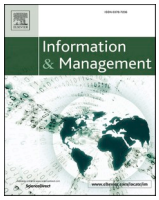
Information & Management 63 (2026) 104240

Contents lists available at ScienceDirect

Information & Management

journal homepage: www.elsevier.com/locate/im



"Fight for me and I will be with you": How product deciphering app digital activism influences user loyalty

Richard Huaman-Ramirez [a,*], Aranzazu Gaztelumendi [b], Zeeshan A. Bhatti [c], Francisco Guzman [d], Jean Pfiffelmann [e]

[a] KEDGE Business School, Marseille, France
[b] ESSCA School of Management, Aix en Provence, France
[c] School of Organisations, Systems and People, Faculty of Business & Law, University of Portsmouth, United Kingdom
[d] G. Brint Ryan College of Business, University of North Texas, United States
[e] EM Strasbourg Business School, University of Strasbourg, France

ARTICLE INFO

Keywords:
Digital activism
Perceived authenticity
Self-app connection
Political ideology
Health consciousness

ABSTRACT

Although the use of product deciphering applications (PDAs)—such as Yuka and Fooducate—is becoming increasingly common, there remains a lack of research on how users perceive these apps, and specifically how PDAs' perceived digital activism influences user loyalty. PDAs are mobile applications that allow users to scan the composition or contents of products, providing precise information about how these products may affect their health. However, users also perceive these PDAs as engaging in digital activism: advocating for users by actively promoting significant change regarding (potentially) unethical practices by certain product manufacturers. This paper investigates the mechanisms (i.e., perceived app authenticity and self-app connection) and conditions (i.e., political ideology and health consciousness) through which perceived digital activism in PDAs affects user loyalty. Four quantitative studies were conducted in France, involving a total of 832 individuals (exploratory pre-study: $N_1 = 61$; confirmatory pre-study: $N_2 = 122$; cross-sectional study: $N_3 = 403$; experimental study: $N_4 = 246$). Data were analysed using Partial Least Squares Structural Equation Modelling, OLS regression, and ANOVA. Results show that perceived app authenticity and self-app connection both mediate the relationship between perceived digital activism and user loyalty. These mediators are further moderated by political ideology and health consciousness—i.e., the effects of perceived digital activism on user loyalty via perceived app authenticity or self-app connection are stronger for liberal than for conservative users, and stronger for high health-conscious than for low health-conscious users.

1. Introduction

Presently, some application providers, who seek to retain users by building relationships, are aligning their mission or core values with genuine social issues that extend beyond their basic functions [1]. For instance, Yuka in France, Fooducate in the United States, and ToxFox in Germany are regarded as social change agents due to their ability to influence the practices of target manufacturers. Users perceive these product deciphering applications (PDAs)—which scan products to provide clear information about their impact on users' health—as entering the sociopolitical arena by generally portraying large and well-known companies as "the enemies." Users may also see these applications as effective in exerting pressure on large retailers and manufacturers, compelling them to change the composition of specific products; this engagement can be considered a form of digital activism, in which software applications are used to disseminate information to a large audience with the purpose of promoting social and political change [2]. Consequently, users who see application providers advocating for their physical health may be more inclined to remain loyal to these apps, with user loyalty defined as the act of (re)using the apps and recommending them to others (e.g., [3]). Focusing on user loyalty is particularly important because application providers are increasingly challenged by low user retention rates. In fact, a considerable proportion of applications are used only once and then deleted [4]. An in-depth

* Corresponding author.
E-mail addresses: richard.huaman-ramirez@kedgebs.com (R. Huaman-Ramirez), aranzazu.gaztelumendi@essca.fr (A. Gaztelumendi), xeeshan@gmail.com (Z.A. Bhatti), francisco.guzman@unt.edu (F. Guzman), jean.pfiffelmann@em-strasbourg.eu (J. Pfiffelmann).

https://doi.org/10.1016/j.im.2025.104240
Received 29 April 2024; Received in revised form 20 August 2025; Accepted 27 August 2025
Available online 28 August 2025

understanding of the effect of digital activism on PDA user loyalty is therefore relevant for both academics and practitioners.

From a theoretical perspective, the focus of information systems literature on digital activism has primarily been on how digital tools enable users to engage in political or social activism. Research demonstrates that internet use not only reinforces existing patterns of offline political participation but also fosters new forms of online political activism [5–7]. The literature suggests that the use of social media enhances activism, which in turn influences government decision-making and shapes relationships with social actors [8]. The literature also indicates that digital tools enable people to challenge and express resistance to powerful companies [9], but they can also be used by these powerful organisations to track users and contribute to the digital divide [10]. Research further reveals that digital tools empower users and help them organise their social interactions and political activism [11] as well as foster solidarity with other users [12]. In sum, research has focused on how users employ digital activism to advocate for change.

The information systems (IS) literature, however, has not explored how application providers that support digital activism—such as those challenging manufacturers' practices by deciphering product attributes and their potential impact on users' health [1]— are perceived by their users. This is crucial because users of these applications act as change agents in the development of effective strategies aimed at fostering strong relationships with them. In addition, IS practitioners need to evaluate the consequences of their actions from the users' perspective when developing these applications. Therefore, we aim to address the following research question:

RQ1: What is the effect of PDAs' digital activism on user loyalty (recommendation and (re)use intention)?

Another gap in the literature concerns the underlying mechanisms through which application providers' digital activism can enhance user loyalty. There is limited research in the IS literature exploring the symbolic pathways that explain this relationship. In fact, activism is inherently symbolic, as it can serve as a carrier of values, narratives, and social identities [13]. Among other concepts with symbolic implications, we propose that *self-connection*—which refers to the extent to which users integrate apps into their self-concept [14,15]—can shape how users relate to the company. For instance, a strong self-connection with an online learning platform leads to a greater willingness to recommend it and to pay for its services [15]. Similarly, we suggest that the digital activism of application providers may help them build relationships with users by reinforcing self-connection, which, in turn, can enhance user loyalty. Digital activism, through the use of digital tools or applications, may enable users to assess the degree of alignment between their own beliefs and values and those expressed by the provider, within the framework of moral evaluations. Put simply, it may allow users to determine whether an application provider's ethical principles align with their own [16]. Given that activism is driven by a sense of purpose and values [17], it is reasonable to expect that application providers engaged in such practices would be perceived as more authentic and capable of supporting users in fulfilling their self-definition needs.

