 1). Some kind of "palpability" (TALMY, 2000) is given to an otherwise vague and elusive abstraction through the cognitive process of "conceptual reification" (LANGACKER, 2008). Zuckerberg succeeds in using "ontological metaphor" (LAKOFF; JOHNSON, 1980, 1999) and "metonymy-guided inferencing" (BARCELONA, 2010) to build his line of argumentation and eventually manipulate the reader-listener's interpretation, as the present study purports to show.

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[8] "Facebook is an idealistic and optimistic company. For most of our existence we focused on all the good that connecting people can do." Mark Zuckerberg's opening statement in his first hearing before the US Senate on April 10, 2018.

2 MANIPULATING CONTENT[9]

Klein's 49 minute "interview" with Zuckerberg is deceptively framed as an honest, responsible "conversation" between two socially-minded intellectuals: a sharp political analyst and a rich, forward-thinking philanthropist. But Zuckerberg is necessarily on his guard, which explains much of his fuzzy rhetoric. Readers might have expected a punchier question-and-answer session, pitting an inquisitive political journalist against a Silicon Valley Tycoon. What they get instead is a series of bland (rather than bold) statements, and some very dull (rather than inspired) remarks on burning topics.

The "transcript," Klein confesses, has been "lightly edited" for the sake of clarity. It is headed by a compact 433-word introduction that sums up Facebook's recent troubles with government, public opinion, and the Stock Exchange:

> It's been a tough year for Facebook. The social networking juggernaut found itself engulfed by controversies over fake news, electoral interference, privacy violations, and a broad backlash to smartphone addiction. Wall Street has noticed: The company has lost almost $100 billion in market value in recent weeks (…) Has Facebook become too big to manage, and too dangerous when it fails? Should the most important social infrastructure of the global community be managed by a single company headquartered in Northern California? And does Zuckerberg's optimism about human nature and the benefits of a connected world make it harder for him to see the harm Facebook can cause? (KLEIN, 2018)

Although Klein occasionally uses his turns in the "conversation" to ask straightforward questions or make standard requests for clarification,[10] he always begins with his own perception of events or his understanding of the situation. This after all is "The Ezra Klein Show," and Klein, not Zuckerberg, is the man in charge. It is, indeed, Klein who guides the entire conversational exchange. He is the one who selects and controls the topics, who reacts to Zuckerberg's statements and airs his own views.[11] Just as Zuckerberg is clever at evading embarrassing questions, Klein is clever at playing two roles and being empowered by both. As a conversationalist, he is free to express his views, develop his own arguments and engage his listener. As a professional show-host and interviewer,[12] he has the right to ask any relevant question and elicit a response. Both his interviewing style and his share of the discourse space reflect this strategy. Klein has the concision and moral entitlement of the truth-seeking interviewer, yet at the

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[9] A simple Word Counter analysis was performed to obtain basic statistical information, particularly content words (total number, frequency list, key word density); average reading and speaking times. Results were verified using alternative software (AntConc and Textalyser), with only minor variations.

[10] "I want to begin with something you said recently in an interview, which is that Facebook is now more like a government than a traditional company. Can you expand on that idea?"

[11] "I'm also within an advertising model, and I have a lot of sympathy for the advertising model. But I also think the advertising model can blind us. It creates incentives that we operate under and justify. And one of the questions I wonder about is whether diversifying the model doesn't make sense."

[12] The word "conversation" is used four times and "interview" only twice to denote the verbal interaction between Klein and Zuckerberg.

same time enjoys the freedom of the casual, wordy conversational partner, who pretends to be involved in a sincere and open discussion:

Table 1 – The Vox Media interview (April 2, 2018)
Conversational roles and main discourse functions

IDENTITY	ROLE	DISCOURSE TYPES AND FUNCTIONS	WORD COUNT
Ezra Klein	Political analyst	Introduction: framing the issue and setting the stage.	433
Ezra Klein	Interviewer	Analyses, comments, and questions: framing issues, guiding and feeding the conversation.	1475
Mark Zuckerberg	Interviewee	Answers, comments and developments: acknowledging, explaining defending.	3997
Total			5905

