Ethical Tensions in UX Design Practice: Exploring the Fine Line Between Persuasion and Manipulation in Online Interfaces

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ABSTRACT

HCI researchers are increasingly concerned about the prevalence of manipulative design strategies in user interfaces, commonly referred to as "dark patterns". The line between manipulation and persuasion strategies is often blurred, leading to legal and ethical concerns. This paper examines the tension between persuasive UX practices and manipulative designs. UX/UI design professionals (n=22), split into eight focus groups, conducted design activities on two fictitious scenarios. We qualitatively analysed their discussions regarding strategies for influencing user behaviours and their underlying reasoning. Our findings reveal a combination of classical UI design strategies like sticky interfaces and incentives as their most common practice to influence user behaviour. We also unveil that trust, transparency, and user autonomy act as guiding principles for the professionals in assessing their ideas. However, a thorough approach is missing; despite a general user-first attitude, they feel constrained by contextual factors. We explain how the tensions between principles and context contribute to manipulative designs online.

CCS CONCEPTS

• **Human-centered computing** → **User interface design**; • **Social and professional topics** → **Codes of ethics**.

KEYWORDS

dark patterns, user experience design, deceptive design, manipulative design, ethics, design responsibility, consumer protection

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1 INTRODUCTION

As a designer, how confident would you be to draw the line between a persuasive and a manipulative user interface design? A few decades ago, scholars and practitioners embraced persuasive design [14, 48], and captology [30], but would they be proud of all the resulting practices today [39]? A debate around when user experience (UX) practices become manipulation has been catalysed by the proliferation of tracking technologies [73, 74, 83]. Service providers collect more user information, leading to micro-personalised targeting, also known as "hypernudging" [14, 46]. Users' autonomy is at stake: the extent to which this personalisation leads users unconsciously into manipulative practices online is questioned in a growing research community [4, 14, 40, 52, 53, 55].

The debate about interface designs influencing user behaviour has recently intensified among scholars, practitioners and policymakers. The term "dark patterns"[1] appeared in this breeding ground to describe *"user interface design choices that benefit an online service by coercing, steering, or deceiving users into making decisions that, if fully informed and capable of selecting alternatives, they might not make"* [52, p.2].

While the literature theoretically distinguishes coercion, deception, persuasion and manipulation in design [13, 75], it is hard to consistently tell them apart in the design outcome [19]. Persuasion convinces users with transparent arguments, while manipulation has a hidden influence on users [75]. Coercion implies giving users only one choice, while deception instils false beliefs by providing false information or hiding essential information. Scholars have discussed the threshold of when influencing user behaviour through design becomes an ethical concern in the context of soft paternalism, where users are supposed to be influenced for their own good [76, 77]. However, in the digital domain, the intentions of the service provider are often hidden, which makes it difficult for users to distinguish when they are being persuaded versus manipulated [54, 75].

It is urgent to study manipulation from the designers' perspective because they can play a crucial role in addressing this problem [12, 67]. Design scholars have studied how social structures inform designers' decisions [8, 21, 37, 79] and how designers can incorporate ethics in their design practice [34]. However, designers' concrete approaches to designing for online influence have been understudied; while they are critical safeguards against e.g., manipulative designs. As Mathur et al. [53] explained, a crucial and open problem in regulating 'dark patterns' is understanding when online interfaces use admissible persuasive techniques without constraining user autonomy. To do so, practitioners need guidance to evaluate on which side of the persuasion line their designs fall. The presented study explores this gap: the tension between UX practices and manipulative design, by scrutinising the design strategies that can lead to user manipulation.

[1]This paper includes the term "dark patterns", which is being discussed within the community to embed stereotyped connotations that impact communities of colour [33, 71]. The authors use it only for the sake of unpacking the problem of the ambiguity of this term in the community and propose alternatives in the outlook.

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In the here-presented study, we investigate UX/UI designers' strategies to influence user behaviour through their designs. 22 UX and UI professionals, split into eight focus groups, undertook a set of design activities on two ethically differentiated scenarios. We qualitatively analysed their discussions to identify their strategies to influence users and the principles and rationale that guide their design decisions.

Our contribution is threefold. First, we bring awareness to the grey areas when crossing the line between persuasion and manipulation, by unveiling how certain UX design strategies can become problematic. We, therefore, present strategies, principles and contextual factors that can facilitate manipulation, showing the tensions between them. Second, we provide empirical insights into practitioners' views on ethical designs when they seek to influence users. Third, we provide recommendations for designers to assess potential manipulation in their interfaces. Hence, this study provides a new lens to assess ethical practices in UX design, in the context of influencing user behaviours, showing how manipulation not only results from designers' intentions but also from their circumstances.

2 RELATED WORK

2.1 The (Un)Definition of "Dark Patterns" as a Problem of Online Manipulation

Whether "dark patterns" is an ethical, psychological, or designerly term is unclear. While regulators have defined specific designs like pre-marked check boxes or providing inaccurate information about limited stock as "dark patterns" [4, 69], some policymakers [62, 64] refer to them generically as design artefacts in user interfaces that impair autonomy. This leaves room for interpretation when it comes to edge cases that resemble persuasive designs [27, 39]. In an attempt to define a "dark pattern" from a practical standpoint, Mathur et al. [53] distinguished attributes associated to the choice architecture of the interface. Gray et al. [39, 41] proposed categories of design strategies to differentiate the vast body of "dark patterns": nagging, obstruction, sneaking, interface interference, forced action and social engineering. While both attempts to define dark patterns point towards questionable UX practices, some identified strategies overlap with classical persuasion techniques: for instance, emotional design, or computers as social actors [30] coincide with social engineering. This makes some "dark patterns" techniques hard to distinguish from persuasion [14, 39]. It is hence essential to further understand under which circumstances they become manipulative and cause harm to users.

2.2 Ethical Tensions Between Persuasive and Manipulative Design

In this paper, we discuss when UX design strategies fall under the realm of persuasion or when they become manipulation. We do not take a normative stance in deciding whether a certain manipulation is good or bad.

Scholars in applied ethics define manipulation as the intention to stealthily and elusively change a person's behaviour towards goals this person did not intend to achieve [57, 68, 73, 74]. For manipulation to occur, there must be an interest in subverting users' vulnerabilities covertly [68], typically with irresistible incentives. Manipulation reduces the user's capability of resisting the influence, and hence their autonomy [10, 43, 54, 74]. For instance, restricting choice options or the fact that they do not understand the influencing mechanism infringes their autonomy [10]. Manipulation may include deception and coercion [1, 74], although both are not necessarily manipulative. Deceiving implies making false statements deliberately to motivate a specific behaviour [74]. Coercion means leaving only one possible option to users, so they have no other choice [74], like removing options [10, 68, 75].

Unlike manipulation, persuasion does not infringe on users' autonomy nor exploit their vulnerabilities. Persuasion is a type of influence that is transparent about the persuaders' intent [26, 31, 75]. Trying to steer users in another direction does not imply unacceptable influence *per se* when it works transparently [26, 68]. This is what some authors call "rational persuasion" since the persuader gives rationales to the persuaded to motivate a different behaviour openly and transparently [10, 75]. Similarly, scholars have also discussed a specific type of influence: nudges [2, 54, 66, 80]. Depending on their transparency levels and resistibility, nudges can be manipulative or persuasive [54, 56, 61]. To be persuasive, nudges are supposed to be transparent or, at least, provide enough information to the persuaded and be resistible enough [54]. The differences between the types of manipulation and rational persuasion reside, therefore, in transparency and easy resistibility to the mechanism of influence.