Another important symbolic pathway associated with digital activism apps is their perceived authenticity—the extent to which an app's actions align with the mission and values it promotes—which can shape how users relate to the company. For instance, the perceived authenticity of an AI service app is positively associated with usage intention [18]. We thus suggest that the perceived authenticity of application providers may be enhanced when users observe their activism through engagement with social concerns, potentially influencing user loyalty. In fact, activist companies that align their actions with their values or purpose may be perceived as more genuine by customers, as they are less susceptible to external influences or the actions of other companies [19]. We, therefore, address a second research question:

RQ2: What is the mediating role of both self-app connection and app authenticity in the relationship between a PDA's digital activism and user loyalty?

The information systems literature has not considered personal values as boundary conditions under which application providers' digital activism can enhance user loyalty. Activism is intricately linked to personal values, as these can empower individuals to resist conformity pressures and engage in political action [20]. In addition to other concepts associated with personal values, we posit that an individual's political ideology (conservative versus liberal) can shape how users relate to the company. For instance, conservative users are more likely to believe in fake news and to spread it on social media [21]. We therefore suggest that digital activism, which involves taking a stand for positive societal change, may resonate more strongly with liberal than with conservative users. Accordingly, the impact of PDA digital activism on user loyalty may be expected to vary between left-wing (liberal) and right-wing (conservative) users.

Moreover, health-conscious users may respond differently to activist PDAs compared to non-activist ones, given that PDAs are health applications. Prior studies have shown that health-conscious users are more inclined to perceive fitness apps as useful, leading to a higher intention to download and rate them positively [22]. They may also be particularly susceptible to activist companies influencing their self-concept. Health-conscious users are therefore more likely to perceive companies as aligning with their self-image when they believe those companies contribute positively to their overall well-being [23]. Accordingly, we address a third research question:

RQ3: What is the moderating role of both political ideology and health consciousness in the relationship between digital activism and user loyalty?

Our research makes three distinct and key contributions to the current body of knowledge. First, we adopt a symbolic approach to explain the impact of perceived digital activism on user loyalty. We contribute to the digital activism literature by examining how users self-connect with apps that exhibit digital activism, and how these alignments shape their loyalty—reinforcing the importance of social identities in the digital landscape. Additionally, we assess the authenticity of an app's activism and demonstrate that users are more likely to remain loyal when they perceive the activism as genuine and aligned with their values.

Second, we contribute to the digital activism literature by exploring the boundary conditions of the relationship between digital activism and user loyalty. Specifically, we examine the moderating roles of political ideology and health consciousness. This allows us to investigate how these personal values influence users' responses to digital activism, highlighting the nuances of user loyalty across different political and health-conscious segments.

Third, we contribute to the information systems literature by proposing a reliable and valid measurement scale—developed through an exploratory pre-study, confirmatory pre-study, cross-sectional study, and experimental study—for assessing digital activism from a user's perspective.

The paper proceeds as follows. The next section presents the conceptual framework and hypotheses, followed by the methodology. We then report the results of the data analysis, and conclude with a discussion of the findings.

2. Conceptual framework

2.1. Product deciphering applications as digital activists

PDAs refer to mobile applications that enable users to scan product compositions or ingredients, providing clear information about how these products affect their health [24]. These applications rank products

according to their health performance, based on free and open databases. When a product is identified as having a detrimental effect on health, the application suggests healthier alternatives. A distinctive feature of these apps is their intrusion into the sociopolitical sphere, portraying large and well-known manufacturers—whose products are deemed unhealthy by these apps—as "enemies." Users may interpret this engagement as a form of digital activism.

Digital activism is a type of activism that uses digital tools and platforms to challenge established practices and promote social change [25]. It encompasses a wide range of activities, including complex forms of engagement such as hacktivism [26], online protests [7,27], online petitions and social media campaigns [9]. It also involves a diverse array of actors, including consumers [7,27] and organizations [10,25] (For more details, see **Appendix 1**). This research focuses on the user's perceptions of application providers.

Application providers can also play a critical role in digital activism because they can propose digital technologies that advocate for broader social change [10]. They can promote and drive positive change by addressing pressing societal issues [28]. We therefore argue that PDAs (proposed by application providers) as information artefacts can be perceived by users as tools for digital activism because these apps empower them by providing extensive information about the potential health impacts of products and by exerting pressure on major retailers, manufacturers, and producers. From the perspective of digital applications, we define perceived digital activism as users' perception of application providers' actions to challenge established practices and promote social change through their software applications.

2.2. Social identity theory

Social identity theory [29] asserts that when an individual from one group evaluates individuals from other groups, the motivation to seek connections with them is influenced by the perception of how these others might contribute to the development or maintenance of the individual's self-concept. In other words, we are more likely to connect with outgroup members when their traits or characteristics are consistent with our own self-definition [30]. Self-connection is an integral component of social identity; the greater the influence of individuals from other groups on one's self-concept, the more likely these alignments will be internalised as symbolic elements of one's self-connection with them. Consequently, the stronger the connection one feels to them, the more likely these interpersonal and symbolic bonds will be internalised as integral parts of one's group affiliations.