Source: Table1 elaborated by the author

Figure 1 – The Vox Media interview (April 2, 2018)
Participation level (based on the number of words used by speakers)
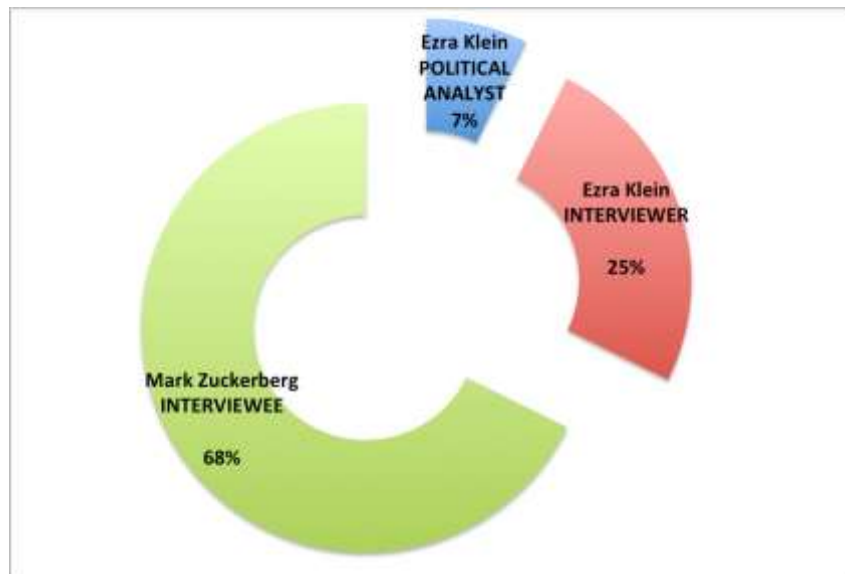
Source: Figure 1 elaborated by the author

But Zuckerberg is a hard nut to crack. He is a skilled conversationalist and can't be cornered so easily. He is superficially compliant ("sure," "I certainly think what you're saying is a fair criticism," "I certainly think that's a fair question, " "we're continually thinking through this"), but will accept responsibility for side issues only, like governance.[13] He does not hold his company accountable for more serious "disputes" that might seriously damage its reputation and threaten its economic future, like fake news, hate talk or election meddling. If anything Facebook is trying to "help" by "bringing people closer together." It is part of its challenging "mission," so we are told.[14] Throughout the conversation, Zuckerberg remains soft-spoken and euphemistic,[15] upbeat and idealistic,[16] but persistently vague and noncommittal. He is a tortured intellectual engaged in hard thinking,[17] an honest technology executive who is doing his best to fix "problems"[18] with his team ("we").

"Content" is certainly among the toughest "problems" that the company has to address: platforms and web applications store large amounts of personal data that are an essential component of people's digital lives. Yet, there seems to be some confusion between **storage** and **ownership**, since personal data can be "sold" to other companies and businesses for a huge profit. Conceptual reification – i.e. construing the non-physical in terms of the physical; turning notions, ideas, processes, etc. into "things" – makes the transaction easier to conceive and most of all to perform: personal data is "something valuable" that can be "collected" or "amassed," "leaked" or "transferred," and eventually "sold" and "acquired," as any commodity in a business transaction. Interestingly, it is academics, not businessmen, who first designed the "scraper

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[13] "Right now, I don't think we are transparent enough around the prevalence of different issues on the platform. We haven't done a good job of publishing and being transparent about the prevalence of those kinds of issues, and the work that we're doing and the trends of how we're driving those things down over time."

[14] "I think it's clear that just helping people connect by itself isn't always positive. A much bigger part of the focus for me now is making sure that as we're connecting people, we are helping to build bonds and bring people closer together, rather than just focused on the mechanics of the connection and the infrastructure."

[15] "I'm just not sure that the current state is a great one" (referring to the clashing "social and cultural norms" at war with each other on Facebook). Or "helping people connect by itself isn't always positive" (referring to the destructive hate speech and damaging disinformation routinely spread through Facebook).

[16] "I think human nature is generally positive. I'm an optimist in that way. But there's no doubt that our responsibilities to amplify the good parts of what people can do when they connect, and to mitigate and prevent the bad things that people might do to try to abuse each other."

[17] "I think it's actually one of the most interesting philosophical questions that we face. With a community of more than 2 billion people all around the world, in every different country, where there are wildly different social and cultural norms, it's just not clear to me that us sitting in an office here in California are best placed to always determine what the policies should be for people all around the world. And I've been working on and thinking through: How can you set up a more democratic or community-oriented process that reflects the values of people around the world?"

[18] "I try to judge our success not by, 'Are there no problems that come up?' But, 'When an issue comes up, can we deal with it responsively and make sure that we can address it so that those kinds of issues don't come up again in the future?'"

programs" that enabled them to "crawl" or "trawl" social networks, "observe the spontaneous "online behavior" of users in real time, "document locations, interests, and political affiliations" (FRENKEL, 2018).[19]

The word "content," it should be remembered, has both a **concrete physical sense** (any object or substance stored in a container), and a more **abstract metaphorical sense**: the ideas that are dealt with in a discussion or piece of writing. Ever since the inception of the World Wide Web in the late 1980s and early 1990s, a new abstract meaning has emerged: "content" typically refers to any kind of "material" presented on a website or other digital media.[20] This more specialized use is now dominant in Modern English. As the semantic map below attests,[21] "content" most significantly co-occurs[22] with words related to the worlds of **business** ("marketing") and **digital media** ("user," "media", "web," "site").

