Alternative Patterns, a participatory project to practise ethical design in HCI professional community

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Abstract

In light of the standardisation of interfaces and the ubiquity of dark patterns, this article presents a participatory action research project exploring the creation of an alternative notification pattern.
Drawing on a co-design methodology involving digital design professionals and adopting an open approach, it examines the creation of an ethical pattern (from the perspective of both the proposed solution and the methodology to be implemented) and demonstrates the value of a participatory process through a compagnonnage approach, which empowers users.
It proposes opening up the discussion on the use of the term 'pattern' rather than 'heuristic'.
It also examines the role of a design project within the participatory action research method and the contribution of design, whether in research through the creation of an artefact (the alternative notification pattern) or of action through co-design. This project explores the creation of digital design commons, and, in particular the concept of open design, and the role of imagination in the democratisation of design.

State of the art: from patterns to ethical patterns

At the end of the 20th century, the design patterns movement emerged. It was inspired by the pattern language of the world of architecture, which "*describes a problem which occurs over and over again in our environment, and then describes the core of the solution to that problem, in such a way that you can use this solution a million times over without ever doing it the same way twice*" (Alexander, 1977). The aim was, therefore, to develop a common language that could be used by both architects (who designed these spaces) and residents (who lived in them).
The design patterns were originally defined in software engineering as "*descriptions of communicating objects and classes that are customized to solve a general design problem in a particular context*" (Gamma and al.,1995). Then, more recently in HCI, such as "*a semi-structured description of an expert's method for solving a recurrent problem, which includes a description of the problem itself and the context in which the method is applicable, but does not include directives which bind the solution to unique circumstances*" (Mor and Winters, 2007).

This movement gave rise to projects such as ui-patterns.com, which provided digital designers with access to lists of standard interface elements (such as navigation tabs, accordion menus and cards) to use in their productions. In this sense, these design patterns were the forerunners of the user interface components (a standalone, modular and reusable graphical user interface element, such as a button or an input field) that are predominantly used today.

It is from these design patterns – a set of standardised and freely accessible interface elements – that anti-patterns arise. These are defined almost simultaneously by Brown as "*software mistakes that most of us make frequently*" (1998), then, by Koenig as "*just like a pattern, except that instead of a solution it gives something that looks superficially like a solution but isn't one*" (1998). These anti-patterns describe the unintentional mistakes made by designers when they misidentify the problem to be solved, which negatively affects users. The aim is to highlight poor-quality designs. This concept encompasses issues relating not only to interfaces and interactions, but also to maintenance and the way in which a service is architectured.
Among these anti-patterns, Widdicks and his colleagues have identified two main processes that lead to their creation: backfiring and favouring (2020). The first, backfiring, involves finding solutions to problems that appear relevant but ultimately make the situation worse. They give the example of social media platforms (such as Facebook, Instagram and Twitter), which were originally designed to bring people together but, due to design flaws, have become harmful to users, such as through the sharing of misinformation. The second, favouring, focuses on improving the user experience without considering the negative consequences created, such as increasing screen time through infinite scrolling or autoplay.

It was in 2010 that Brignull identified patterns deliberately designed to mislead users, coining the expression "Dark Patterns" for them. These complement anti-patterns, as Brignull states in his original definition:

> "*Normally when you think of "bad design", you think of laziness or mistakes. These are known as design anti-patterns. Dark Patterns are different – they are not mistakes, they are carefully crafted with a solid understanding of human psychology, and they do not have the user's interests in mind*" (2010).

What distinguishes dark patterns from anti-patterns is therefore the question of intent: if the pattern is intentional, then it is a dark pattern.

This new area of research, as thus defined, will give rise to numerous publications (Bongard-Blanchy and al., 2021; Luguri & Strahilevitz, 2021; Mathur and al., 2021) aimed at assessing how these dark patterns contribute to mislead users. In particular, the literature proposes to list cases of dark patterns, focusing primarily on the effect perceived by the user. It is notably the categorisation by Gray and al. (2018) that has gained consensus within the academic community. Beyond these classifications, numerous publications seek to determine how to identify dark patterns, using methods that are more or less automated (Chen and al., 2023; Hasan Mansur and al., 2023).

In exploring this new field, the distinction between dark patterns and anti-patterns (linked to the question of intention) has not always been taken into account. For example, Greenberg and his colleagues (2014) chose, in their list of patterns based on proxemics systems, not to differentiate anti-patterns from dark patterns, focusing instead on the negative effects

caused by these patterns. Indeed, they fall within what is now a standard framework used to analyse dark patterns: their effects on users rather than their intentionality:

> "*We do not differentiate whether a particular pattern is dark vs. anti: as our examples suggest, the difference between the two often arises from the designer's intent rather than a particular design feature. That is, the same pattern – depending on the designer's intent – can be viewed as either a dark pattern or an anti-pattern*".