2.3 How Does Design Influence Users? Persuading and Manipulating with UX and UI Design

How do we know when designs cross the line of manipulation, subverting vulnerabilities in a hidden way? Scholars in design have explained how, through the user interface design, affordances [36, 60] and signifiers [59] are made *apparent* and can apply a certain *strong force* [78]. According to Tromp et al. [78], the attributes of "salience" and "force" make designs decisive, coercive, seductive, or persuasive. "Salience" refers to how apparent the mechanism of influence is for the user. "Force" refers to the extent to which users have room to take a path different from the one that the design proposes [78], which translates into "user agency". To disentangle if something is a dark pattern -manipulative, hidden and subverting vulnerabilities- or simply persuasion -transparent and allowing users' agency-, designers have to navigate those attributes.

In an attempt to make the attributes "force" and "salience" navigable for designers, we have adapted the model from Tromp et al. [78] with applied ethics terms and theories (see Figure 1). Based on this adapted model, persuasion, manipulation, deception, and coercion can be represented as a function of salience and force. Persuasive designs are apparent in salience and weak in force since persuasion gives enough agency to the user in a transparent way. On the contrary, manipulation is hidden, not giving agency and subverting users' vulnerabilities, and can apply a strong or weak force. Coercion is a strong force, by limiting user options, but it is also apparent to users.

Designers can take different ways to make design strategies more or less salient and strong. For example, friction might contribute to making a design strategy salient because it "interrupts the users"

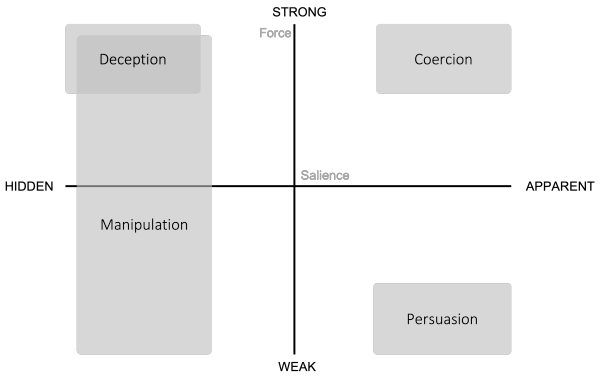

Figure 1: Dimensions of influence through design. Adapted from Tromp et al.'s [78]

primary tasks' [25, 28, p.3]. Kollmer [44] explains digital sludges -i.e., nudges with bad intentions- through the concept of friction as a way to increase the effort for users to reach their initial goals. Scholars and policymakers have also criticised friction. For instance, Gray et al.'s [39] taxonomy on designers' strategies identifies obstruction and nagging techniques as dark pattern strategies that interrupt or redirect users. Bowles [14] criticised the use of salient persuasion as a potential solution that, in practice, may simply overwhelm users. However, friction in design is also used to foster reflection and guide users to more conscious decisions [25, 28]. Friction can even contribute to the force of a design by not only hindering but also helping users to resist the influence and being aware of their agency [49].

The use of emotions is a "hidden" or subtle technique that is widespread in UX design too. Fogg, explaining computers as social actors [30], already appealed to the use of human emotions in the same way as Norman, who coined the "emotional design" [58]. The "dark patterns" community is questioning the use of emotions as a way of manipulation since its resistibility is still unclear [4, 11, 39]. Without clear and universal criteria to set boundaries of how to use "salience" and "force" to influence behaviour ethically, we build upon the empirical exploration of designers' rationales and strategies in UX to examine the tensions between UX practices and manipulation.

2.4 The Role of Designers in Designing Manipulation

How designers shape technology has been a concern of design and critical design scholars for many years [3, 7, 9, 42, 65, 78, 79, 81]. Shaping behaviours within the "digital architecture" [47], designers become mediators of ethics between business models and users, implementing their ethical commitments [21, 37] and being responsible for their impacts [9]. In their study with designers at their workplace, Gray and Chivukula [37] explained how designers mediate ethics in different ways. In some cases, they are aware of malpractices but constrained by organisational factors. In others, they mediate with their knowledge, applying and improving the design outcome and informing other stakeholders about problematic designs. Within this ethical mediation, Chivukula et al. [23] identified different roles that designers may adopt when applying ethics: educator, learner, policy-follower, activist-advocate, member of my profession, responsible, deliberative/thoughtful and translator. Chivukula et al. [21] also noticed how design students leveraged different values according to how they interpreted the business intentions: donations for charity versus manipulative e-commerce. User-centred approaches and persuasive techniques sometimes conflict in the design process, confronting values between designers and other stakeholders.

If designers do not mediate on ethics, contesting specific stakeholders' decisions, there is a risk of falling into "ethical blindness" [63]. "Ethical blindness" refers to acting unintentionally unethically in certain circumstances. For instance, when stakeholders have a fixed set of values that nobody contests [63]. In this regard, Wong [82] explained how UX designers used tactics of soft resistance to confront different values of stakeholders when designing technology. The relationship between stakeholders plays a crucial role in some ethical frameworks [34], but also is an essential part of user-centred design and UX approaches [45]. "Ethical blindness" is present in anti-patterns or the #asshole design discussion [29, 38] as bad designs that are not necessarily intentional but lead users into decisions they would not want to make. We expect to contribute to this set of literature explaining these tensions for professional design practitioners in the specific context of manipulation in design.

2.5 Research Questions

There remains a gap in prior research about a clear differentiation between persuasive UX practices and manipulative designs. The present study will address this gap. Our objective is to investigate when UX design strategies cross the line of manipulation by understanding design practitioners. Therefore, we empirically study their design strategies employed to influence behaviour, their considerations towards those, and the context in which those design practices take place. To reach those objectives, the present study aims to answer the following research questions:

(RQ1) What strategies do UX designers use when they are asked to influence users through an online interface?

(RQ2) What are UX designers' considerations when evaluating their design ideas to influence user behaviour through an online interface?

(RQ3) What are the contextual factors that shape UX designers' decisions when they are asked to influence users through an online interface?

In studying dark patterns and manipulative designs, designers have not been adequately involved in disentangling these practical aspects. Although Gray et al. [39] use a practice-led approach, we still lack insights from design practitioners into their persuasion strategies and their pain points when designing influence and assessing the effectiveness and ethical boundaries of their designs.

3 METHODOLOGY

3.1 Overview

The three research questions were addressed through a qualitative data collection based on a series of design activities. UX/UI design practitioners were asked to execute a set of design tasks on a realistic brief. We conducted a thematic analysis [15–17] of

Table 1: Distribution of participants by company, brief, job position and years of experience, educational background as self-declared. FF corresponds to the "Fast-fashion" brief, NGO corresponds to the "Non-Governmental Organisation" brief.