Figure 2 – Semantic map for "content": frequent collocates
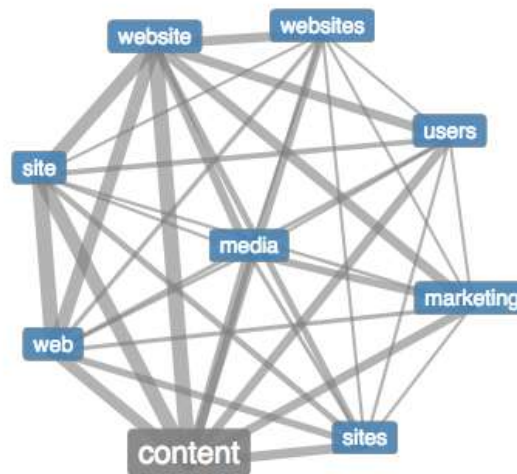
Source: Leipzig Corpora Collection

Unsurprisingly, Zuckerberg uses "content" in its modern digital technology sense, but skillfully neutralizes and generalizes its meaning. "Content" simply designates what people post on social media. As is often the case, Zuckerberg's simplicity is a clever calculation, not a sign of innocence. He knows perfectly well that "content" is a key issue, because unsecured personal data is regularly harvested, mined and monetized, while hate talk, fake news and shocking pictures are malevolently being spread through Facebook. If anything, "content" matters. Yet, Zuckerberg abstains from adding

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[19] Facebook, it would seem, had no objections to scholars accessing user data for academic research, despite restrictions being introduced for third parties in 2014.

[20] Definition based on the *Collins English* and *Webster's New World College Dictionaries*.

[21] Leipzig Corpora Collection. South African English Web Corpus (2014). Sentences: 88,384,819. Types: 7,709,815. Tokens: 1,725,131,621. Available at : <http://corpora.uni-leipzig.de/en?corpusId=eng-za_web_2014>. Access on: 08/04/2018.

[22] These are based on left neighbors, right neighbors, or whole sentences.

specifying or classifying adjectives like "sensitive" or "personal" ("personal content," "sensitive content"). Neither does he insert modifying nouns like "user" in "user content." Leaving aside a single isolated case ("meaningful content"), he consistently refrains from any form of specification. Readers and listeners are left to work out for themselves the type of "content" being referred to. Zuckerberg's avoidance strategy works to perfection: in the absence of specification, the problems posed by unfiltered content and "data trawling" (GULLAPALLI; ASESH, 2014) are never named and acknowledged as such. Facebook's share of responsibility in the process is accordingly downplayed.

There are however limits to vagueness and indeterminacy. Zuckerberg is occasionally forced to clarify his meaning, if reluctantly. This happens when he finds himself under intense pressure from Ezra Klein to explain how Facebook handles "misbehavior." During the interview, "content" acquires a number of contextual meanings (Appendix 2) and is made to signify in more than just one way. The word may first denote any digital material posted by Facebook users, as in "people share a lot of content" or "content consumption." This interpretation is conceptually and statistically the "default inference" (AGERRI; ALI, 2007). It has maximum scope and indefiniteness. At the other end of the spectrum, "content" may refer to specifically designated discourse types: "hate speech" vs. "valid political speech"; "spam"-like ads"; "click-bait" headlines or "sensational" news (as opposed to professional "journalism"). The range of specificity is here narrowed. But just as Facebook is reluctant to control the **"**content" shared by users and unwilling to accept responsibility for inappropriate material, Zuckerberg is disinclined to label and categorize the different types of "content" in a straightforward way. Granted, he does mention deviant or manipulative forms of discourse (like "hate speech" or "disinformation campaigns"), but he persistently refrains from using negative adjectives, like "racist", "violent", "harmful," "inappropriate," "unsuitable," "offensive," etc. which have an evaluative or categorizing function. Zuckerberg thus refuses to establish a clear typology ("unacceptable content," "hurtful content," etc.), and maintains his evasive, non-committal strategy throughout.

Another way of minimizing Facebook's responsibility is to maximize the relevance of authorship: the social media website allows groups or individuals to display material, react and make comments. Facebook has a facilitating role, but is not the actual source of the content being shared by users. Therefore it cannot be held morally accountable for incidents that might occur. This is why Zuckerberg systematically links "content" to those who create, share or manage it. Whoever is the author of a post, and however offensive, Facebook will not take the blame. The source may be vague (any member of "the community") or more specified ("family", "friends," "bad," "hateful," or "terrorist" organizations, "journalists," "state actors"). In Zuckerberg's argumentation, types of discourse metonymically stand for the people or organizations that produce them (e.g. "hateful organizations"), the kinds of ideas and intentions that

they characteristically express (e.g. "hate"), and the social relationships that they uphold.