In light of the negative effects caused by dark patterns, new initiatives are seeking to equip digital professionals within the non-use of these dark patterns, all while claiming to uphold an "ethical design" approach. Therefore, in the rest of this article, we will refer to these counterpoints to dark patterns as ethical patterns.
In this list, we can mention the Bright Pattern project (Sandhaus, 2023), which defines itself as the opposite of dark patterns – "*tricks used in websites and apps that make you do things you didn't intend to do*"[1]. We can also mention the Fair Patterns project[2] (Potel-Saville and Da Rocha, 2024), which is "*designed to counter dark patterns, addictive design and protect user autonomy*" and aims to "*empower users to make free and informed choices online*".
These projects may also aim to promote player well-being, such as Radiant Patterns (Filho and al., 2026), which are "*interaction patterns intentionally selected and implemented during the digital game design process to allow the pursuit of development goals whilst ensuring foundational player well-being is not significantly undermined*". These "*represent a conscious design choice focused on minimising predictable risks of psychological harm and avoiding design patterns known to consistently frustrate these basic psychological needs, thereby establishing ethical boundaries for the player experience*".
Finally, these ethical patterns may also focus on desired outcomes, such as Hoepman's Privacy Design Strategies (2014), which "*describe a fundamental approach to achieving a specific design goal*".

All these ethical patterns offer unique solutions to a specific problem. Whether through work on the graphic interfaces (Fair Patterns) or on the design rules for these interfaces (Radiant Patterns, Privacy Design Strategy or Bright Patterns). They are therefore limited to a specific field, preventing their use from being generalised.
Another limit of these projects is the lack of documentation regarding the methodology required to create an ethical pattern. They are therefore of limited use to professional interface designers.

It is to overcome these limitations that the project described in this article seeks to implement a design methodology that can be generalised to the various components of an interface. To this end, it adopts a methodology for designing a pluralistic solution, tailored to different uses and situations, through a participatory, open and empowering approach for designers, in line with the philosophy of open design.

2. Methodology for designing an alternative pattern

2.1. The participatory project process

This project was led by a digital design association in France, seeking to forge links between academic research and professional practice.

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[1] https://brightpatterns.org
[2] https://www.fairpatterns.ai/resources/library

It was conducted in a spirit of openness, both in terms of information sharing and participation. Indeed, regarding information sharing, all documents were freely accessible within the association's community, and updates on progress and summaries of developments were also regularly shared through the public instant messaging platform (Mattermost). As for participation, anyone was free to join the project at any time, with no preconditions.
The project ran for a year and a half, during which time the participants first selected an interface component as a case study, then carried out user research on it, and finally prototyped a solution regarding this pattern.

2.1.1. Component selection: the notification as a case study

Through a classic coparticipation approach – in which all participants work together – the participants selected the first interface element to be addressed. This process was carried out in three stages: brainstorming, vote and discussion.
During the brainstorming session, each participant was asked to list interface elements that they felt were particularly damaging to digital usage. The session brought to light about twenty elements, such as terms and conditions of sale, consent banners, news feeds, notifications, or account creation and login features.
A vote then settled the matter. Each participant was given three stickers, which they could place on one to three items they felt were particularly worth exploring. This stage highlighted three key elements: cookies, notifications and the terms and conditions of sale.
Finally, following a discussion, a decision was reached by consensus to settle on notification.

2.1.2. Exploring the use of a notification

The participants began by collecting screenshots of the various visual representations of notifications they encounter in their daily lives (fig. 1). Here, the aim was to gain an overview of the different types of notifications, as well as to visualise what a notification looked like in the participants' imagination. This helped to establish a framework for what we meant by 'notification' and what we would be addressing as the project progressed.

This visual exploration was supplemented by a review of the literature on notifications. It provided an insight into how users process and interact with notifications, whether in terms of reaction time, type of reaction and the importance of different types of notifications, or in relation to the total number of smartphone notifications received each day. This revealed that users react more quickly to messages and social media notifications and more slowly to news and utility notifications, that they received an average of 63.5 notifications per day on their smartphones, and that they tended to respond quickly because they felt social pressure to do so (Pielot and al., 2014; Sahami Shirazi and al., 2014).
Also, it helped to understand the impact of notifications, depending on their frequency, and whether a particular frequency results in fewer interruptions. Indeed, sending a notification when an interruption of user action is detected, as well as at regular intervals (for example, three times a day), was preferable, as it resulted in fewer interruptions and less stress (Fitz and al., 2019; Morrison and al., 2017).
As well as the impact in terms of disruption, we also explore how the arrival of a notification is experienced. Literature shows that all types of notifications cause disruption; however, the impact of this disruption varies from person to person (Kushlev and al., 2016).
Finally, this literature review has highlighted possible approaches to designing existing notifications in accordance with the GDPR (General Data Protection Regulation) (LINC, n.d.).