Comp.	ID	Brief	Job position	Exp.	Education
A	P01	NGO	Senior UX Designer	9 years	Electrical and Computer Engineering
A	P03	NGO	UX Designer	8 years	Engineering in Computer Science / Design for Interaction / Industrial Design Engineering
A	P19	NGO	Senior UX Designer	11 years	Computer Engineer Design / Fine-arts / User-Centered Design
B2	P08	FF	UX Designer	5 years	Design
B1	P09	FF	UX Designer	10 years	Web technologies and management
B2	P10	FF	UX Designer	30 years	Computer and Accounting (Development)
B2	P12	FF	UX Consultant	3 years	Communication and information
B1	P04	FF	UX Manager	9 years	Communication and Computer Graphics
C	P11	FF	UX Designer	4 years	Information and Communication / Digital Project Development
C	P13	FF	Lead UX/UI Designer	9 years	Graphic Design / Web Design
D	P05	NGO	Senior UX Designer	6 years	Psychology
D	P14	NGO	Fronted Developer	4,5 years	Engineering in Computer Science
D	P15	NGO	Product Owner	13 years	Business / Innovation Digital Management
E	P16	NGO	UX Designer	3 years	Product Design / Advertising / Digital design and project management
E	P17	NGO	UX Designer	8 years	UX Designer / Computational Sciences
E	P18	NGO	Head of Design	29 years	Modern Design
F	P20	FF	UI/UX designer	3 years	Architecture
F	P21	FF	UX/UI Designer	2 months	UX/UI Design
F	P22	FF	UX Researcher	3 months	Cognitive Science
G	P02	NGO	UX/UI Designer	2 years	Computer Applications
H	P06	NGO	Freelance Designer	10 years	Cognitive Science / Computer Science / Socio-technical systems
I	P07	NGO	UX/UI Designer	7 years	Videogames Development and virtual environment

the conversations with UX/UI design practitioners using inductive coding to uncover their approaches and the tensions within the design strategies when influencing users.

3.2 Participants and Recruitment

We recruited 22 UX/UI professionals currently active in industry, with a wide variety of backgrounds and years of experience. They had on average 8.35 years of professional experience (mode = 9, sd = 7.7). 15 identified themselves as women, 6 as men, and 1 as non-binary (see Table 1). We used professional networks and social media to reach design practitioners: potential candidates whose LinkedIn profile included "UX/UI designer, manager, consultant" or similar terms were contacted. Then, the contacted participants were asked to invite their colleagues to participate in the activity, as a means of snowballing. The participants were distributed into eight groups of 2-3 participants each and assigned to one of two design briefs: Four groups conducted the assignment to design for a human rights NGO (from now on "NGO") and four groups for a fast-fashion (from now on "FF") website (see Section 3.3.2 for more details). Seven of the groups were formed by co-workers who respectively worked for the same company, meaning seven different companies were involved. For one company, we formed two groups for the design activities (company B in the table below). The remaining group was formed by designers who did not know each other previously (company G, H and I). The study was approved by the Ethics Review Panel of the University of Luxembourg and complied with all relevant regulations. Informed consent was provided by participants, who were fairly compensated for their time.

3.3 Protocol

3.3.1 Activities. Each group of participants was given with a design brief simulating a real task. In both briefs, they were asked *"to create an effective solution for [the client's] website to ask visitors for their emails to receive a newsletter"*, similar to the scenarios proposed by Chivukula et al. [21]. Depending on the brief, participants drafted a solution for a "Human Rights NGO" or a "Fast Fashion company" that needs to collect email addresses to increase awareness and participation in human rights activities or to send commercial offers in the case of the fast-fashion company. With the exception of the business' intention (NGO vs FF), the instructions and tasks provided were the same in both briefs. We chose these briefs because while they represent different intentions from the business's point of view, neither business must necessarily have their intentions aligned with the user. Solutions were sketched as low-fidelity hand-drawn prototypes (from now on 'the prototypes'). The participants were informed that they could be creative, check information online and write comments on their designs. The activities were conducted in a university lab or in premises provided by the companies respectively.

The session was divided into three activities:

i In the first, individual, activity, the participants were asked to design an effective solution for their scenario. To stimulate ideation they had to make a Crazy 8 activity [6] (which

consists of sketching 8 solutions in 8 minutes), before further detailing their preferred idea (20 min). Participants then pitched their design idea to the group (2 min).

ii This was followed by a group activity in which participants were asked to design one solution together, either based on their individual ideas or from scratch (20 min). The group then pitched the solution to the moderator (2 min).

iii Lastly, a focus group was conducted to reflect on the prototypes and the strategies to influence behaviours online (30 min). Only in one session, with designers from company B, we conducted two parallel design activities, combining both sub-groups for the focus group at the end of the session. In the focus group participants were asked about the following topics: elements that influence users, users' understanding of influence, the impact of design elements on users and society, designer's perception of ethics and designer's perception of dark patterns [2].

3.3.2 Material. Participants were provided with the following material: (i) Design brief, (ii) a Crazy 8 template [6], (iii) a layout with the landing web page of the FF or NGO website made by the researchers and inspired by actual websites. (iv) A collection of royalty-free images corresponding to the topic. [3] (iv) Templates to elaborate their design ideas.

3.4 Data Analysis

We recorded and transcribed the participants' individual and group pitches, as well as the focus group discussions. Given the topic's complexity, and its subject-dependency, we built our analysis on the reflective thematic analysis method (from now on "RTA") [15, 17]. We looked for patterns in the participants' approach to influencing user behaviour and the tensions they experience. For the sake of reflecting on the verbatims and understanding transcriptions, we must note that there was only one participant whose mother tongue was English. The verbatims accompanying the results are therefore corrected.

We built on the Braun and Clarke [15, 17] six-stage process of reflexive thematic analysis to actively seek the themes and subthemes. The first author, who conducted the data collection and transcribed the data, familiarised themselves with the data during the transcription process, by extracting summaries of the data and taking notes regarding relevant insights. Then, initial codes were generated. The software MAXQDA supported this process. Alternating the scenarios while searching for themes allowed to uncover more nuances and evolve from more descriptive codes to latent themes. Relationships between codes, sub-themes, and themes were established at this stage, supported by visual maps. These themes were confronted and discussed with the second author, who double-coded 50% of the data. Themes were reviewed and data was reinterpreted through discussions in an iterative process. Finally, the three overarching themes that answer the research questions were defined and named, with a sub-level of themes (See Table 2).

[2]Both protocol and focus group guide are provided as supplementary materials

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4 RESULTS

In this section, we present the analysis of the discussions with the participants, grouped by each research question. First, we present the strategies that participants use when they are asked to influence users through an online interface (RQ1). Second, as designers' considerations (RQ2), we present participants' delimitation of manipulation and four main guiding principles they apply when evaluating this in their own designs. Third, we report the contextual factors that shape participants' decisions when they are asked to influence users through an online interface (RQ3).

4.1 (RQ1) Design Strategies to Influence Users: Influencing is an Exchange

"Influence is an exchange" captures the idea that participants perceive the process of influencing users as a trade: users cannot be asked something without obtaining something in return. This idea comes from the principle of *"good user experience first"* (see Section 4.2) and informs the strategies designers use to influence users through their designs. In response to RQ1 we elicited the following strategies: convincing with arguments, providing tangible and intangible incentives in exchange, using frictional and sticky elements and testing the effectiveness of the mechanism of influence.

4.1.1 Convincing users with reasons related to the product/service. The main strategy participants adopted to convince users was outlining the direct benefits or favourable consequences. This strategy was especially adopted in the NGO scenario, in which participants pointed to the NGO's positive role in the world to convince users to sign up for the newsletter. The FF participants used rational arguments associated with the products and what the users can get through the products.

