Why AI Shouldn't Decide What We Share with AI and How We Can Do Better

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Cookie Banners Don't Work & Privacy Labels Don't Really Work Either

We by now know that the current implementation of cookie banners leads to substantial user frustration. For example, many banners make it difficult to reject cookies [6, 12], and some websites even disregard users' expressed choices altogether [10]. In addition, dark patterns are prevalent in cookie banner designs [5, 8].

At the same time, prior research demonstrates that improvements are possible. Personalized cookie banners that take users' privacy knowledge into account lead to more informed decisions [3]. In our own work, we found that the options presented to users significantly influence their decisions [13]. Thus, while the current state is problematic, alternative designs show promise.

In 2020, Apple introduced privacy labels for applications across the App Store ecosystem [1]. These labels were intended to provide users with greater transparency regarding data collection practices. However, empirical findings suggest that users do not fully understand them, due to their complexity, terminology, and information structure [7, 14].

At the same time, privacy labels are not entirely ineffective. Research shows that they influence users' willingness to install an app [2]. Users therefore neither fully understand nor completely ignore them.

We Already Know How to Do Better

Taken together, these findings indicate that the problem is not a lack of design interventions, but rather their current implementation. As discussed above, personalized cookie banners represent one possible avenue for supporting more informed decisions [3].

Building on this idea, and in collaboration with a bachelor's student (under the primary supervision of Astrid Weiss), we explored the concept of unified privacy preference settings. Specifically, we investigated whether websites could adhere to a browser-level standard that ensures a consistent layout across pages, thereby reducing cognitive load and facilitating decision-making.

Preliminary results indicate that the browser-based approach was perceived as more credible and trustworthy than traditional cookie banners. Furthermore, the new solution achieved a score of 72.25 on the System Usability Scale (SUS) [9]. Eighty percent of participants preferred the new system over classical cookie banners. However, these findings must be interpreted cautiously. The evaluation was conducted within the scope of a bachelor's thesis and is therefore not representative. The study included ten participants, all of whom identified as male and were between 18 and 30 years old ($M = 23.3$, $SD = 3.13$). Fifty percent of participants had a background in computer science.

In my dissertation, I plan to conduct a follow-up study using the developed prototype to validate and extend these initial findings. The figures on the following page illustrate the prototype.

Why AI Shouldn't Decide

A question that quickly arises in this context, and is central to this workshop, is whether AI can assist users in the consent decision-making process.

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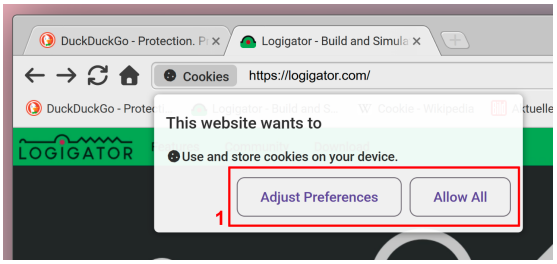
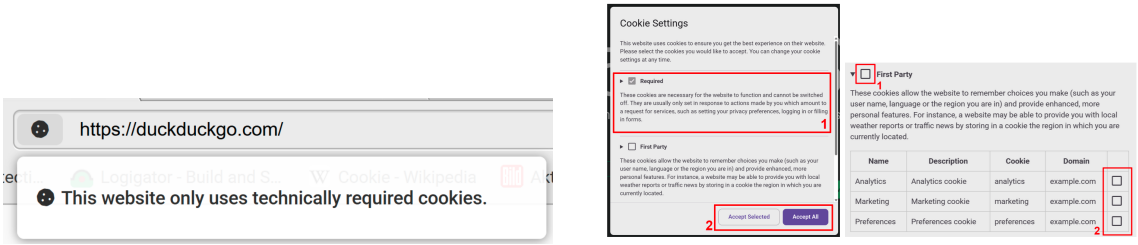


(a) Setting cookie preferences when first visiting a website (© Andreas Schlößl)

(b) Adjusting cookie preferences when revisiting a website (© Andreas Schlößl)

Fig. 1.



(a) Website using only technically necessary cookies (© Andreas Schlößl)

(b) Settings matrix (© Andreas Schlößl)

Fig. 2.

In my view, it is an absolute no-go to outsource our reasoning to AI when we are dealing with consent. AI cannot provide consent on a user's behalf, because doing so would not meet the definition articulated in Article 4(11) of the GDPR. The regulation defines consent as *"'consent' of the data subject means any freely given, specific, informed and unambiguous indication of the data subject's wishes by which he or she, by a statement or by a clear affirmative action, signifies agreement to the processing of personal data relating to him or her;"* [4]. Delegating this act to an AI system would undermine the very conditions of being freely given, informed, and an unambiguous indication of the data subject's wishes.

Against this backdrop, I argue that if we use AI in this domain, it should not be to replace consent, but to support it. AI could function as an assistant that guides users through the decision-making process. For example, an AI assistant might help explain complex privacy policies or clarify elements of privacy labels, which we know can be confusing for users [7, 14]. However, this approach is not without challenges. Large language models are known to hallucinate or generate inaccurate information [11], which raises serious concerns in high-stakes contexts such as privacy and consent. One potential mitigation strategy could involve restricting AI systems to a curated set of predetermined, verified responses. Yet even then, it remains unclear whether such a system could adequately account for the diversity and complexity of real-world cases.

Therefore, based on the results of the previously discussed prototype and the arguments outlined above, I strongly believe that we should focus on encouraging and enabling users to make their own informed decisions. Establishing a standardized interface to which websites must adhere would be a meaningful first step. A consistent language for

privacy policies, combined with efforts to educate users about it, could empower people to provide meaningful consent and make genuinely informed decisions about data collection.

Ultimately, the question remains: do we really want AI to decide what data we share? Probably not.

Acknowledgments

Andreas Schlößl developed the prototype and conducted the associated user study that informed parts of this position paper. Portions of the related work section are based on, and have been rephrased and condensed from, our previous publication on cookie interfaces [13]. Rafael Vrecar received funding through a DOC Fellowship from the Austrian Academy of Sciences (Grant No. DOC/27292).

DeepL and ChatGPT were used exclusively for linguistic refinement. This included improvements to spelling, grammar, vocabulary, phrasing, sentence structure, and overall textual flow. The tools were not used to generate original ideas, arguments, analyses, empirical results, or citations. Prompts were limited to requests such as: "Improve the flow of this text, keep the style the same, it is an academic position paper. Fix grammar and spelling mistakes as well." All intellectual contributions, conceptual framing, and substantive content remain the author's own.

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