In line with this theory, we believe that PDAs can be incorporated into users' lives and their self-concept. Users may convert these apps into digital representations of their values and lifestyle, leading them to self-connect with the apps [14,15]. Therefore, self-app connection reflects the extent to which users integrate apps into their self-concept. Among the various concepts associated with social identity theory, we focus on self-connection because the alignment between an app and a user's self-concept can serve as a mechanism to explain the relationship between PDA digital activism and user loyalty.

2.3. The authenticity framework

From a socio-psychological perspective, a genuine person acts in ways that are primarily determined by their own identity, although environmental factors do play a role in shaping each individual [31]. In other words, authenticity refers to being true to oneself, whereby a person's actions align with their internal values and beliefs. Thus, authenticity is the extent to which a person remains true to who they are, despite external pressures [32]. This involves maintaining a state of congruence between one's inner experiences and external representations. A person's authenticity is believed to increase when their behaviour aligns with their principles, free from external influence. Consequently, the greater their authenticity, the more likely others are to value these symbolic aspects.

Research has shown that the concept of authenticity can be extended to the context of technological devices. For instance, users can perceive intelligent virtual assistants, chatbots, and applications as being authentic [18,33,34]. Therefore, we define authenticity in the context of digital tools as the perceived genuineness and trustworthiness of PDAs, which can significantly influence users' emotional and behavioural responses towards the apps. Among the various concepts associated with the authenticity framework, we focus on perceived authenticity because users' perception of genuine apps can serve as an alternative mechanism to explain the relationship between PDA digital activism and user loyalty.

3. Hypotheses development

3.1. Digital activism and user loyalty

User loyalty, in the context of applications, refers to the continued use or reuse of an app over an extended period and, consequently, to the recommendations users make to friends, relatives, or others (e.g., [3]). Research shows that users are frequently loyal to technological offerings [35], websites [36,37], and more specifically to mobile platforms [38–40].

The relationship between digital activism and user loyalty is closely tied to companies' responses to social movements. For instance, platforms such as Change.org enable users to contest certain firms' practices, prompting substantial changes in those firms' behaviour as they respond to public pressure [9]. Such responsiveness may enhance user loyalty, as it demonstrates that users' opinions are acknowledged and valued. Social movement organisations also employ digital activism techniques to promote social change and encourage user participation, thereby strengthening loyalty through shared ideals and collective action [25]. Furthermore, users who form relationships with companies that align with their ethical purchasing principles tend to develop stronger emotional bonds [41]. Likewise, social media platforms, as digital tools, are essential for fostering unity, potentially leading to increased loyalty towards corporations that support these movements. We therefore expect that an app contributing to positive societal change may reinforce user behaviour and relationships, as such actions are generally perceived more favourably. Based on these arguments, we hypothesise:

H1: PDA digital activism has a positive effect on user loyalty.

3.2. Digital activism and self-app connection

Digital activism has emerged as a powerful tool for fostering self-connection among individuals and organisations, significantly influencing how people perceive their identities and engage with social issues. Organisations have increasingly utilised digital platforms to enhance their activism, promoting broader social change rather than merely seeking immediate compliance from large corporations. They leverage digital tools to create collaborative agreements that can lead to societal transformation, thereby fostering a sense of belonging and identity among individuals [25]. When symbolic elements associated with an organisation are used in the construction of a user's self-concept, they become meaningful, forging a connection between the user and the organisation [42].

It has been suggested that, in addition to traditional websites, individuals are now using social media platforms and digital apps to take consumer activism to the next level [7]. As a result, individuals tend to use applications that support their views and offer opportunities to participate in causes they care about. For instance, Eli et al. [43] studied an app named "Buycott", which supports digital activism and decision-making in healthcare products. We posit that users can connect more easily with activist apps because these become meaningful to them

when they defend their interests. Since activist apps convey symbolic properties by promoting values-based societal change and influencing corporate practices, an app that champions digital activism and defends users' rights or welfare is likely to be perceived as an ingroup member. Accordingly, users are more likely to incorporate an activist app into their self-concept, as it advocates for the respect of their rights. Based on these arguments, we hypothesise:

H2: PDA digital activism has a positive effect on self-app connection.

3.3. Self-app connection and user loyalty

The effect of self-app connection on user loyalty is supported by a growing body of literature examining the ties people establish with apps. Research shows that when users feel a deep connection with an app, they tend to exhibit loyal behaviours, such as continued usage and positive recommendations [44]. This connection is further strengthened by the duration of the user–app relationship, indicating that longer interactions can deepen ties and increase loyalty [44]. In the context of gamification, interactions within mobile applications have been shown to enhance consumers' self-connection, which in turn influences their intention to continue using the app [45]. Similarly, in the context of smartphone apps, research shows that users who feel a strong connection to an app, as a dimension of technology attachment, are more likely to engage with it consistently and develop loyalty [46]. We can therefore expect that self-app connection is positively related to user loyalty.

We argue that users of digital activist apps are more loyal to apps that align with the cause they support (i.e., their self-identity). Since activist apps are more likely to be incorporated into the user's self-concept, and self-concept can be positively related to user loyalty, we expect that self-connection functions as a mechanism to explain the relationship between digital activism and user loyalty. Accordingly, we hypothesise:

H3: (a) PDA self-connection has a positive effect on user loyalty and (b) mediates the relationship between PDA digital activism and user loyalty.

3.4. Digital activism and PDA authenticity

The effect of organisations' digital activism on their authenticity is increasingly relevant in today's interconnected world, where social media and digital platforms play a pivotal role in shaping user perceptions and organisational identities. Digital activism has transformed the landscape of activism, enabling organisations to engage with broader audiences and mobilise support for various causes.

One aspect of digital activism is its ability to foster collaboration between organisations and the public. Organisations utilise digital activism not merely to demand compliance from businesses, but to promote broader social change through collaborative efforts [25]. The perceived authenticity of an organisation increases when its digital activism aligns with its stated values and mission, creating a coherent narrative that resonates with its audience. In addition, long-term collaborations can enhance an organisation's authenticity because they demonstrate a commitment to genuine engagement rather than opportunistic activism.