4.1.2 Exchange between users and designers. Apart from highlighting existing benefits, participants also tried to introduce new, additional benefits to the exchange. Advocating for giving a pleasant user experience, the participants always tried to provide added value when they asked for users' email addresses. Even when the brief was not offering anything, they would attract the user with a presumed added value - e.g., special offers for your birthday (B1). The participants fear that users might consider the newsletter a nuisance instead of something with potentially inherent value. Participants provided this type of transaction to users by three principal means: *appealing through feelings*, *engaging with the audience*, and *offering tangible and intangible incentives*.

Participants showed reluctance to use negative *feelings* while using positive ones was perceived as a common way of providing a pleasant experience. This is a strategy to give more weight to the positive side of sharing the email address, positioning it as an *intangible incentive*. Some intangible incentives offered were feelings: belonging (D), community (A, B1, B2), hope (E, A), trust (A, F, G, I), welcome and connection (B1, B2). On the other hand, *tangible incentives* such as stickers (D), platforms and podcasts (A), money (B1, B2, C), or even a styling service (F) were also offered through the prototyped solutions.

Table 2: Themes identified in the data and their alignment with the research questions

Research question	Overarching themes	Themes
RQ1: What strategies do UX designers use when they are asked to influence users through an online interface?	Influencing is an exchange	Convincing users with reasons Exchange between users and designers Understanding how strategies work on users Friction and stickiness
RQ2: What are UX designers' considerations when evaluating their design ideas to influence user behaviour through an online interface?	Conditions of manipulation and guiding principles	Conditions of manipulation Impacts Autonomy Trust and transparency Usability Users vs user experience first
RQ3: What are the contextual factors that shape UX designers' decisions when they are asked to influence users through an online interface?	Responsibilities and hurdles	Design responsibility is shared Imbalanced power towards business

P5, P14, and P15 illustrated the different types of incentives they provide to engage users. They initially suggested a physical reward such as a sticker, ultimately leading to the intangible reward of recognition for being part of the NGO. These types of exchanges were sometimes identified with the idea of "user first" (P8) as a way to provide "meaningful experiences" (P2). Still, they are intentionally designed to influence users.

> M: *"I'm very curious because this is not the first time that the three of you mentioned transactions or incentives. What do you mean by that in this case?"*
> P15: *"The stickers. Right? Yeah."*
> P14: *She had the idea of stickers, but it depends if you can give more incentives..."*
> P5: *"It's not like stickers. It's more than just the stickers, right? It's also like, if you put the sticker, like on your car or on your bag, there's also like this feeling of 'I'm a good person because'... and that's free marketing for the company."* (See Figure 2)

4.1.3 Friction and stickiness. Friction and stickiness represent concrete UI mechanisms that participants balanced to influence users. Friction is a way of interrupting users' tasks, and stickiness is a way of repeating the call to action, so it always stays present in the user's sight. Building on the "user experience first" principle, participants were unanimous in cautiously using friction to catch the user's attention without bothering the user. Hence, we observed the trend of using sticky mechanisms to keep the information present as long as possible in the prototype, without being frictional, but always prominently positioned in the hierarchy of the prototype. These mechanisms were observed for the use of pop-ups, sidebars, top bars and calls to action. P10 explained how keeping sticky calls to action, which are always visible when browsing through the website, will continuously catch users' attention to subscribe.

> *P10: And the way you can see, because you have, for example, the pop-up once. But if you don't respond now, you have a possibility with a fixed banner to [come back] when[ever] you want [...]. And the other one is, for example, you don't need to subscribe [now], but once you go to the basket, you have a reminder because you already [gave] your email address. So you just have to uncheck and check, [there are] several positions [to place the call to action]... it could be interesting.*

4.1.4 Understanding how strategies work on users. To conduct an exchange with the user, participants reported the need to understand how their prototypes work on their actual target. They suggested the standard techniques of testing interfaces like A/B testing (G, H, I, C, A), and personas (P15). They would also benefit from using analytics (B1, B2) from the website and from third parties. While participants expressed their desire to better understand the users: *"talk a lot, test a lot"* (P21), they actually mentioned methods that ultimately aim to exploit the users' weaknesses while guaranteeing a good experience. This shows their desire to understand the users stems from the intention to elicit a certain behaviour out of them.

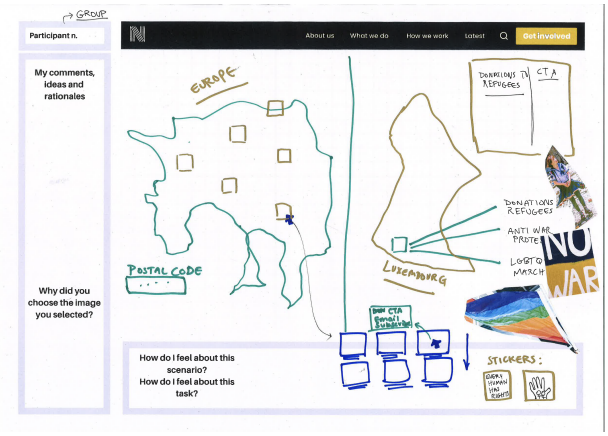

Figure 2: Prototype from group D for the NGO brief. Participants decided to maintain the call to action persistent with 'windows' that blink showing different parts of the world. The intention is to avoid an intrusive design for the user.

4.2 (RQ2) Designer's Considerations when Influencing Users: Delimitation of Manipulation and Guiding Principles

During the design activity, the participants regularly self-assessed their solutions [5]: Is this design going to be effective in obtaining users' email addresses? How can I make it even more effective? And how would I react if I was facing this interface? In response to RQ2, we elicited participants' considerations when evaluating their designs based on two aspects: their delimitation of manipulation and their intrinsic guiding principles when designing.

4.2.1 The limits of manipulation. As a general trend in our data, participants demonstrate intuition about what they deem acceptable influence and what crosses the line, but the concrete limit of manipulation is unclear to them. The researchers did not introduce the term manipulation; it spontaneously emerged in the participants' conversations and proved very difficult for them to define clearly. Manipulation bore a negative connotation throughout our participants' exchanges. They associated manipulation with restricting user autonomy, "pushing" users into something unsolicited, or tricking and playing with them. However, reflecting on what is socially acceptable in offline marketing and television, the participants found that their techniques resemble those and are hence acceptable: *"so that's the beginning of manipulation, but that's just the way it is, that's communication"* (P16).

Role of the client. The nature of the client seemed to trigger ethical concerns for participants. Except for one group with the NGO brief (D), none of the designers reflected if they were manipulating, associating and justifying ethical responsibility with the business behind the request *per se*: *"in my opinion, for the NGO or another governmental institution which tries to help people and tries to save the planet [...] [if] I must design a mega massive button for [the user to] subscribe, in my opinion, it is not a dark pattern"*(P18), or *"the shop, the fast-fashion is not ethical, it is the company"* (P4). As an illustration of this trend, one significant difference between the NGO and the FF briefs was the use of "real stories" (D, A, E). Participants with the NGO brief would not consider their strategies manipulative if the message explained a reality within the organisation - e.g., projects to prevent war, hunger or poverty. On the contrary, the participants on the FF brief would acknowledge their potential manipulative power when using similar strategies.