Conceptual reification also plays a part in Zuckerberg's reasoning: "content" is either positively construed as an endless string of items that can be "shown" on the platform, or negatively construed as an abstract substance that is overly "consumed" by immoderate users [23] or dangerously "pushed" or "pumped" into Facebook by unscrupulous advertisers (acting like "spammers"). Zuckerberg draws a sharp distinction between pure "content consumption," which he rejects, and social interaction ("connecting and building relationships"), which he approves. Facebook, he argues, has come up with the perfect solution combining "content consumption" and "social networking." The system has been set up in such a way that the "News Feed" shows "more content from friends and family first." Users can "watch," "read" and "learn" as much information as they like while having "meaningful interactions" and "building relationships." In his view, the perfect solution: Facebook remains attractive and competitive for regular advertisers, who keep a watchful eye on the time spent by users on the platform, while promoting "meaningful interactions" among users.

## 3 WHY MATTER MATTERS SO MUCH

Human beings are essentially interactional creatures (JOUSSE, 2000): their growth and survival require constant socio-physical interaction with fellow creatures and continuous sensory-motor interaction with their material surroundings. The interaction provides a firm experiential basis for developing cognitive systems (PIAGET; INHELDER, 1998), and shaping the functions of linguistic expression (HEINE 1997; GIVÓN, 2001; HALLIDAY, 2004).

Experience is not something that is "built" out of discrete or homogeneous elements. It is an on-going process that combines and eventually integrates a variety of units. Connections are established between different interactional frames and patterns; transfers occur across domains (LAKOFF; JOHNSON, 1999; TALMY, 2000). A case in point is provided by **substance and object manipulation**. This a basic, everyday experience that is systematically recruited to help speakers think about abstract "things"; to discuss "light", "solid" or "substantial" "content"; to examine "scattered" or "homogeneous" "material"; to "handle" "big" or "small" "matters." This materialistic imagery is rooted in the shared bodily experience of objects being **made up of substance**, of objects **having size, shape, mass and dimension**, and eventually of **objects being open to different kinds of manipulation**.

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[23] "Well, I think our responsibility here is to make sure that the time people spend on Facebook is time well spent. We don't have teams who have, as their primary goal, making it so people spend more time. The way I design the goals for the teams is that you try to build the best experience you can."

Figure 3 – Transferring experience across domains
Cutting across the concrete / abstract divide
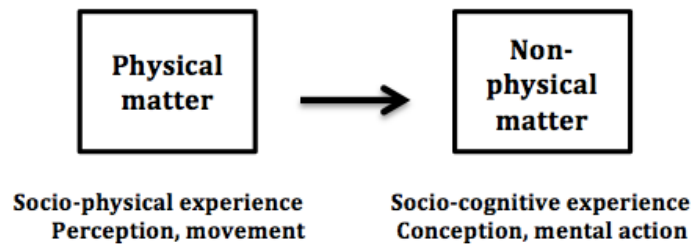
Source: Figure 3 elaborated by the author

As Arnheim (1969, p. 117) insightfully noted in *Visual Thinking*, "the properties of physical objects and actions are applied without hesitation to non-physical ones by people all over the earth, although not always in the same fashion." Interestingly, the expression of the **physical** in terms of the **non-physical**, the creation and manipulation of **abstract objects of conception,** were among the first cognitive mechanisms to be identified by Lakoff and Johnson in the early days of the cognitive theory of metaphor (1980). "Ontological metaphor" was the name they chose for our common, everyday way of "viewing events, activities, emotions, ideas, etc. as entities and substances" (25). The cognitive function that they both assigned to "ontological metaphors" was nothing less than "understanding" (in its broadest sense): "We use ontological metaphors to comprehend events, actions, activities, and states. Events and actions are conceptualized metaphorically as objects, activities as substances, states as containers" (30). This is no small achievement for, once the properties of physical entities have been mapped onto non-physical ones, key mental operations can be performed. Speakers may distinguish between different "things" and compare them, just as they may refer to the different "sides", "aspects" or "dimensions" of "something" particular. Speakers are also free to express quantity in highly subjective ways, since objective measurement is rarely an option with abstractions. Remarkably, dynamic processes tend to become **static** as a result of being reified[24] or substantivized.[25] The *Vox Media* interview contains a fine sample of such mental operations, which are clearly encoded lexically and grammatically:

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[24] From Lat. *res* "thing." To "reify" means, "to construe as a (kind of) thing", typically as a (discrete) object or a (homogenous) substance. Cognitive Grammarians equate nominalization with "conceptual reification" (LANGACKER, 2000, 2008; RADDEN; DIRVEN, 2007).