Figure 1: Examples of notification visuals collected by participants

The participants then expanded their understanding of the use of notifications using a grounded theory methodology (originating in the social sciences) – where theory emerges from data collected in the field – (Glaser and Strauss, 1967), starting with semi-structured interviews. These were structured to question the use, experience and impact of notifications. All interviewees were required to own a smartphone. Each participant was free to conduct as many interviews as they were able to, as long as they complied with the smartphone requirement and prioritised a range of different interviewee profiles. This resulted in a total of 33 interviews, conducted by five participants, which were transcribed textually and then analysed. The analysis was carried out using a spreadsheet, with the interviewees listed on the vertical axis and the questions on the horizontal axis. The verbatim were categorised using a coding system designed to identify underlying concepts, in line with grounded theory. This process led to the creation of three personas.

2.1.3. Design of an alternative version of the notification component

With all these elements in place, the participants were able to move on to designing an alternative version of the notification.
The solution design was based mainly on an inductive approach. The prototyping was grounded in interviews and the professional experiences of the participants (most of whom came from the field of digital interface design). It was through this participatory approach that each participant was able to propose a solution offering a wide range of uses. This is not only a countermeasure against dark patterns, but a set of diverse alternatives grounded in real-world experience.

The prototyping process was carried out through successive iterations. Each participant worked alone or in small groups on a defined and chosen part of the prototyping process for a short period (around two weeks) before presenting their findings collectively at follow-up meetings for discussion and feedback.

2.2. The participants, digital professionals

This project followed a participatory design methodology, enabling participants to collaborate on their current practices in order to achieve common goals, learn from other participants and reflect on possible alternative futures.
As described by Bødker and his colleagues, what is important in participatory design is to :

> "*understand that mutual learning is not just a simple relationship between individuals. We focus on the empowerment of people not only as individuals but as part of their groups and communities, both as they currently stand and for the (possible) future.*" (2022)

In line with the book, Bødker and his colleagues discuss the issue of empowerment, which is the main reason behind our choice of this method. The participatory design methodology contributes to the empowerment of digital professionals, which aligns with what the association behind the project is striving to implement in its projects and has, indeed, enshrined in its mission statement. There is also a desire to support professionals in jointly designing their professional practices, a concept particularly central to the logic of action research, where participants shape the subject of study as they study it.

The participants comprised nineteen people, including user experience designers (eight participants), user experience researcher (one participant), product designers (three participants), user experience and user interface designers (three participants), engineer (one participant), associate professor (two participants) and project manager (one participant). In other words, they were mainly digital professionals and designers, the majority of whom were young professionals.

This approach has fostered a collaborative learning environment that builds skills and leads to greater autonomy. It can be likened to the French compagnonnage system. Indeed, this project has facilitated the transfer of expertise between professionals. This practice of knowledge transfer is similar to what takes place within the compagnonnage tradition.
The "Compagnons du Devoir" is a traditional French institution that trains young artisans in craft trades (for example cabinetmakers, blacksmiths, cheesemakers, leatherworkers, stonemasons). This training, which aims for excellence, is achieved through the transmission of technical skills and ethical values between peers and through travel. During their travels, the "tour de France", they master the techniques learnt from various masters while living together in a community within a brotherhood.
Organisations targeting digital professionals can also be inspired by these peer-training methods, as they have proven highly effective.
Here, the use of this compagnonnage approach enabled participants to share and pass on their methodological skills, thereby achieving autonomy. In fact, that was one of the main reasons why the participants decided to take part.

Other reasons inspired participants to get involved in this voluntary project, such as an interest in the subject—which may have stemmed from personal awareness—, the time available, curiosity and, above all, a desire to contribute to research into more digital ethical practices. This last motivation aligns with the project's aim of developing practices that break away from existing patterns, thereby working towards increasing democratic approaches in technology.

As participation was open and voluntary, almost no participants stayed with the project from start to end. However, once they had started work on a particular part of the project, the majority stayed on until that part was completed. Other participants were involved on a more specific basis, working on particular tasks such as transcribing interviews.

3. The methodology for designing an alternative pattern and the alternative notification pattern: results of this project

3.1. The project as publicly published

The finalised and published draft of the alternative notification pattern comprises several sections. It includes the definition of a notification, user research and suggestions for prototyping.