Impacts of design. We expected participants to also reflect on the potential unintentional consequences of the design choice during their exchange. Only two prototypes embedded design decisions with inclusion (B1) and ecological purposes (E). However, during the focus groups, the moderator had to explicitly ask about the impacts the prototypes might have because they were rarely spontaneously addressed by the participants. Despite this facilitation, the participants only reflected on their intended outcomes -i.e., increasing subscribers- as a potential consequence, while it was harder for them to foresee unintended consequences.

Participants were then also prompted to talk about the user groups and the societal aspects their designs might affect. When asked about the impact of their design on the user, the answers still did not go beyond the intended outcome or the direct effect of the design on the target users. The participants barely saw any potentially negative impact, with few exceptions: privacy loss and the vulnerability of users with high sensitivity to Human Rights when using images that appealed to emotions (D, E). When asked about the societal impact, participants seemed to be aware of some potential unintentional consequences caused by their design outcomes, such as an excessive carbon footprint or a lack of diversity. To counter such consequences, participants considered green design solutions (C, A, E) and the use of inclusive images (B1, B2, E, F).

When discussing the potential susceptibility of users towards the design strategies, participants showed a pattern of identifying intersectional conditions of vulnerability: personal sensitivity towards certain topics - users more connected to the topic, like the LGTBIQ+ community (D, F), but also lonely or isolated people (B1, B2) - and socio-economic vulnerabilities - young people, people with fewer resources, or women (B1, B2, C). Especially in the FF brief, the focus group reflected on potential harm for people at the intersection of youth, low economic status and personal vulnerability. *"The problem with fast-fashion, is [for] people who have less money. It's not always young people, but people with less... buying power"* (P4).

4.2.2 Guiding principles. The main guiding principles that the participants drew on to avoid manipulative designs were the following:

Autonomy. From the UI elements and general strategies of influence proposed by the participants, we saw that they aimed to increase trust to ensure that the users agree "voluntarily". Thus, coercion and deception were perceived as unethical influences that participants would not apply. While they expressed that leaving the decision to the user is crucial, they had no clear idea of how to give such agency to them. The participants argued that giving agency to users relates to the amount of information shared with them: if users are informed, this will allow them to make rational decisions.

> P15: *"And if you're gonna give me your information, of course, make sure that [you] are agreeing on receiving the newsletter and agreeing on giving someone else's email. And also, this [other] person has to agree to be subscribed. And if we had all these steps, yes, I guess it's transparent."*

P15 alludes to the fact that with enough information, regardless of the mechanisms that are being used, users always have agency because they can close the webpage. In relation to this, P11 explains, the website gives autonomy because *"[it] gives you the freedom to make your action or not. Here you are free not to give your email address, but you have 20 per cent off"*. Users are autonomous to actively avoid the influence: rejecting the discount, avoiding the pop-up or closing the website. This alludes to an interpretation of autonomy as negative liberty: as freedom from external barriers, instead of a positive one, freedom to act [18]. To act upon this negative liberty, participants assume action on the part of the user - e.g., closing the window.

Autonomy as a core principle is also present when participants are asked about "dark patterns". They easily identified those as strategies to *"trick users"* (P9) through forcing, deception, manipulation and coercion, and they expressed that they would never want to find themselves consciously designing such elements.

Trust and transparency. Participants associated autonomy with transparency and trust, as this would guarantee users' autonomy. According to the participants, users need to trust the client and their service in order to be influenced. To achieve this, the participants aim to create designs that are transparent with the user about what is being asked of them and what they obtain in exchange. Hence, this was reflected in the prototypes using contact information, privacy policies, or more information links.

> P7: *"[The importance of trust is] for the user, who needs to click on the button. Because if you're not sure what is going on with either the NGO thing or to whom you are giving the information, maybe it's another entity behind it managing [the data]. [You] don't know if it's a mail service that will send you a lot of spam [...] or [if] you get scammed [...] So here we should need to work more on the trust and of course [this] is the first step to building a website to get the [user's] email. But yeah, the user will need more trust on what we are providing."*

P7 and P2 discussed the need to disclose as much information as possible to instil trust in the user and therefore get users' emails. This reflects a nuanced conception of transparency as a value, as it could be considered instrumental to the goal of influencing the user, instead of a value per se. There is a second nuance in the idea of *transparency.* It is not clear if participants refer to the transparency of the business intentions or the transparency of the influence strategy. Instead, the transparency of the strategies depends on participants' preconceived notions of what users already know about these strategies, similar to conventions regarding usability. As P11 explained: *"sometimes it's better to make something that is pretty similar rather than very 'innovative', because [you] lose the user or create some confusion"* (P11). This connects with the principle of *usability.*

Usability. Participants considered *usability* as another guiding principle. They reflect on users' expectations for the specific use case and then rely on the design strategies and mechanisms that users are familiar with, to make the interaction as smooth as possible. Although participants recognised that they might be excluding specific target groups -like the elderly or users with disabilities-, they generally employ common elements, such as pop-ups, buttons to close, banners or sliders. They furthermore favour design patterns that have proven effective for other providers: *"The things that we saw really often [...] [are] the ones that I'm sure will work for 20 or 30 per cent of the users"*(P13).

Users first vs good user experience first. Participants identified themselves as advocates for users; however, they are actually advocating for a good *user experience.* Participants chose their design strategies considering users' needs, users' expectations, and, above all, the user experience. This distinction is important because guaranteeing a good user experience implies that practitioners disregard strategies that can be bothering, annoying, too pushy or intrusive for the user. However, as a counterpart, they may create more subtle mechanisms that guarantee a good experience but with the power to subvert vulnerabilities. This is very present in the use of feelings as strategies (see Section 4.1).

> P3: *"[...] at the same time, [I] have like a message of hope. So, when I look at all these images (Researcher comment: Participant points out some images) they're depressing and... which is true. Like... it is a very strong issue, and it is something that people should feel strongly about. But oftentimes, [the users] need inspiration as well. [They] need a place of hope, which is why I chose images that are sad, but also they look up to something positive so which is why there's this... yeah, this girl [among] ruins."* (See Figure 3)

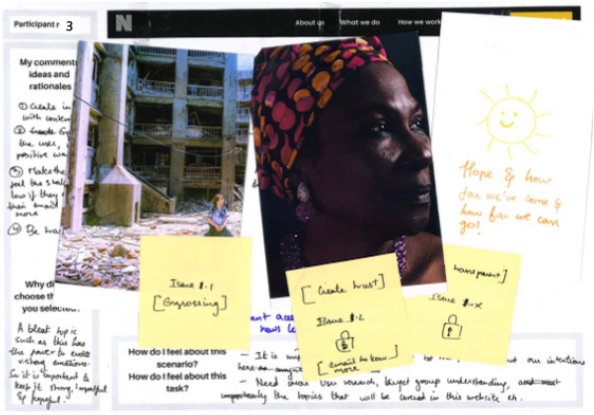

Figure 3: Participant 3's prototype for an NGO. The participant selected three different images to transmit hope, transparency and trust to the users. This was a matter of showing what the NGO does and providing users with intangible incentives that nudge them to provide their email.

Participants did not mean to trigger unpleasant experiences with, for example, shocking images in the NGO scenario. They aimed to evoke positive feelings as a way of getting the user to subscribe to the newsletter. This is also present when testing mechanisms (See Section 4.1): participants' desire to test stems from the intention to change behaviour. The participants, therefore, knew that a good user experience is instrumental to influencing user behaviour.