[25] The word is here taken in both its traditional grammatical sense ("to turn into a noun or substantive"), and its literal sense ("to turn into a substance"). Cognitive Grammar posits that nouns typically designate "types of things" (RADDEN; DIRVEN, 2007, p. 63) and that objects form the "conceptual archetype" of the noun category (LANGACKER, 2008, p. 94).

Table 2 – (Subjective) expression of (abstract) quantity
A lot of + N referring to non-physical entities

Speaker	Onto	Process
M. Zuckerberg	*I had a lot of love for the idea of the open internet.* *I have a lot of sympathy for the advertising model*	Quantification of an emotional state
M. Zuckerberg	*We've done a lot of research into what drives well-being for people*	Quantification of mental activity. (Dynamic process turned into a static thing/ substance)
E. Klein	*You have a lot more personal power*	Quantification of an ability Comparison
E. Klein	*A lot of the critical coverage from the media comes from journalists angry that Facebook is decimating the advertising market that journalism depends on.*	Quantification of a process
M. Zuckerberg	*We'll fail to handle a lot of the issues that are coming up*	Existence Reference, Relevance ('coming up') Quantification Mental interaction with abstract objects ('handle' = 'treat', 'pay attention to')

Source: Table 2 elaborated by the author

At a more general level of linguistic expression, the phraseology used by all media commentators in the Cambridge Analytica data scandal relies heavily on **object and substance imagery,** both to explain what happened during the BREXIT and Trump campaigns, and to voice moral outrage. Precious Facebook user information was first "harvested." It was "stored" and eventually formed "vast repositories of user data" that were unethically "mined." "Data" is the plural form of the Latin word *datum*, which

literally means "something given." Digitalized computer information is thus construed as storable and sharable "thing" – some kind of crop that can be "harvested" or some kind of ore available for "extraction." Whenever the information takes on a private character ("user / personal data"), as is clearly the case here, it is perceived as a **valuable substance** that can be "stolen" from its owners and "improperly used" by outsiders.

The use of **body-based imagery** for the description of "data mishandling" is part of the same process. Our world experience teaches us that precious objects or substances attract human greed, and are prone to being grabbed or snatched away. "Data sets" were first "assembled" by a Cambridge University researcher and swiftly "sold" to a political consulting firm, which immediately used them to "build psychographic profiles of voters" (FRENKEL, 2008). The "data harvesting" operation – targeting over 87 million Facebook users - was performed using a program known as a "scraper." The "scraping" process was automated and manual activity was probably limited to pressing keys and touching screens in a computer lab. The physical effort required to complete the task was mental rather than kinetic. [26] Yet, **fuller bodily engagement is metaphorically suggested** in most accounts of "data scraping": "trawling" social media, "handling," "manipulating," "mining," "harvesting" data. Clearly, nothing of the kind ever happened: the human bodies that managed to extract and process personal data from Facebook users were never quite so engaged. The primeval images of the "mining," "trawling" and "harvesting" human body, physically manipulating concrete physical items with mining instruments, farming tools or fishing nets, serves as a foundation (or source domain) for the more sophisticated image of the computer specialist, sitting at his desk and running a data processing program. Body imagery is here used as a **medium** to give a vivid dramatic form to more elusive technical or moral processes (e.g. "handling" or "mining" for "processing"; "mishandling" for "misusing").

Body imagery is also produced through the bodily action that spontaneously accompanies speech. Speakers are movers who symbolically enact abstract thought processes while talking (LAPAIRE, 2016). Basic cognitive mechanisms like forming, linking and presenting ideas, marking off conceptual limits, comparing entities, indicating beginnings and endings, are co-expressed verbally and kinetically (MCNEILL, 1992; CALBRIS, 2011). The speaking-and-moving human body is thus crucially involved in the articulation and transmission of thought. Hand movements, in particular, **enact** thought processes (STREECK, 2008), making the invisible visible (MCNEILL, 1992). The **gesture space** in front of speakers is simultaneously used as interactional space, narrative space, and conceptual space. Within that space, **abstract objects of conception** are routinely formed and displayed. As gesture research has convincingly

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[26] In its primary sense, "scraping" denotes a bodily action: moving a rough or sharp object across a surface (to smooth or clean); removing a layer by rubbing. (Adapted from *Collins English Dictionary*).

shown,[27] speakers are often seen holding and manipulating invisible blobs of substance, pointing to invisible entities with their **thinking hands**, when presenting and explaining "things." An "image of an abstraction" is manually produced and, as is manifest in the "frame" (CALBRIS, 2011) or "globe" (LAPAIRE, 2016) gestures, "an act of offering" may occur (MCNEILL, 1992, p. 14).