The impact of digital activism on an organisation's authenticity has also been evident in the context of social movements such as Black Lives Matter. Research shows how the movement has influenced charitable crowdfunding campaigns, highlighting the importance of social justice and anti-discrimination efforts [47]. Non-profit organisations that actively endorse societal movements are seen as more credible and trustworthy, thereby aligning with their values and purpose, which can enhance perceived authenticity. This relationship underscores the significance of aligning digital activism with organisational values, as failure to do so can lead to accusations of inauthenticity. In this way, we propose that PDAs with strong engagement in social change, which demonstrate they are not easily influenced by other (big) companies, can be perceived as more authentic and as acting in line with their values. Based on these arguments, we hypothesise:

H4: PDA digital activism has a positive effect on app authenticity.

3.5. App authenticity and user loyalty

The impact of app authenticity on user loyalty is a critical area of study in the context of digital applications, particularly as users increasingly seek genuine and trustworthy experiences. App authenticity encompasses various dimensions, including the perceived genuineness of the app's content, the reliability of user interactions, and the overall user experience [18]. We believe that this multifaceted nature of authenticity significantly influences user loyalty, as users are more likely to remain engaged with applications they perceive as authentic. One of the key antecedents of perceived authenticity in applications is the quality of the content presented within the app. Research has shown that the authenticity of an app is determined by several factors, including the transparency of information, the accuracy of the services provided, and the overall user experience [18]. When users perceive that an app delivers accurate and reliable information, their trust in the app increases, which is essential for fostering loyalty. This aligns with Jin et al.'s [48] findings, which demonstrated that authentic visuals and content significantly enhance users' willingness to engage with an app, thereby increasing their loyalty. For instance, the aesthetic appeal and authenticity of cover images can lead to greater user satisfaction and retention.

Furthermore, the emotional connection users develop with an app is significantly influenced by its perceived authenticity. Research has shown that immersion and authenticity in learning tasks lead to higher satisfaction and engagement levels [49]. This suggests that when users feel a genuine connection to the app's content and purpose, they are more likely to exhibit loyalty. The emotional resonance created by authentic experiences can lead to stronger user attachment and advocacy for the app. According to previous research [18,48], if users view an app as authentic, they are more inclined to promote it and use it again. Thus, we hypothesise:

H5: (a) PDA authenticity has a positive effect on user loyalty and (b) mediate the relationship between PDA digital activism and user loyalty.

3.6. App authenticity and self-app connection

The relationship between app authenticity and self-app connection is multifaceted, encompassing various dimensions of user experience and emotional engagement. Authenticity in mobile applications is increasingly recognised as a critical factor influencing user perception and behaviours. Research suggests that perceived authenticity in an app can significantly enhance user engagement [18]. The emotional engagement derived from authentic experiences can lead to a deeper self-app connection, as users feel more aligned with the values and identity represented by the app. This alignment may foster a sense of belonging, which is crucial for maintaining user engagement over time. Research also suggests that perceived authenticity can impact self-app connection through the mechanism of trust and commitment [33]. These authors demonstrated that the perceived authenticity of intelligent virtual assistants makes users feel more connected to them via these two mechanisms. Based on these arguments, we hypothesise:

H6: PDA authenticity has a positive effect on self-app connection.

3.7. The moderating role of political ideology

Political ideology refers to an individual's set of views and principles on the functioning of a political system within a society [50]. Although

liberal and conservative political ideologies are the two most dominant in most countries today, these opposing schools of thought were originally based on the left–right political spectrum [51]. The left–right metaphor originated during the French Revolution of 1789: those who supported the monarchy sat on the right side of the French Assembly Hall, and those who aimed to overthrow and oppose it stood on the left side [52]. Right-wing ideology is mainly characterised by a focus on social hierarchies and the status quo, whereas left-wing ideology prioritises equality and social change [53]. In terms of change, the literature has shown that right-wing individuals are characterised by beliefs opposing new experiences [54] and are less likely to enjoy novelty and new feelings [55]. On the other hand, those with left-wing beliefs tend to be more receptive to uncertainty, acceptance, and transformation [56].

In the information systems literature, research shows that political ideology significantly influences various aspects, particularly in how individuals engage with technology, seek information, and interact within online environments [57]. One notable area of exploration is the relationship between political ideology and online behaviour, particularly concerning online reviews. Research has shown that the influence of political ideology extends to how individuals express their opinions in online reviews. For instance, liberal reviewers are likely to produce more cognitively complex language and diverse arguments in their reviews [58]. In addition, research shows that political beliefs affect the believability of "fake news" [59]. In fact, individuals' ideological frameworks significantly influence their perceptions of news credibility, which has profound implications for the design of information systems that aim to foster trust and reliability in news dissemination. Liberal users tend to believe less in fake news and are less inclined to spread it on social media [21].

Based on these studies, an interplay effect of PDA digital activism that involves apps' support for social change and users' political ideology on the authenticity of the app can be expected. In other words, PDA digital activism may be perceived as more authentic by left-wing (liberal) than by right-wing (conservative) users [60]. We posit that the moderating effect of political ideology can be explained by the fact that PDA digital activism refers to the message promotion and stand taken on positive change in society by PDAs, which generally resonates more with left-wing users and less with right-wing users, who are more attached to the status quo and stability. Likewise, we believe that PDA digital activism may have a greater impact on the self-app connection of left-wing-oriented users (as opposed to right-wing-oriented users), given that digital activism will resonate more with left-wing users, making them integrate PDAs more easily into their self-concept. We thus hypothesise that the relationship between PDA digital activism and app authenticity, as well as the relationship between PDA digital activism and self-app connection, are stronger among users with a left-wing orientation than among those with a right-wing orientation:

H7a: The more users' political ideology is left-wing oriented (vs. right-wing), the stronger (vs the weaker) is the relationship between PDA digital activism and self-app connection.
H7b: The more users' political ideology is left-wing oriented (vs. right-wing), the stronger (vs the weaker) relationship is between PDA digital activism and app authenticity.