This definition of the notification explains what a notification is, including its format and how it can be displayed. There are examples of what a notification might look like, details of the possible uses of a notification (to provide information, to announce an action that has been carried out, to announce an action to be carried out, to issue a reminder and to alert), then followed by an argument outlining the issues raised by notifications: interactions, attention capture, stress... And finally, a summary of the project's stages and objectives.

The user research, published in an open design approach, includes the methodology, details of the participants, a breakdown of the interviews by question, and a summary of the research.
The methodology section includes details of the target audience for the interviews, the interview protocol, details of how the interviews were conducted and transcribed, the analysis method, and an anonymised summary table. As for the participant details, these include their gender, age, socio-professional category, their digital usage (personal and professional), as well as the types of digital tools they own. Regarding the details of the interviews by question, for each question, it could include verbatim quotes, graphical representations of percentages, the number of keywords (categorisation) highlighted in the question, and a short summary of the key takeaways.
Finally, the summary of the research highlights five key points to bear in mind: the concept of notifications is difficult to define; current notification settings are complicated; some participants received a large number of notifications every day; the majority of notifications are unnecessary; and people experience incoming notifications in both positive and negative ways. Three personas emerging from this research: the independent (who rarely has their phone with them), the normative who follows the norms (they always have their phone with them, respond quickly, and keep the default settings), and the rebel, who fights to bring about change (who puts their phone aside and uses the settings to avoid being overwhelmed).
There are also suggestions for designing more respectful notifications, such as having minimal notifications by default, simple settings, less aggressive notifications, and moving away from instantaneity.

The prototyping suggestions incorporate a decision tree (fig. 2) and best practices to be implemented depending on the project and the intended use of the notifications.

The decision tree guides users through a series of closed questions (“Is the information contained in the notification essential to the user?” “Could the information contained in the notification be useful to the user?” “And must the information contained in the notification be provided to the user immediately?”), towards the type of notifications to implement depending on the use case (from no notification to a default instant notification).
On the other hand, the ten best practices (table 1) address the problems they are designed to solve and suggest possible solutions, which may include examples of interfaces to implement, existing examples to follow, and others to avoid.
As an example, the best practice “limiting the use of red dots” addresses the issues associated with the use of notification red dots that are highly eye-catching (they encourage users to react, annoy them, and encourage them to check notifications regularly) by linking interview transcripts with research studies. Following this, two approaches to a solution are proposed. Approach A suggests choosing less striking colours and moving towards cold colours, greys or pastels. It presents an existing example where this approach is used: the WhatsApp notifications within the app, which are green. Approach B suggests allowing users to customise the colours of notification red dots according to the type of notification. This approach would allow the user to customise the notification red dots and thus visually indicate (according to their own preferences) its importance or category. It presents an example of a similar design to this existing approach, in the form of the Android status light, which has a colour that can be configured depending on the notification received.