Figure 4 – Delimiting and displaying "abstract objects"
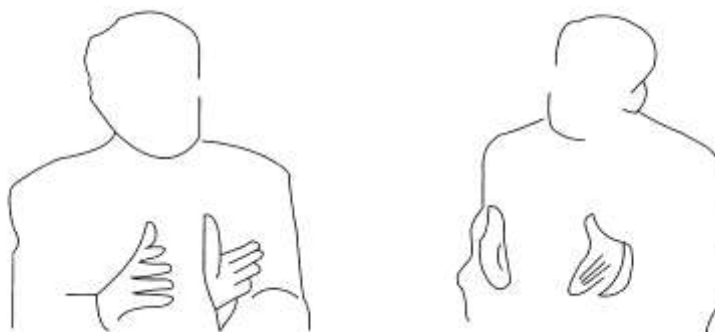
Source: The "frame" (CALBRIS, 2011, p. 118)

When "gestures of the abstract" are made - such as the ones figured above - **manual action**, **vocal action** and **symbolic action** work in synchrony. The meanings produced are simultaneously rich *and* schematic, concrete *and* abstract, palpable *and* impalpable. The **gestural reification** that occurs when virtual objects are formed, makes **conceptual reification** visible: abstract concepts are "entified" and treated as "a mass of some kind" that can be "supported in the speaker's hands" (MCNEILL, 1992, p. 154). Confirmation is given that ontological metaphors (LAKOFF; JOHNSON, p. 1980) exist and are powerful cognitive tools, that analogies are created between abstractions and physical objects or substances (Arnheim 1969), that reasoning is tied to physical action and symbolically enacted as a form of object manipulation, in short that both our **hands** and **things** "help us think" (GOLDIN MEADOW, 2003; LAPAIRE, 2018).

Zuckerberg and members of the US Senate are no exception to this rule. A week after the *Vox Media* interview (April 2, 2018), Zuckerberg testified before Congress (April 10, 2018). Senator Edward Markey from Massachusetts, a member of the *Joint Commerce and Judiciary Committee*, asked him whether he would be willing to cooperate with Congress on regulating the social media industry. Would he "support an on line privacy bill of rights for kids under 16 that would guarantee that information is

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[27] For a study of "gestures of the abstract" and an analysis of the conceptual use of space in ordinary speech, McNeill (1992) remains an unsurpassable reference. Goldin-Meadow's (2003) discussion of "how hands help us think" in instructional settings is rightly viewed as a landmark study in the field. For a useful, synthetic update see Goldin-Meadow and Alibali (2013). Streeck (2008) has produced a remarkable monograph on "gestural conceptualization" and the "manu-facture" of meaning in speech, which is truly insightful. Specific hand configurations like "the frame" (CALBRIS, 2011) and the "globe gesture" (LAPAIRE, 2016, 2018) are also worth exploring.

not used without explicit permission from the parents of the kids?" Unsurprisingly, Zuckerberg tried to evade the question and answered: "As a general principle, protecting minors and protecting privacy is very important. We already do a number of things on Facebook to do that." But Senator Markey was visibly annoyed with Zuckerberg's reply. His insistence on obtaining a relevant answer was jointly manifested by repetition, intonation and gesture: "I'm talking about a law… I'm talking about a law" he interrupted, physically pressing his point with both hands (Figure 5).[28]

Figure 5 – "I'm talking about A LAW"
Hands run over an invisible surface, pressing down

Source: CNET news, April 10, 2018

Senator Markey then added sarcastically "I had this conversation with you seven years ago (Figure 6) on this specific subject (Figure 7), in your office in Palo Alto, and I think that's what the American people really want to know right now. What are the protections that are going to put on the box for families and especially children?"

Figure 6 – I had THIS CONVERSATION WITH YOU
Forming and displaying "a defined abstract object" (CALBRIS, 2011)

Source: CNET news, April 10, 2018

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[28] The screenshots were made from *Zuckerberg's Senate hearing highlights* edited by CNET. Available at: < https://www.youtube.com/watch?v=EgI_KAkSyCw> Access on: 28/04/2018.

Figure 7 – "… on THIS SPECIFIC SUBJECT
The hands are lowered: a second virtual object is held and focused upon

Source: CNET news, April 10, 2018

Again, Zuckerberg tried to dodge the question: "Senator, I think that's an important principle…" But Markey interrupted him, holding on to his question and maintaining the "frame" or "globe" configuration": "We need a law to protect those children. That's my question. Yes or no?" (Figure 8).

Figure 8 – "We NEED A LAW… THAT'S MY QUESTION
The space is "closed on both sides but open in front of oneself" (CALBRIS, 2011)
The central, decisive character of the issue is categorically expressed

Source: CNET news, April 10, 2018

But Zuckerberg would not be intimidated and coerced into giving a straightforward answer. His response was soft, respectful but stubbornly evasive: "Senator, I'm not sure if we need a law but I certainly think it's a thing that deserves a lot of discussion."