3.8. The moderating role of health consciousness

Health consciousness refers to an individual's orientation towards overall health and is conceptualised as a notion comprising self-health awareness, personal responsibility, and health motivation [61]. Highly health-conscious individuals are more likely to be knowledgeable about their health, attentive to health concerns affecting themselves, and willing to take measures to safeguard their well-being. They are motivated to engage in healthy behaviours and to practise prevention, and they feel responsible for maintaining a healthy lifestyle.

Research has shown that health consciousness has emerged as a significant construct in the information systems literature, particularly in the context of health-related technology adoption and usage. For instance, individuals with higher health consciousness are more likely to engage in online health information seeking because they perceive greater utility in the information available online [62]. Furthermore, in the context of fitness applications, findings suggest that health consciousness acts as a significant moderator, enhancing users' commitment to these applications [63]. Health consciousness not only affects initial adoption but also plays a critical role in sustained engagement with health technologies [64]. It also influences individuals' readiness to engage in health-promoting behaviours, such as consuming healthy products and seeking health information [65,66].

Consequently, we suggest that health-conscious users may be more susceptible to the authenticity and self-connection effects of PDA digital activism, as they perceive the application to advocate for their health. In fact, health-conscious users may also be active participants in health management and are more likely to seek health-related information and engage in health-promoting activities. Health-conscious individuals are more likely to engage in preventive health care, adopt a positive attitude towards healthy lifestyle choices, and are motivated to improve or maintain their well-being. We thus hypothesise that the relationship between PDA digital activism and self-app connection is stronger among health-conscious users than among those with low health consciousness:

H8a: The higher (vs the lower) app users' health consciousness is, the stronger (vs. the weaker) is the relationship between PDA digital activism and self-app connection.
H8b: The higher (vs the lower) app users' health consciousness is, the stronger (vs. the weaker) is the relationship between PDA digital activism and app authenticity.

Fig. 1 presents the conceptual model.

4. Study 1

4.1. Data collection and sample

The study's target demographic consisted of individuals who use product deciphering applications, in line with its research aims. A total of 403 users successfully completed a self-administered online survey disseminated across several online platforms. Facebook and LinkedIn were initially used to circulate the questionnaire via a virtual snowball sampling technique, enabling the sample size to expand rapidly [67]. Subsequently, due to difficulties in finding users after a period of eight months, data collection was completed with the help of a local panellist. Data collection in the French market was justified, given that product deciphering apps are widely used in France. The data collection method (via social media vs via panellist) did not have an impact on the variables (all $p > .05$).

The purposive sample shows a fairly uniform distribution across different age groups. Specifically, 47.4 % of participants were between 18 and 25 years old, 17.1 % were between 26 and 35 years old, 14.9 % were between 36 and 45 years old, 10.7 % were between 46 and 55 years old, and 9.9 % were older than 55. The majority of participants were women (62 %), which aligns with the observation that women tend to be more attuned to social and environmental concerns [68]. Regarding income, 48.9 % of participants reported that their monthly income was below €1500, 33.3 % indicated a range between €1500 and €2500, and 14.1 % declared an income above €2500 (Table 1). The profile of participants is in line with the population of PDA users.[1]

Questions were clustered to make it seem like it would take less time to finish, and a progress metric was included to discourage users from

[1] For instance, https://yuka.io/wp-content/uploads/social-impact/en/Social%20impact%20-%20Yuka.pdf and https://www.lsa-conso.fr/yuka,323321

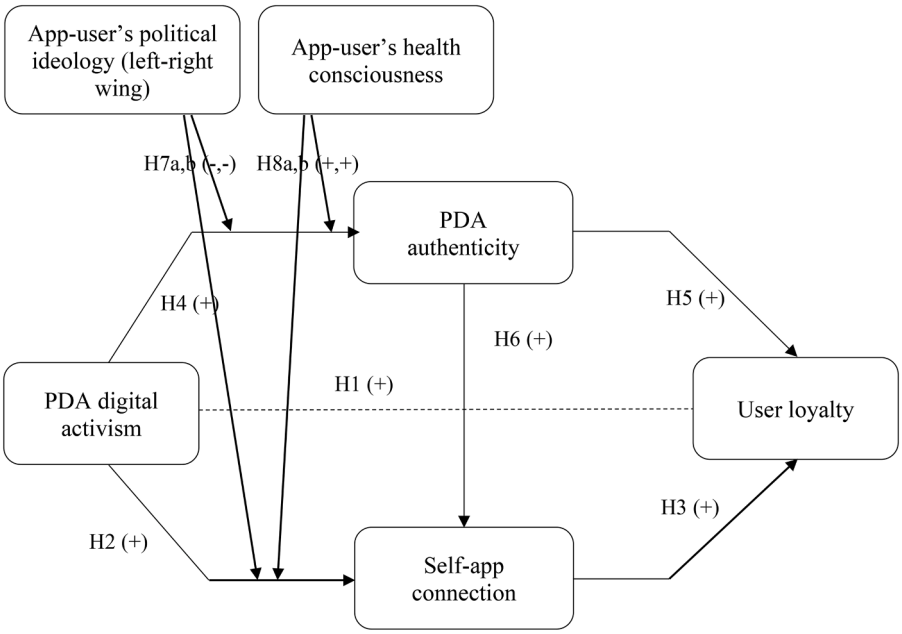


Fig. 1. The conceptual model.
Note: PDA=Product Deciphering App.

giving up too soon [69]. Common method variance (CMV) was also decreased by using a variety of answer forms and randomly ordering the questions in each cluster [70].