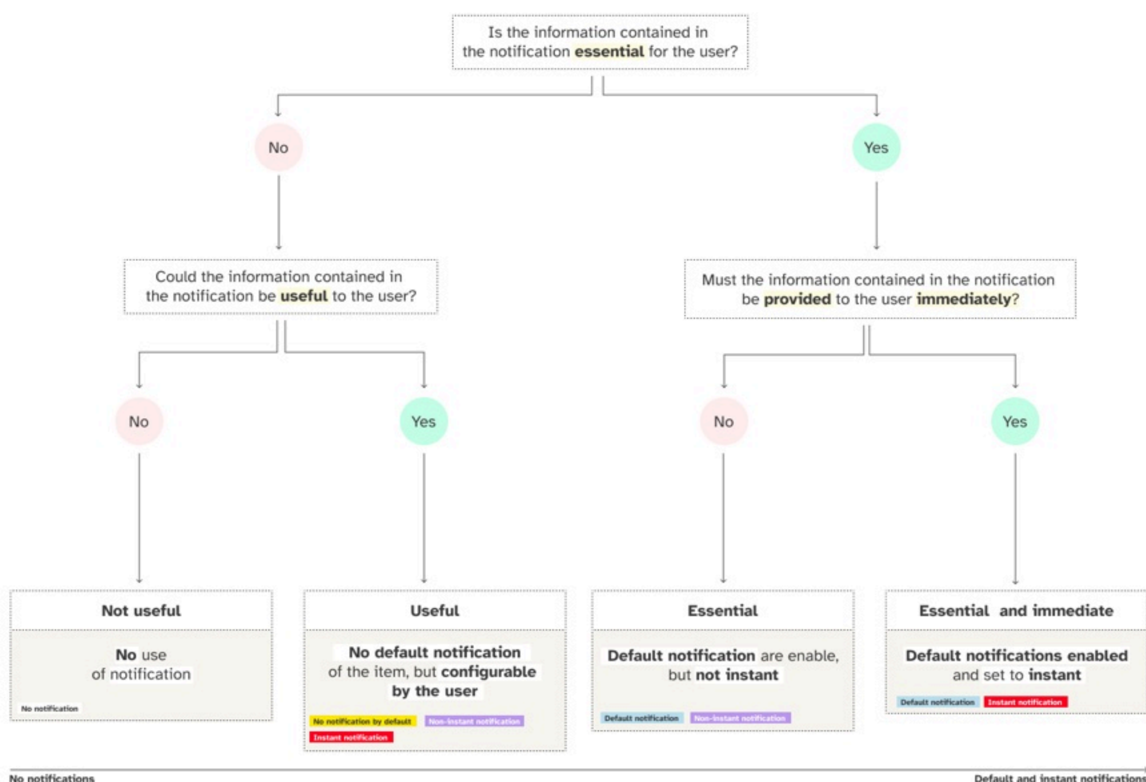

Figure 2: Decision tree

BP 1	Keep notifications to a minimum by default
BP 2	Provide a comprehensive notification hub
BP 3	Limit the use of red dots
BP 4	Configure notifications upon installation
BP 5	Ensure that the notification includes a comprehensive and clear summary
BP 6	Provide a summary of all notifications
BP 7	Be able to configure reception times
BP 8	Be able to configure notifications according to profiles
BP 9	Do not pressure the user into enabling notifications
BP 10	Have ephemeral notifications

Table 1: List of ten best practices (BP)

3.2. The impact on participant practitioners

Participating practitioners were able to develop technical skills—some of which may or may not be related to design (such as oral communication, project management, the creation of an interview framework, the conduct of interviews, the function of a notification, or the prototype of a notification)—as well as their ethical considerations.

It was through the feedback provided by participants after the project that improvements in technical skills were most significant. For their part, the exploration and empowerment of ethical thinking were visible through the participants' feedback, their participation in conferences to raise awareness of this subject (related to dark patterns, attention capture and notifications), and the implementation of these reflections in their current professional practices. All these elements show that the participants were thus able to move towards greater autonomy in their practices.

As for the use of the alternative notification pattern developed in this project, it is clear that the participating practitioners have taken the concept on board, as they have produced numerous communications on the subject. However, there has been little reuse of the pattern as it stands in their interface designs.

3.3. The impact on the design community

When the project was launched, and through its promotion on social media and at professional presentations, there was a clear interest of the French digital professionals and design communities.

The project was constantly consulted on its website, with at least 2,165 visits[3] between late September 2025 and February 2026. The project was also featured in communications on digital social media.
Overall, it helped to highlight the potential harmfulness of the notification feature, opened the door to further discussions, and to present alternatives to members of the French-speaking design community.
No detailed evaluation of this participatory design project was carried out by the lead organisation due to a lack of time, which is a common limitation of this type of project, as noticed by Bossen and colleagues (2016).

4. Discussions

This experimental project exploring a methodology for creating an alternative pattern raises numerous questions, and in particular, its epistemological basis (4.1), the type of project (4.2), its purpose and impact (4.3) and finally, its limitations and future work (4.4).

4.1. The term “pattern” used to refer to heuristics.

Our work shows that the term “pattern” has been widely used by the academic and professional community for the past twenty years or so. Yet its meaning is more akin to the heuristic concept, in the sense given to it by Bastien and Scapin (1993) or Nielsen (2005): rules of best practice that are subsequently detailed and implemented in practical applications.
Indeed, a pattern is an interface standard that is easily applicable. For example, standard settings for notifications. This contrasts with a heuristic, which corresponds to a rule or a general principle of interfaces. For example, the user must be able to configure the notifications they receive.

For the past twenty years or so, the academic community has been discussing ‘patterns’, whether in the context of dark patterns, deceptive patterns, and so on. These are more akin to anti-heuristics than to patterns, in the sense that they represent bad general principles of interface design.
In one of the key articles categorising dark patterns, Gray and his colleagues present eleven dark patterns, which are: Bait and Switch, Disguised Ad, Forced Continuity, Friend Spam, Hidden Costs, Misdirection, Price Comparison Prevention, Privacy Zuckering, Roach Motel, Sneak into Basket and Trick Questions (2018). All these elements, described as patterns, actually correspond to bad interface design principles. Indeed, they illustrate principles that lead the user to a result different from what was initially expected, and thus to disappointment.
In the same way, Brignull’s original classification, which is largely adopted in the work of Gray and his colleagues, includes poor design principles (Brignull, 2010).