4 FINAL CONSIDERATIONS

In the opening moments of his testimony before the United States Senate (April 10, 2018), Zuckerberg defined Facebook as "an idealistic and optimistic company (…) focused on all the good that connecting people can bring." Facebook, he claimed, empowers its users and is good for the world at large:

> As Facebook has grown, people everywhere have gotten a powerful new tool to stay connected to the people they love, make their voices heard, and build communities and businesses. Just recently, we've seen the #Metoo movement and the March for Our Lives, organized, at least in part, on Facebook. After Hurricane Harvey, people raised more than $20 million for relief. And more than 70 million small businesses now use Facebook to grow and create jobs.

Defining Facebook as some kind of high tech philanthropy is definitely "optimistic" but will not deceive anyone, least of all, the seasoned political activists and philanthropists Henry Timms and Jeremy Heimans (2018). Facebook, they scoff, is a "participation farm" and most of us, carefree users, are the animals who should rise up, as in Orwell's 1945 dystopian novel *Animal Farm*. Some will rightfully argue that Facebook's "platform hegemony" has already been challenged but with little effect so far. Yet, the recent "delete Facebook" movement, which is part of a strong backlash against the platform in the aftermath of the Cambridge Analytica scandal, may be a sign that things are about to change.[29] For it is now clear to everyone that Facebook's primary mission is not social connection and content sharing, as Zuckerberg and his "team" would have US Congressmen and the rest of the world believe. Facebook is big business and its priority is to put personal data up for grabs, at a profit. Timms and Heimans (2018) favor "platform co-ops" and "public interest algorithms" instead. They advocate "a world of peer-based technology, not just farms and factories."

Whether one believes or not in the benefits of "participatory technology" and distributed "governance," one thing is certain: any moral or legal debate about the privacy and ownership of "data," any discussion of "content-consumption" is based on a small set of ontological metaphors (LAKOFF; JOHNSON, 1980). What is "mined", "crawled," "trawled", "harvested," and "stored"; what is "shared," "leaked", "transferred," and "sold" is always construed as an object or substance that is potentially valuable, precious material that can be subject to all kinds of "manipulation" by humans. This is why the current war over content production and sharing, data privacy and data leaks, is likely to go on for a very long time.

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[29] "What we are seeing, in light of the Cambridge Analytica scandal, is the emergence of a much broader political consciousness in regards to the platform. This opportunity ahead is for all of us users not simply to "win" occasional concessions from Facebook, but to start to re-imagine the social (and financial and political) contract that we have entered into with the platform" (TIMMS; HEIMANS, 2018).

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Appendix 1: keyword density values

Key word density is characteristically expressed as a percentage. A proportional relationship is set up between the number of times a keyword appears in a text and the total number of words used. The following formula is used for computing key word density: Total number of occurrences of Key word / Total number of words in the text * 100.

The figures provided in the tables were crosschecked using:

- Text Analyzer. Available at: < https://www.online-utility.org/text/analyzer.jsp>. Access on: 09/04/2018.
- Word Counter. Available at: < https://wordcounter.net/>. Access on: 06/04/2018.
- Manual computation.

The first table shows the most frequently used **content words** (lexemes) in the *Vox Media* interview. "Content words" are typically distinguished from "function words" (grammatical markers), and conventionally divided into **nouns**, (main) **verbs** and **adjectives**, according to their morphological and distributional properties. It is interesting to note that 'thing' and 'content' respectively appear in 8th and 9th position in the noun category.

Table 1 – Nouns

Nouns	Word count & density

People	73 (1.23%)
Facebook	45 (0.76 %)
World	24 (0.40%)
News	22 (0.37%)
Time	22 (0.37%)
Community	20 (0.33%)
Zuckerberg	19 (0.32%)
thing(s)	18 (0.30%)
Content	16 (0.27%)
issue(s)	15 (0.25%)

Source: Table 1 elaborated by the author

The most frequent items in the verb category reflect Zuckerberg's dominant **statutory role** in the company's history and organization (founding father, CEO), and his dominant **speech role** in the conversation (interviewee). **Cognitive activity** or **opinion** ('*think*'); **volition** and **necessity** ('*want*', '*need*'); **creation** *('make', 'work', 'build')* are the major semantic categories expressed. Zuckerberg poses as the responsible thinker and shaper of "people's" connected future, on a global scale.