The questionnaire consisted of three sections. Participants were first instructed to read the entire questionnaire and provide their most honest responses after considering all questions. They were reassured that their opinions mattered and would be used to effectively reduce common method variance (CMV). Participants were also informed that their responses would remain anonymous and that there were no right or wrong answers.

Next, participants were asked to indicate the PDAs they had previously used (91.6 % used Yuka, 11.5 % used Inci Beauty, 7.8 % used QuelProduit, 6.2 % used QuelCosmetic, 3.7 % used BuyOrNot, and 1.9 % used ComsEthic). They were then prompted to indicate the app they used most frequently and were instructed to keep this app in mind for the subsequent questions. Participants then responded to questions about their most recent use of the PDA, frequency of use, user loyalty, app authenticity, self-app connection, and digital activism.

Finally, participants were asked a series of demographic questions, including gender, age, income, and profession, along with items designed to assess their health consciousness and political ideology.

4.2. Measures

Digital activism was measured through the adaptation of an original measurement scale based on an exploratory and confirmatory study. In the exploratory phase, six items (see Table 2) were first extracted from the literature following a deductive approach for item generation [71]. A sample of 61 respondents (75 % women, $M_{age} = 32$) was then used to explore the scale dimensionality. The criterion of a minimum sample size of ten times the number of items was applied [72]. Respondents were exposed to the following text to evaluate the notion of activism from a fictitious cosmetic company ("Biuti"): *Imagine that you are in the following situation: You are walking down the street one evening on your way home from work, and you see an advertising poster on a bus stop. The poster features the new body moisturizer from cosmetics "Biuti." Your attention is drawn to the advert because you realize that you need this type of cream. When you look closely at the poster, you see a woman in a rural setting. She is old and/or plump. You also see the company's slogan: "The real perfect body."*

The choice of cosmetic products was justified by the fact that they are also targeted by PDAs. Respondents were then asked questions about their perception of the company. Specifically, they evaluated the extent to which they perceived Biuti to be an activist company using the six aforementioned items. A principal component analysis showed high factor loadings (> 0.7) and a single factor (eigenvalue > 1), explaining 68 % of the total variance of the six items.

In the confirmatory phase, the six items identified in the exploratory study were used, and the psychometric qualities of the scale were verified through a second sample of 122 participants (51 % women, $M_{age} = 42$). As in the exploratory study, participants were exposed to the same text to evaluate activism. The data were analysed following the steps for Confirmatory Composite Analysis with reflective measurement models [77]. First, the indicator loadings were greater than 0.708 and their t-statistics were above 1.96, indicating significance for a two-tailed test at the 5 % level. Second, the reliability of the lowest indicator was 0.55, above the 0.5 threshold. Third, Cronbach's alpha and composite reliability, used to measure construct reliability, were above 0.7 and below 0.95. Fourth, the Average Variance Extracted (AVE) value was higher than 0.5. Fifth, discriminant validity was demonstrated, as the heterotrait–monotrait (HTMT) values were below 0.85. Sixth, when linking activism to purchase intention, the results showed a significant correlation, supporting the nomological validity of the activism construct

To sum up, the measurement scale for the general construct of activism presents strong psychometric properties, making it adaptable to the notion of digital activism.

Self-app connection was measured through an adaptation of Escalas and Bettman's [73] scale. Gelbrich's [74] scale was adapted to measure user loyalty. The measurement of *app authenticity* was adapted from Schallehn et al.'s [19] scale. Finally, the individual variables of *political ideology* and *health consciousness* were measured using Mehrabian's [75] scale and Plank and Gould's [76] scale, respectively. All items were rated on a 7-point Likert scale (from 1 = "Strongly disagree" to 7 = "Strongly agree").

Following the translation of the questionnaire from English to French by two native French speakers, a marketing expert proficient in both languages conducted an additional review. To reduce repetition, costs, and participant fatigue, and to improve the response rate, certain

Table 1
Demographic Characteristics of the Sample ($N = 403$).

Categories	*N*	%
Age		
18–25	191	47.4
26–35	69	17.1
36–45	60	14.9
46–55	43	10.7
56 or older	40	9.9
Gender		
Male	152	37.7
Female	250	62.0
Other	1	0.2
Monthly household income		
<1500€	197	48.9
Between 1500€ and 2500€	134	33.3
Between 2501€ and 4500€	57	14.1
Between 4501€ and 6000€	10	2.5
>6000€	5	1.2
Most frequently used PDA		
Yuka	347	86.1
Inci Beauty	27	6.7
QuelProduit	12	3.0
QuelCosmetic	8	2.0
BuyOrNot	3	0.7
Clean Beauty	3	0.7
CosmEthics	2	0.5
Viji	1	0.2
Recency of use		
One week ago	103	25.6
2–4 weeks ago	78	19.4
1–2 months ago	60	14.9
3–6 months ago	60	14.9
7–12 months ago	44	10.9
>1 year	58	14.4
Frequency of use		
Several times a day	13	3.2
Once a day	26	6.5
Once a week	111	27.5
Once a month	105	26.1
Less than once a month	148	36.7
Occupation		
Student	127	31.5
Executive	52	12.9
Office worker (private)	50	12.4
Civil servant	23	5.7
Retired	22	5.5
Trader	20	5.0
Engineer	15	3.7
Technician	14	3.5
Liberal profession	13	3.2
Health profession	13	3.2
Professor	12	3.0
Unemployed	6	1.5
Other	36	8.9

elements were removed after a face validity review with one PDA user and an expert in digital marketing [78]. Table 2 contains the construct measurement scales.

The presence of CMV was assessed using Harman's one-factor test [70]. After doing an exploratory factor analysis on the six concepts (twenty-nine items), it was determined that the data were not influenced by any potential bias. The analysis revealed that only 38.04 % of the variance in the non-rotated solution could be explained when the number of factors extracted was limited to one. It can therefore be concluded from these evaluations that CMV is not a concern.