It is in contrast to these dark patterns that other patterns have been developed, which we have chosen to group under the term “ethical patterns”. These encompass all patterns that offer ethical solutions, seeking to propose designs that do better.

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[3] This corresponds to the visits recorded by the Matomo tool uses to track views. However, this tool does not count users who use ad blockers.

The choice of this name responds to a need for a single term to refer to all these different patterns, which use different names. It is even more crucial considering that these different names, which represent this concept, can be likened to brand names.
For instance, “fair patterns” is a registered trademark in various countries, including the European Union and the United States. As for the other terms—”bright patterns”, “radiant patterns”, “privacy design strategy” and “alternative patterns”—although they are not registered trademarks, they can be considered as a form of intellectual property. They belong to their respective authors and organisations and are not used elsewhere.
All these ethical patterns, developed in opposition to dark patterns, are, like dark patterns or deceptive patterns, closer to heuristics than to patterns. They also describe interface principles to apply. For example, the “dumb it down” pattern from the Bright Patterns project highlights the importance of providing clear and understandable explanations of how user data is processed by AI. This is indeed an interface principle.

The predominant use of the term “pattern” is driven by marketing considerations. It establishes a direct affiliation with the dark patterns to which they respond. It also serves to gather a community around it, acting as a flag-bearer. Finally, its use is more “marketable” in business and the professional world, where heuristics—under the umbrella of Bastien and Scapin’s heuristic criteria—may be seen as too academic, outdated or difficult to implement.
One of the underlying problems created by the use of the term “patterns” is that the solutions provided—these ethical patterns—are difficult for interface designers to implement when they are not linked to a desire for ethical communication. It is complicated for practitioners to take them on board and use them in their professional practice. Furthermore, despite the number of projects proposing ethical patterns, we see that they have little resonance within professional design communities. This is, in fact, one of the aims of this article: to explore the creation of solutions that can be used by practising designers and that fit into their working practices.

4.2. A design project falling within a participatory action research approach, involving both research and action

Traditionally, action research is an approach that breaks down the division between the researcher, who observes, and the subject, who is observed. It is not a matter of conducting research on people, but with them, in order to solve a real problem. It has a dual objective: to produce theoretical knowledge (research) through the resolution of an existing concrete problem within a social context or an organisation, leading to transformation (action). These two objectives are interlinked. Action research is characterised by a cyclical and iterative process, comprising phases of planning, action, observation and reflection (Lewin, 1946).
According to Swann, the action research methodology lends itself easily to design processes, as the two are similar. The iterative and cyclical nature of action research is also a feature of the design process (Swann, 2002).

As part of this project, a key focus of the creative cycle was the prototyping of an artefact, which is the alternative pattern of a notification. This artefact served not only as a tool for knowledge (a tangible manifestation of the experimentation, of the knowledge that was created), but also as a mediation tool (facilitating dialogue, an understanding of ethical issues, the exploration of a new form of notification, and the development of reflection on these issues). This pattern thus became a reflective tool for participants, enabling them, through its manipulation and direct engagement with the object, to shift their professional

approaches. There was a transition from an intuitive design practice to a reflective and tool-based one.
To put it another way, within the framework of this project, what constitutes the research is the design process as well as its outcome. And what constitutes the action is the impact of this co-design project on the participating practitioners, that is to say, their autonomy and empowerment.
The knowledge generated was put into practice by the professionals, leading to further learning, which, in turn, was put into practice, and so on. This process is representative of the cyclical nature of any action research project.

A key difference between this project and traditional action research is the absence of social change, in the sense of bringing about a shift in society. Here, what the project has produced is a transformation, an impact on a small community of practising professionals.
Furthermore, unlike in conventional action research, where interviews constitute the main research material, here it was the entire process of designing an alternative notification artefact that served as the research material.

This action research has led to tangible changes, whether through the development of skills and the empowerment of participants, or ethical awareness regarding the use and application of notifications. The social change inherent in action research has been shaped by the participants' perspectives.
As the participants took ownership of the research, despite a collaboration that was not always perfectly symmetrical (inherent to the initial phase where the project is first framed), it can be said that this constitutes participatory action research as defined by MacTaggart (1991). That is, research in which researchers and practitioner designers collaborate, improving their knowledge, tools and/or working methods through joint and documented work, and which, through cycles of iteration, enables the improvement and change of practices by learning and taking a step back from the subject and their experiences.

Finally, and this is one of the project's key contributions, it demonstrates that, in the field of design, participatory action research involves not only dialogue, but also the co-production of artefacts that act as catalysts for the transformation of professional practices. Design is here research and action. The research involves the creation of the artefact (an alternative element of a notification), and the action is carried out through co-design.