4.3 (RQ3) What are the Contextual Factors? Responsibility and Hurdles in Designing Influence

To answer RQ3, we found the context in which design practice takes place contributes to determining the use of online influence strategies. Designing ethically is a shared responsibility and depends on the support or constraints coming from other stakeholders. However, the position of designers in this decision seems imbalanced. Therefore, the set of stakeholders with decision-making power, and the position of the designers within the organisation, matters.

4.3.1 Responsibility is shared. Participants reported being aware of their responsibility and their knowledge about human psychology, being able to manipulate users. Their role is crucial, but they are not alone in this process: the set of stakeholders with decision-making power matters. This was shown when reflecting on other stakeholders as supporting or constraining factors in the design of influence. Participants regularly mentioned the reliance on the role

of the legal department and corporate values to ensure that regulatory limits are not trespassed by their designs. For example, they know about GDPR compliance but are not necessarily sure about its implications for their designs. Web developers are also referred to as key collaborators: the feasibility and cost of implementation for web developers were considered when assessing the suitability of the solutions.

Participants know that the client plays a significant role in how ethical their actions can be; hence, they sometimes associate ethical responsibility with the business. While FF participants tend to identify unethical practices in malicious designs required by the business model, NGO participants justified their potentially manipulative designs with the 'greater good' that the NGO would bring to society. However, participants failed to recognise other impacts from their design that are not associated directly with the business.

Participants unanimously agreed that the contracting client/main stakeholder holds the responsibility for the design choices: *"We use emotions for the client says [inaudible]. It works, but it's not very grateful"* (P12). There is a clash of values between what designers consider permissible and the business interests, which is further developed in the following section (see Section 4.3.2).

4.3.2 Imbalanced power towards business. This set of relationships constrains participants and their power of action when it comes to behaving more ethically. They acknowledged they have two options to avoid manipulative designs: carefully choosing the company they work for and rejecting the assignment while assuming the consequences this implies.

> P9: *"[...] we are working for [this company], personally, as an internal designer rather than working [...] for Amazon, for example. It's a choice because I don't want to help Amazon. They're making a lot of money. I don't care about Jeff Bezos. So I prefer to work here and help the poor [employees of this company]."*

Similarly, they advocated for educating other stakeholders in the company in two ways: firstly the best ways to increase subscriptions at any cost, and second how to do the same without intentionally harming users. Here, P12 and P9 explained their educator role. They can teach that avoiding unethical practices, despite the sacrifice of some subscriptions, can be worthwhile.

> P12: *"I agree with with [P9]. I think it's good to also show [to future colleagues] what it is, what exists, like dark patterns, and maybe give them some solutions to do things well. And also I agree because I think it's also our responsibility to maybe, maybe not change because it's going to be complicated; but maybe to be conscious about things. And, for example, like for the newsletter, I think maybe we can explain to the client that, sometimes, it's better to have maybe less number of emails but with more quality. It's better to have maybe 20 than 100."*

However, some participants acknowledged that acting according to or imposing their values is not always possible, and their role as educators cannot always be fulfilled. P6 and P7, who were freelancers, discussed their actual possibilities of avoiding the design of "dark patterns" if the company asked for it, explaining the difficulties of their position. The designer's reputation and values might be at stake, but it is not an easy decision when "you need to eat" (P7). P6 and P7 exemplify the internal conflict that designers can face when trying to be ethical: they have their own values, but they are afraid of finding themselves rejecting everything that might look unethical.

> P6: *"I think, personally, I will feel the spirit before signing any contract. But we never know if it's something really big. Maybe I will ask myself as a designer if I want to be associated with that. That would be subject to one contract because I work for myself. So, if I want to show my work, I have to show my values too. So, I don't want to reject every touchy subject... Mhm...maybe I will try to find a way to engage myself as a designer for that kind of thing and say okay that part I don't do it and you will find someone else."*

> P7: *"Well, sometimes you have the option to say no, I don't want to design something like that because I don't agree with this position of the company/organisation [...] So as you say, [P6], it is a bit hard and we need to eat, we need to [earn a] salary, and you need to pay bills and so on. So, in the end, you say 'Okay what [am I] doing here? I'm doing business'. So, in the end, you need to provide the business value and you need to accept some stuff. But the recommendation is to don't do that, to just avoid it."*

5 DISCUSSION

Through the analysis of the discussions, we found that while participants' guiding principles seem to be a driver in implementing UX strategies, there are various reasons why they fail to implement them properly. This mismatch between guiding principles and design strategies seems to be the opportunity for an unconscious design of manipulative strategies. In this section, we want to highlight the following tensions between UX practice and ethics. First, we will explain the tensions between the designers' guiding principles and the contextual issues. Second, we will discuss the strategies of UX practice that might lead to manipulation in the absence of a proper ethical analysis, and we will consider its tensions with the designers' values.

5.1 Tension Between Principles and Contextual Factors: An Imbalanced Ethical Mediation in UX Design

We have highlighted several contextual factors that put designers in complicated positions, as these limit their decisions. These results are aligned with Gray and Chivukula's framework of ethical mediation in design [37]. The authors explained how designers mediate ethics in three ways: they are constrained by organisational practices, they impose their individual practices in the organisation, and they use theories from applied ethics scholarship in their design. The insights from our focus groups show how designers sometimes impose their individual practices over organisational ones: choosing who they want to work for and instructing stakeholders in

ethical practices. Our results also highlight the opposite situation: organisations impose their own agenda on designers, making them accept their limitations as a designer and subsume into stakeholders' practices. Participants reflected on how accepting or rejecting work from their client or employer sometimes is their only way to make ethical design decisions. Our results do not bear much information on how applied ethics shape design practices. Only the applicability of data protection regulation as "applied ethics" seemed to shape their practices. Within this set of relationships, we have found how participants identified themselves with different roles explained by Chivukula et al. [22], like educator and advocate, but with a clash of identities that is difficult to resolve. It is noteworthy that our participants had difficulties when reflecting on the potential impacts of their designs. This contrasts with the reasoning of Wong's [82] participants, who use soft resistance techniques that try to address potential impacts on underrepresented communities. It is, therefore, necessary to reflect on these results together. Designers might not be trained for the assessment of impacts. However, as shown in our results, they also rely on other roles which hold, in Wong's terms [82], the "ethics ownership": business, managerial or legal departments. This raises several questions: to what extent is ethical mediation possible under certain circumstances? To what extent can we make designers responsible for ethical assessments when they are immersed in an ecosystem of actors? Reflecting on this matter might give us an insight into the problem of 'dark patterns' in large digital services.

Designers are not moral philosophers, and, although they have an intuition, we cannot always expect them to make a complete assessment of the ethical aspects of designs. Without the proper tools and knowledge, the way they mediate ethics becomes imbalanced (See Figure 4). Applying the framework of ethical mediation to our sampling of designers, we see an imbalanced set of relationships in which applied ethics is limited, weighing the organisational practices much more than individual practices. Although we agree with the scholars who advocate for a better integration of ethics in education and design programmes [35, 72], there is also a need to rethink the whole governance system of technological design.