SmartPLS 4 software for partial least squares structural equation modeling (PLS-SEM) was used to estimate the measurement and structural models [79]. The primary justification for using PLS-SEM analysis is that it provides a prediction-oriented strategy for SEM by focusing on explaining variances [80]. Due to its causal–predictive nature, it helps researchers strike a balance between explanation and prediction.

Table 2
Measurement items and variable sources.

Construct	Measurement items	*Sources*
PDA Digital Activism	This app [X] is involved in a societal issue. (DAC1) [X] is an activist app (company). (DAC2) This app [X] militates in favor of a societal issue. (DAC3) This app [X] takes a stand on a real social issue. (DAC4) This app [X] engages in social debate. (DAC5) This app [X] understands current societal issues. (DAC6)	Self-created scale
PDA Self-app Connection	This app reflects who I am. (SAC1) This app and my personality fit. (SAC2) I feel a personal connection to this app. (SAC3) App's image and my self-image are similar in a lot of ways. (SAC4) I can identify with this app. (SAC5)	Adapted from Escalas and Bettman [73]
PDA Authenticity	This app possesses a clear philosophy that guides the company's promise. (AAU1) This app knows exactly what it stands for and doesn't promise anything which contradicts its essence and character. (AAU2) Considering its promise, this app doesn't pretend to be someone else. (AAU3) Considering its promise, this app doesn't curry favor with its target group; moreover, it shows self-esteem. (AAU4) This app distorts itself to match contemporary market trends (R). (AAU5)	Adapted from Schallehn et al. [19]
User Loyalty	I would recommend this app to my friends. (ULO1) If my relatives were looking for a product deciphering app, I would recommend this app. (ULO2) I intend to reuse this app in the future. (ULO3) Chances are that I will use this app again in the future. (ULO4)	Adapted from Gelbrich [74]
Political Ideology	In any election, given a choice between a right or a left-leaning candidate, I select the right-leaning candidate over the left one. (PID1) Socialism has proven to be a failed political ideology. (PID2) The major national media are too left-wing in my opinion. (PID3)	Adapted from Mehrabian [75]
Health Consciousness	I choose products carefully to ensure good health. (HCO1) I think of myself as a health-conscious consumer. (HCO2) I'm very self-conscious about my health. (HCO3) I'm generally attentive to my inner feelings about my health. (HCO4)	Adapted from Plank and Gould [76]

Note: In brackets [X], the company name (i.e., Biuti) was used in the pre-studies.

4.3. Results

The Yuka PDA was by far the most popular—86.1 % of participants reported using it most often, whereas only 6.7 % indicated that they most often used the Inci Beauty PDA. For the other apps, the percentage of participants who reported using them was <5 %. This proportion is a good representation of the market share of PDAs in France. The results also indicated that participants had last used the PDA one week ago (25.6 %), 2–4 weeks ago (19.4 %), and 1–2 months ago (14.9 %). The

frequency of use was once per week (27.5 %), once per month (26.1 %), and less than once per month (36.7 %) (see Table 1).

Regarding the psychometric properties of the measurement scales, reliability and convergent validity were assessed using composite reliability (CR) and average variance extracted (AVE), as recommended by Fornell and Larcker [81]. Indicator reliability was assessed using standardised loadings (lambda) as described by Hair et al. (2019). The criteria for CR, AVE, and lambda were 0.7, 0.5, and 0.7, respectively.

The measurement approach included six unidimensional constructs: digital activism, self-app connection, app authenticity, user loyalty, political ideology, and health consciousness. Table 3 shows that the indicator loadings for each construct are above 0.7. All constructs have CR and AVE values greater than 0.7 and 0.5, respectively. The Fornell–Larcker criteria confirm discriminant validity by showing that the diagonal values (square root of AVE) are greater than the lower non-diagonal values (correlations between latent variables).

Discriminant validity was also assessed using the HTMT ratio to check the robustness of the results, which shows that the upper non-diagonal ratios are below 0.85 (see Table 4). Thus, the measurement model provides clear evidence of reliability, convergent validity, and discriminant validity. The composite factor model fits both the actual and anticipated correlations well, as indicated by the Standardised Root Mean Square Residual (SRMR) value of 0.049 (below the 0.08 threshold), as recommended by Hu and Bentler [82].

Table 3
Measurement properties ($N = 403$).

Constructs	Items	*Mean (SD)*	Standardized loading	Reliability and validity
PDA Digital Activism	DAC1	5.02	.814	CR = 0.919
	DAC2	(1.33)	.726	AVE = 0.655
	DAC3	4.32	.833	
	DAC4	(1.37)	.821	
	DAC5	4.72	.833	
	DAC6	(1.34)	.823	
		4.67		
		(1.36)		
		4.77		
		(1.31)		
		5.03		
		(1.19)		
PDA Self-app Connection (R^2=48.4 %)	SAC1	4.33	.866	CR = 0.937
	SAC2	(1.54)	.893	AVE = 0.747
	SAC3	4.19	.806	
	SAC4	(1.49)	.882	
	SAC5	3.21	.872	
		(1.53)		
		3.99		
		(1.43)		
		4.02		
		(1.51)		
PDA Authenticity (R^2=32.7 %)	AAU1	4.91	.877	CR = 0.900
	AAU2	(1.24)	.868	AVE = 0.751
	AAU3	4.80	.854	
		(1.17)		
		4.92		
		(1.10)		
User Loyalty (R^2=45.6 %)	ULO1	5.42	.923	CR = 0.959
	ULO2	(1.36)	.906	AVE = 0.853
	ULO3	5.57	.932	
	ULO4	(1.35)	.934	
		5.37		
		(1.65)		
		5.38		
		(1.61)		
Political Ideology	PID1	3.29	.852	CR = 0.859
	PID2	(1.89)	.808	AVE = 0.670
	PID3	4.04	.794	
		(1.42)		
		3.39		
		(1.54)		
Health Consciousness	HCO1	5.53	.897	CR = 0.918
	HCO2	(1.16)	.895	AVE = 0.738
	HCO3	5.61	.757	
	HCO4	(1.20)	.881	
		5.64		
		(1.11)		
		5.79		
		(1.14)		

Table 4
Discriminant validity results.