4.3. Creating digital commons that foster a design democracy through the creation of imaginaries

This project challenges the concept of open design, contributing to the creation of digital knowledge commons.
These were first defined by Hess and Ostrom (2007), who distinguished them from physical commons (such as water and forests). Unlike physical commons, they are non-depletable (reading a Wikipedia page does not prevent others from reading it as well); however, they can be degraded by enclosure (overly restrictive copyright), pollution (misinformation), or the obsolescence of knowledge. The major risk here is underutilisation of these commons.

In the world of design, this is a concept that is frequently cited (Bosqué, 2021). Yet it struggles to gain recognition outside of fablabs and makerspaces.

However, other forms of open design have historically been present in interface design, such as design patterns, components, system designs, style guides, and so on.

The project presented in this article proposes a method for what a form of open design applied to interfaces might look like. This method is based on available documentation, and opportunities for the project to be reused. This documentation should cover the full process of design, including user research, design concepts, or decision patterns. Also, it should be reusable, through a CC BY (Creative Commons Attribution) license, allowing for sharing and adaptation, or through the sharing of duplicable (forkable) working documents such as the decision tree in a format available directly on Figma (main interface design tool) or other design tools.

In this project, our goal was to redesign the original design concept. This is what we propose, and it is one of the key contributions of this project: an experiment in open design that offers an open design project methodology.

One of the key benefits of this work to create digital commons is that it fosters openness and empowers the participating practitioners. They have been able to deepen their ethical reflections and professional practices through a compagnonnage approach.

A second advantage is the ability to spark the imagination. Today's digital landscape has undergone significant standardisation, whether through the development of standards (Bastien & Scapin, 1993) or system design (Google, 2014). This standardisation has been largely influenced by the GAFAM (Google, Apple, Facebook, Amazon, Microsoft), which pioneered the standardisation of freely accessible interfaces. In doing so, they created a standard for the imagination tied to these interfaces.
This standard of imagination, sustained by the aesthetic and functional hegemony proposed by GAFAM, emerged in opposition to the plural imaginaries that were available in the historical diversity of interfaces.
It is this diversity of interfaces—which is virtually absent from today's interfaces—that we need to reclaim and reinvest in, thereby creating alternative visions that challenge the prevailing interface standards, which are also the primary breeding grounds for dark patterns.

Indeed, interfaces shape our imagination. Beignon and his colleagues, in their research on how companies encourage us to use artificial intelligence, have shown us that the creation of imagination can be used to encourage users to adopt a particular technology—in this case, AI. They do this by shaping the imagination surrounding AI as a magical element, free of processes and environmental costs (Beignon and al., 2025).

The reappropriation of the creative imagination surrounding interfaces and their openness makes it possible to propose alternative forms of interface standards and imaginaries, and thereby, at the same time, to combat the dark patterns that arise from these interface standards.

One of the contributions of the project described in this article was that it helped to reopen the imagination of the practising designers who carried out the project, as well as, by extension, the imagination of all those who interacted with it. This practice of creating

imagination and developing utopian visions is, in fact, one that is particularly favoured by participatory design (Teli, 2015).

This expansion of the imagination therefore also allows users to reclaim digital technology and interfaces, leading to a design democracy: a design process shaped by everyone, rather than by a small group of individuals, mainly from Silicon Valley.

4.4. Limitations and future work

This experimental and volunteer-based co-design project faces the typical limitations of such initiatives. It includes difficulties in retaining participants over the long term. As participants have varying levels of commitment, very few of whom stayed with the project from start to finish. It also includes difficulties to make decisions that were guided more by engagement considerations than by strict academic rigour: through user research that focused on smartphone notifications, the absence of consideration for disabilities in the user research, and the proposed solutions, which primarily addressed visual notifications while overlooking other forms of notifications.
The main limitation of the project concerns the limited professional perspective we have on the project and its actual relevance to professional interface design communities.

In future studies, it would be interesting to examine, through the lens of organisational sociology, whether the various existing ethical patterns (alternative patterns, bright patterns, fair patterns, radiant patterns, privacy design strategies) actually align with the practices of professional interface designers. This includes shared research, resources, and potential use cases. The goal is to more accurately assess the impact of these projects on the interface design community.

5. A project representative of ethical design practices within the French-speaking community

The article presents an experiment using a methodology for creating an ethical pattern through participatory design. This project is typical of how digital ethical design projects are carried out.

As such, it forms part of an approach aimed at empowering stakeholders (both designers and users), that is to say, ensuring that these individuals' ability to exercise control is developed. This vision is part of the perspective initiated in particular by Douglas Engelbart, a pioneer in human-computer interaction research, on the augmentation of human intelligence (Bardini, 2000). For him, the computer is a tool that enables humans to become better. Interfaces must, therefore, be tools that enable the development of individuals' capabilities. Tools that they can control and direct according to their original goals.