Designers need a better system of checks and balances within their companies that allows them to provide their expertise and ethical commitments without the risks of suffering adverse consequences. Untried mechanisms of balancing ethics in design are being discussed by policymakers, internet governance and applied ethics scholars. They include ethical impact assessments [51], documentation of the design process [4, 11] or self-regulatory instruments [50] - e.g., the use of codes of conduct for UX design in the organisation. These instruments could help designers reflect on their designs' impacts, which our results have shown to be problematic. Providing these tools to designers might contribute to facing *"the imbalanced power of business"* and could include all the stakeholders that advocate for users and good practices. Moreover, including legal departments, DPO[4] or ethics departments within those governance systems will empower designers to implement proper "applied ethics" with other stakeholders' inputs.

[4]Data Protection Officer

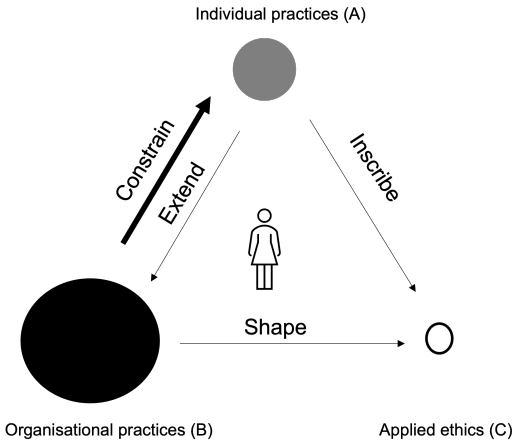

Figure 4: Gray and Chivukula's [37] framework of ethical mediation applied to our participants. Adaptation from the original.

5.2 The Tensions Between Principles and UX Strategies: When Persuasion Becomes Manipulation

Aside from the clash of principles between stakeholders and designers, the way designers interpret their guiding principles and how they implement their strategies gives rise to potentially manipulative designs. This is especially aggravated by the context of the surveillance economy [14, 46, 83]. Designers believe they are advocating for the user when they are actually conducting user profiling, "hypernudging", and opening the opportunity to subvert the user's vulnerabilities and weaknesses, in other words, to manipulate.

5.2.1 Tensions in autonomy: creating irresistible incentives in a hidden way. The implementation of ethical principles is a double-edged sword. The way designers preserve user *autonomy* through the designs is the main point to assess whether a particular design includes manipulation [75]. Our results highlight two types of UX strategies that, if used to target user vulnerabilities, may become irresistible for users. Using *tangible incentives*, specifically money -or discounts- seems irresistible enough to become manipulative. Using *emotional triggers* about sensitive topics for users might be irresistible in some cases. What can be perceived as a rational way of persuasion can easily move to the realm of manipulation if the design strategy works subtly. Providing convincing arguments about why you should give your email address to a fast-fashion website, showing the provider's intentions, falls under legitimate persuasion; when those arguments subvert vulnerabilities in a hidden way, however, they turn manipulative. *User research and analytics* methods to test the strategies on the users, constitute a perfect tool to investigate the exact points at which users misclick, misread the information or are more inclined to specific topics. Designers know these methods work; hence, they incorporate them into their toolset.

5.2.2 Tensions in usability: when the "average" user becomes the "vulnerable" one. Usability as a principle also might increase tensions.

Designers adjust their designs to standards that the user might expect, and the user, in turn, gets accustomed to the designs they interact with. UX methods foster the focus on user groups with their specific needs creating a sort of "average user' for their designs; this might be problematic in the realm of influencing behaviours. When UX designers are aware of psychological and socio-economic vulnerabilities that make their designs more effective for a given group of users, they might unconsciously subvert those vulnerabilities. Reflecting on all users and what characteristics may render some of them more vulnerable, should be an integral part of every design process to prevent from unintended exploitation of vulnerabilities.

5.2.3 Tensions in UI elements: how UI design contributes to a misimplementation of principles. The interplay between values for the design of UI elements might also create irresistible strategies. Although *transparency* and *trust* are essential for designers, the interpretations of those may lead to malpractices. Providing information about the provider is a way to generate trust. Yet, if the only purpose is to attract users, then transparency is not an ethical commitment, and it may become a manipulative strategy. The consequences of value leveraging are reflected in the idea of *friction and stickiness* as mechanisms. Despite our participants' conviction of not forcing or coercing the user, there is a lack of reflection on the idea of resistibility to the influence, which is key [54, 75]. Designers, trying to guarantee *positive user experience first* -avoiding "bothering" frictional calls to action-, make more subtle designs that, with the wrong combination of elements, might become manipulative. Frictional elements, therefore, need to be analysed in combination with the information that is provided.

Thinking in Tromp's [78] terms, a frictional element might fall in the realm of persuasion if accompanied by the proper information. Although some "dark patterns" taxonomies include frictional elements, user-centred design approaches in usable privacy and security have started to use friction to foster reflection in users' interactions [25, 28]. Bringing Tromp's model into manipulative design analysis, the designers in our study do not use "strong" strategies that force users, but they devise other potential paths. However, the "salience" of the mechanism of influence is more subtle. When choice architectures are imbalanced, providing more options to give away your personal data, or if the design strategies appeal to emotions that subvert users' vulnerabilities, the strategy of influence is not salient, nor transparent for the user, and, therefore, manipulative. Exploring these dimensions in their designs becomes crucial for designers to determine when designs are manipulative. A way to explore these dimensions and fix the tensions between principles and UX strategies is provided via design recommendations (See Section 6).

Our results, *transparency* and *user experience first*, resonate with the values that Chivukula et al. [21] reported in their study. How they implement those principles ethically seems unclear, justifying unethical implementations on behalf of the greater good. If the impact is positive, designers might interpret that it is justified to create manipulative designs. This is an example of how digital architecture plays a crucial role [47] in "designing with intent". Our results exemplify the borderline cases that Di Geronimo et al. pointed out [27] in their analysis of 'dark patterns'. Based on empirical data collected predominantly from experienced designers, our analysis confirms and expands the findings that Chivukula and Gray [21] started to explore based on data from design students. Our results also are in accordance with previous literature in design ethics [20, 22, 37], but applied to the use case of influencing behaviours.

5.3 From "Dark Patterns" to "Manipulative Designs"

The amalgam of definitions and terms used by scholars to describe "dark patterns" still leaves room for uncertainty, not only for designers but also for policymakers. Several regulations are trying to address the term and the problem they represent, overlooking the tensions that UX designers experience [11, 24]. The coined term "dark patterns" yields problems in two directions. First, it is necessary to listen to the discussion about the reproduction of racist stereotypes when this term is associated with malicious designs [70, 71]. Second, given the term's vagueness, it sustains confusion among practitioners [71], as reflected in our focus groups. Policymakers should consider its meaning with caution. It is an urgent problem to determine the extent to which "manipulative designs" can be illicit and under which circumstances. The conditions of vulnerability under which manipulation works might be a rationale for regulating these design patterns, including a reformulation of the term. This would allow to provide the term with a precise meaning and avoid confusing the community. As a starting point, we suggest shifting the discussion to a more accurate term, "manipulative designs', for further reflection in the community: this moves the focus away from specific patterns as the problem concerns an entire system, design strategies and a context of manipulation.