Table 2 – Verbs

Verbs	Word count & density
think	66 (1.12%)
make	19 (0.32%)
need	12 (0.20%)
work	12 (0.20%)
want	10 (0.17%)
build	9 (0.15%)

Source: Table 2 elaborated by the author

There is a more balanced use of adjectives, in terms of frequency and meanings expressed. Zuckerberg is keen to stress **diversity** among humans *('different')* - as in "there are wildly different social and cultural norms" - while stressing Facebook's **singularity**: "Facebook is different." Although in the eye of the most violent storm ever weathered by Facebook, Zuckerberg's message remains resolutely confident ('*sure', 'I'*), and upbeat *('good')*. Negativity is barely present in his speech: there is no room for anger, anxiety or antagonism. The "bad things" that some individuals or groups might do are systematically played down. The adjective *'bad'* is used only twice to acknowledge danger *("the bad things that people might do to abuse each other", "a bad or hateful or terrorist organization"),* and once do deny the problems posed by Facebook addiction ("I don't think it's really right to assume that people spending time on a service

is bad."). Remarkably, adjectives that are omnipresent in American moral politics - such as *'evil', 'violent', 'abusive', 'destructive'* - are totally absent from Zuckerberg's argumentation. The message is clear: the Facebook guys are the good guys. The company will always believe in the betterment of humans around the world *('global', 'social'*) through free content sharing and social networking: "I think human nature is generally positive. I'm an optimist in that way."

Table 3 – Adjectives

Adjectives	Word count & density
different	13 (0,22%)
good	10 (0,17%)
sure	10 (0,17%)
global	9 (0.15%)
important	9 (0.15%)
social	9 (0.15%)

Source: Table 3 elaborated by the author

Appendix 2: 'content' in context

CONTEXTUAL USE	CONTEXTUAL MEANING	SOURCE / ORIGIN
Maximum scope: any MATERIAL posted on Facebook		
My goal here is to create a governance structure around the <u>content</u> and the community that reflects more what people in the community want than what short-term-oriented shareholders might want. What we're really trying to do is make it so that the <u>content</u> that people see is actually really meaningful to them. We have panels of hundreds or thousands of people who come in and we show them all the <u>content</u> that their friends and pages have shared. The thing we've found is that you can break Facebook and social media use into two categories. One is where	Any data shared on Facebook: links, text, photos, videos, etc.	All members of the Facebook *'community'*

people are connecting and building relationships (…) The other part of the use is basically content consumption. So that's watching videos, reading news, passively consuming content in a way where you're not actually interacting with anyone or building a relationship. And what we find is that (…) the things that are primarily just about content consumption, even if they're informative or entertaining and people say they like them, are not as correlated with long-term measures of well-being.	(generic meaning, i.e. widest possible scope)	(maximum number, i.e. widest possible scope)
Broad scope: any MATERIAL posted on Facebook by family and friends		
So this is another shift we've made in News Feed and our systems this year. We're prioritizing showing more content from your friends and family first, so that way you'll be more likely to have interactions that are meaningful to you and that more of the time you're spending is building those relationships.	Any data shared on Facebook: links, text, photos, videos, etc. (generic meaning, i.e. widest possible scope)	Inner circle of the Facebook *'community'* : (specific set of *'friends'* and *'family';* restricted scope)
SPEECH (acceptable or hateful)		
People share a whole lot of content and then sometimes there are disputes between people around whether that content is acceptable, whether it's hate speech or valid political speech;	*'Hate speech'* vs. *'valid political speech'* (+ indication of high amount and diversity: *'a whole lot of…'*)	*'Bad', 'hateful'* or *'terrorist' 'organization'* vs. (Regular, respectable) *'organization'*
(Unsolicited, low quality) ADVERTISING		
There's a group of people who are like spammers. These are the people who, in pre-social media days, would've been sending you Viagra emails (…)	*'Spam'*-like *'ads',* i.e. unsolicited,	*'Spammers',* unauthorized advertisers

They're trying to pump this <u>content</u> into Facebook with the hopes that people will click on it and see ads and make money. As our systems get better at detecting this, we show the <u>content</u> less, which drives the economic value for them down.	low quality advertising	
(Unreliable, low-quality) NEWS		
There was this issue with click-bait, where there were a bunch of publications that would push <u>content</u> into Facebook, [and] people would click on them because they had sensational titles but then would not feel good about having read that <u>content</u>. So that was one of the first times that those basic metrics around clicks, likes, and comments on the <u>content</u> really stopped working to help us show the most meaningful <u>content</u>.	'*Click-bait*', i.e. unreliable low quality news vs. '*meaningful content*'	Non professional publishing organizations Vs. reliable, trustworthy sources (like the NYT)
(Reliable, high-quality) NEWS		
You need a well-informed citizenry, so we're very focused on the quality of journalism, that everyone has a voice, and that people can get access to the <u>content they need</u>.	Quality news media content ('*journalism*')	Professional news agencies, reliable sources of information

Source: Appendix 2 elaborated by the author