Also, this perspective of empowerment takes place in other ethical design projects, such as the "Oracle du net"[4] project developed by LINC (the digital innovation laboratory of the CNIL: the French Data Protection Authority) and the designer Victoria Duchatelle. It invites users to visualise the challenges of digital technology, and more specifically, how algorithms work,

[4] https://linc.cnil.fr/loracle-du-net-vous-revele-comment-les-algorithmes-vous-calculent

through the installation of a “Hally” plugin. For its part, the Tarot Tech of Cards[5] project by Artefact enables designers to consider the impacts of technology. Cards such as “The Radio Star”, “Mother Nature” and “The Forgotten” allow designers to examine the consequences of the solution they have designed. Finally, the agency Design Ethically has developed a new design process[6] that incorporates steps to take ethical considerations into account.

Another key feature is the emphasis on sobriety, or even frugality, within the digital industry. In the context of the project presented, this sobriety is particularly evident in the design of the patterns. These must take into account the environmental impact they will have and, for example, must not encourage unnecessary use (Papanek et al., 2021).
In the case of notifications, it is even more important not to use re-capture elements—notifications sent to the user to attract them on an app and thus capture their attention (Monge Roffarello and al., 2023). This pattern may be seen as an interface standard, but it will have a significant environmental impact. Indeed, by re-capturing users’ attention, it encourages them to continue using the app. As all use of digital interfaces has environmental consequences (Roussilhe and al., 2023), increasing usage increases the environmental impact.
Across France, the integration of ethical design considerations into environmental issues is therefore a major trend. This is obvious both within professional communities—as seen in the numerous tech and design events dedicated to this topic: Green IO, Green Tech Forum, “Journée de l'éconconception numérique”—and within research communities that regularly intersect environmental issues with the problem of dark patterns (Beignon and al., 2025).

We are also seeing a trend within design communities to anchor ethical questions—which may appear philosophical or disconnected from professional practice—in specific themes that bring these issues down to earth: accessibility, eco-design, dark patterns... (Poiroux and Pineau, 2023). Here, this project does indeed focus on a specific topic: the use of dark patterns. It proposes an alternative that falls within the realm of ethical patterns, as we have defined them: patterns that offer solutions to equip digital professionals in the non-use of dark patterns, whilst claiming to be part of an ‘ethical design’ approach (doing things better).

Fourthly, this project is rooted in professional design practice. It aims to produce methods and design artefacts that will be used in a professional context. As such, it is in line with current research aimed at aligning ethical design principles with current professional practices (Eßmeyer and al., 2026). In this case, this takes the form of a participatory action research method, which also helps to forge links between professional practice and academic research.
As such, it addresses the need for tools and methods required by practising designers, whether in the project initiation phase or the project execution phase, thereby enabling them to implement ethical design initiatives (Öz and al., 2026).

Ultimately, beyond these characteristics found in many projects within ethical design communities, we also see a drive towards standardising practices through this type of project. These forms of practice standardisation—to varying degrees of regulation—currently exist in many areas of ethical design: accessibility (WCAG), eco-design (RGESN in France), and personal data (GDPR). The field of combating dark patterns starts to be subject to this

[5] https://tarotcardsoftech.artefactgroup.com
[6] https://www.designethically.com/framework3

type of standardisation of practices (european DSA). However, these standards are emerging and this project—among ethical pattern practices—contributes to.

Conclusion

In this paper, we looked back at how we moved from patterns to dark patterns and finally to "ethical patterns"—which we have defined as patterns that offer solutions to equip digital professionals to avoid using dark patterns, while claiming to uphold an "ethical design" approach.
We then presented the reusable methodology of a project exploring the creation of an ethical notification pattern, which can be used by practising designers and integrated into their workflows. Through its participatory approach, we also theorised the concept of a compagnonnage approach within a digital project, as a learning approach enabling the transmission of know-how and ethical values. Finally, we challenged the epistemological link through the use of the concept of patterns, widely employed in the literature to discuss heuristics.
The project's typology, based on participatory action research methodology, involved not only dialogue but also the co-production of artefacts serving as catalysts for the transformation of professional practices. And its use and impact through the creation of digital interface commons that foster a democracy of design by drawing on the imagination of the practising designers who carried out the project, as well as, by extension, all those who have interacted with it.
Finally, we outlined how this project exemplifies ethical design practice within the French-speaking community, through its focus on empowering stakeholders, its work on digital sobriety, its application of a specific ethical design approach—here the dark patterns—,its commitment to methodologies and tools rooted in existing practices, and finally, its drive to standardize professional practices.

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