We aim to contribute to the conversation about manipulation in design, restating the problem of dark patterns online, which transcends the ill-intentions of designers and businesses. We have explored how traditional persuasive UX design strategies can easily cross the line of manipulation, turning into manipulative designs. Aiming to understand what design strategies may become manipulative and under which circumstances, we have explored contextual factors that affect designers and may act as a potential trigger of manipulation. This study has helped to consolidate the literature on ethics in design, applied to the specific context of designing for manipulation and showing how the design of manipulative interfaces also depends on context: the personal context of designers that apply ethics, and the context in which the design practice takes place. Therefore, we argue for a holistic analysis when thinking about manipulative designs. First, judging when the strategy is manipulating instead of persuading, and what is the implementation of values through the design strategies. Second, the context in which designers operate and devise their design strategies gains in relevance. Hence, by providing the proper tools, knowledge and management systems within companies, we can empower designers to face the tensions between UX and manipulative designs.

6 DESIGN RECOMMENDATIONS FOR PRACTITIONERS

To facilitate persuasive design, with "apparent" and "weak" design strategies [78], and under consideration of the above-discussed

tensions between UX strategies and manipulation, this section provides a set of design recommendations. The recommendations are coupled with questions that designers can ask themselves to assess whether their design crosses the line between influence and manipulation.

- *Support user goals* [9, 32, 57, 68]. Both manipulation and persuasion seek to influence user behaviour. Trying to influence does not make a design manipulative by default. But if the goal of the design differs from the user's goal, you should assess if your goal also serves their interest. Questions you can ask yourself: Are my design goals aligned with the user's short-term goals but misaligned with the user's long-term goals? Or are the design goals misaligned with the user's short-term and long-term goals? Both cases require reflection regarding the user's interest.
- *Keep incentives resistible* [13, 68, 74]. Designs should not present incentives that are irresistible to specific populations. *Incentives* can be used as long as they do not exploit vulnerabilities. Therefore it is necessary to consider all potentially affected users. Are there user groups that are more susceptible to my incentives? Research vulnerabilities in your target user audience and ask yourself: are the incentives difficult to resist for them?
- *Be careful with emotions* [68, 74]. The design should not appeal to emotions beyond the user's reasonable expectations. If the design appeals to emotions (through language, visuals, sound, etc.), ask yourself: is the emotional appeal difficult to resist? Are there user groups that are more susceptible to these emotional arguments?
- *Use friction for good* [13, 25, 44, 74, 78]. Friction does not always imply 'evil' designs; it can also provide helpful information to users or trigger critical reflection. The key is to analyse *if it supports the users and if users can resist its influence*. So, if the design introduces friction in the user task flow, for example, in form of a pop-up, ask yourself: Is the friction serving the user's interest too? Can they overcome or resist it?
- *Provide fair decision spaces* [49, 52, 60, 74]. To ensure users' agency, all available choices should be presented in an equal manner to the users so that they can *be aware that the options exist*. It is hence indispensable to use adequate signifiers. If the task flow includes decision-making interactions, ask yourself: Does my design present all available choices? Are certain choices emphasised to guide the user's decision-making? Are the emphasised choices highlighting a choice against the users' best interests? Are the emphasised choices highlighting information that is not necessary for the user to make a decision? Is necessary information withheld from the user? On the contrary, if the task flow does not include decision-making, the information design architecture should not lead users towards options against their best interests. You may ask: Is my design employing a mechanism of which the user is not aware? Is the hierarchy of my design prioritising elements to influence the user?
- *Be transparent* [10, 54, 74, 78]. The extent to which users have agency will depend mainly on how transparent you are. Hierarchy and information architecture are essential to creating transparent designs. Designs should avoid barriers to information and present complete and truthful information so that users can make an informed decision. If the design includes any informational element, you may ask yourself: is the information that I provide complete or only partial? Is the information framed in an unbalanced manner? Is the provided information potentially untruthful? Is relevant information hidden through the information architecture?

7 LIMITATIONS AND FUTURE WORK

The objective of this study was to provide an empirical exploration with designers of how persuasive UX practices could become unethical, i.e., manipulative. The present study elicits specific UX strategies that can be considered manipulative; it could be expanded in future versions of this work based on a large-scale set of UX/UI designers. Other expansions of this work might include the analysis of cultural differences in the designers as part of their intrinsic values and perceptions. Although it was not the intention of the study, we included two countries, Luxembourg and the Netherlands, in which the participants worked. We noticed differences in the working style, which might be a nuance to explore in the future.

Similarly, seven of the eight groups were colleagues: they worked together, knew each other and shared the same language. We acknowledge that in those cases, the designers might be shaped by the same organisational practices. We initially tried to overcome this limitation by sampling participants from different backgrounds and experiences so a wide range of organisational practices is represented. In the same way, although participants worked in the same company, they did not always work on the same projects. With this limitation in mind, surprisingly, we found that the group with designers who did not work for the same company had more problems engaging in discussions which might be caused by social desirability bias for ethics-related topics. Further extensions of this work could compare how different companies - from start-ups to large technological companies - shape, constrain or extend the ethical values of UX designers in developing technological solutions. Finally, it will be crucial to expand this work by testing these UX strategies on specific populations that might be considered vulnerable, but also to test under which circumstances persuasive elements might be manipulative on general populations.

8 CONCLUSION

In this paper, we have explained the tensions between UX practices and manipulation, helping to restate the problem of online manipulation and "dark patterns". We have run focus groups with UX/UI designers and asked them to prototype solutions to influence users online. Building on their discussions, we have elicited the principles that designers follow to design ethically. Furthermore, we elicit the main strategies in UX practices that can become manipulative if the principles are not properly applied. Lastly, we have explored how an imbalanced relationship between designers and stakeholders can contribute to fostering manipulative practices. We provide design recommendations to overcome this tension. This study provided a new lens to assess UX design ethical practices in the context of

influencing user behaviours, showing how manipulation not only results from designers' intentions but also from their circumstances.

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A APPENDIX

Here we present a non-exhaustive example of codes used to create the themes and overarching themes building on Braun and Clarke [16] thematic analysis methodology.

Overarching theme	Themes	Codes
Influencing is an exchange	Convincing users with reasons	Rational arguments
	Exchange between users and designers	You give me your email, and I give you something in return
		Added value for the user through the newsletter
		Tangible incentives
		Intangible incentives
	Understanding how mechanisms work on users	Analytics
		Need to test
		Elements to catch attention
	Friction and stickiness	Permanent reminders
		Non-intrusive elements

Overarching theme	Themes	Codes
Conditions of manipulation and guiding principles	Conditions of manipulation	Designers know how to manipulate
		The business is not ethical
		Knowing the classic DP: coercion and deception
		An emotion to communicate is the beginning of manipulation
	Impacts	Psychological aspects of users
		Environmental aspect of impacts
		The main impact is getting subscribers: to comply with our mission
	Autonomy	They can avoid it: close the webpage, do something active
		I am not pushing or forcing the user
		I am not lying, not tricking
	Trust and transparency	The information needs to be complete
		The information needs to be complete
		Human-readable designs
		We need trust to get the e-mails
	Usability	Designers expect that user behaves in a certain way
		Designers expect that user behaves in a certain way
		Balance between what they know and the information
		This is very common mechanism, they are used to
		Pretty direct and obvious, they know it
	Users vs user experience first	I don't want to transmit negative feelings
		I don't want to bother the user
		It's user first

Overarching theme	Themes	Codes
Responsibilities and hurdles	Design responsibility is shared	Designers also teach
		Own values matter
		Designers rely on rules in the company
	Imbalanced power towards business	If the company want us to do DP we will do it
		I can choose my company