Constructs	1	2	3	4	5	6
1. PDA digital activism	**.809**	**.525**	**.509**	**.470**	**.062**	**.248**
2. PDA self-app connection	.561	**.864**	**.535**	**.623**	**.122**	**.253**
3. PDA authenticity	.606	.613	**.866**	**.615**	**.079**	**.356**
4. User loyalty	.508	.692	.670	**.924**	**.048**	**.301**
5. User's political ideology	.100	.116	.138	.046	**.831**	**.132**
6. User's health consciousness	.267	.402	.263	.313	.151	**.859**

*in non-bold: HTMT **in bold: Fornell-Larcker criterion.

The hypotheses were evaluated by using 5000 bootstrap resamples (Table 5). The findings indicate that, contrary to expectations, there was no statistically significant direct relationship between digital activism and user loyalty ($\gamma = 0.082$, $p > .05$, [−0.030; 0.177]), thus failing to support H1. However, our findings confirm the social identity hypothesis, as hypotheses H2, H3a, and H3b are supported. Specifically, there is a significant and direct relationship between digital activism and self-app connection ($\gamma = 0.316$, $p < .001$ [.203; 0.412]) and self-app connection is positively and directly associated with user loyalty ($\gamma = 0.380$, $p < .001$, [.281; 0.484]). Additionally, there is a mediating effect of self-app connection in the relationship between digital activism and user loyalty ($\gamma = 0.123$, $p < .001$ [.076; 0.179]).

According to the authenticity mechanism, there is a strong and significant positive relationship between digital activism and app authenticity ($\gamma = 0.527$, $p < .001$, [.431; 0.605]) and app authenticity is positively and directly associated with user loyalty ($\gamma = 0.347$, $p < .001$, [.250; 0.440]), providing support for hypotheses H4 and H5a. Furthermore, there is a mediating effect of app authenticity in the relationship between digital activism and user loyalty ($\gamma = 0.184$, $p < .001$ [.132; 0.244]), supporting H5b. Finally, the findings indicate a positive and direct relationship between PDA authenticity and self-app connection ($\gamma = 0.370$, $p < .001$, [.280; 0.459]), supporting hypothesis H6.

Regarding the control variables—gender, age, and income—none had a significant effect on user loyalty (gender: $\gamma = -0.017$, $p > .05$, [−0.083; 0.060]; age: $\gamma = 0.005$, $p > .05$, [−0.075; 0.076]; income: $\gamma = 0.024$, $p > .05$, [−0.047; 0.116]).

The moderating role of political ideology was tested through a two-stage method in order to maximize statistical power [83]. The results reveal that political ideology has a significant moderating effect on the relationship between digital activism and self-app connection ($\gamma = 0.081$, $p < .05$, [.001; 0.153]), and between digital activism and app authenticity ($\gamma = -0.110$, $p < .05$, [−0.199; −0.003]), supporting H7b, but not H7a. In fact, the relationship between digital activism and app authenticity was expected to be stronger for left-wing users compared to right-wing users.

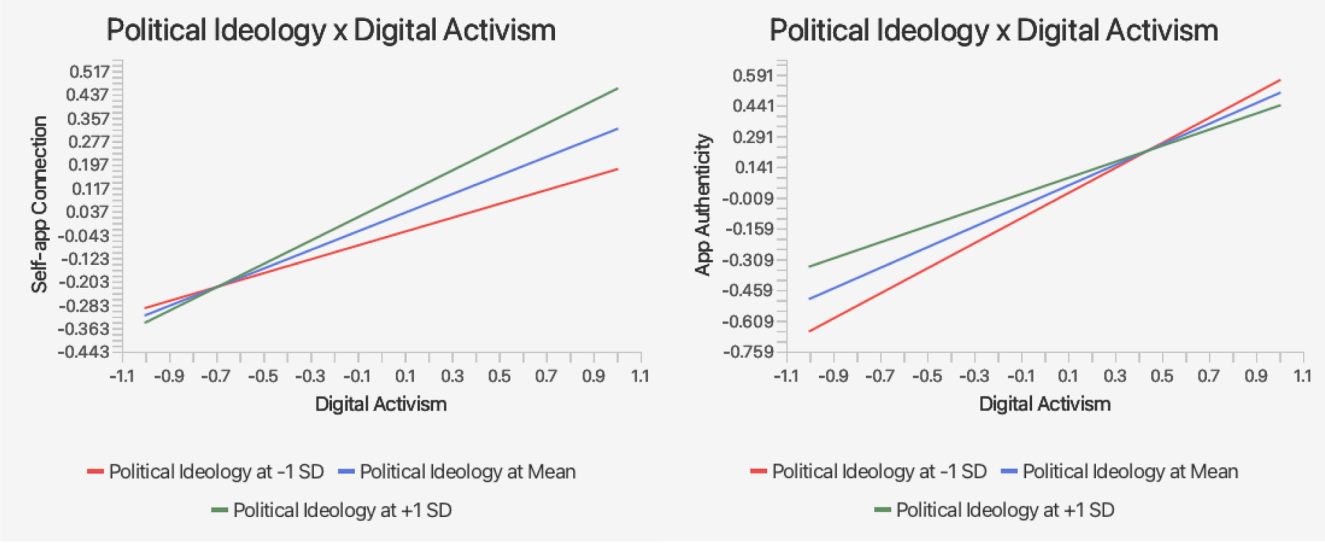
The findings also indicate that health consciousness has a significant moderating effect on both the relationship between digital activism and self-app connection ($\gamma = 0.079$, $p < .05$, [.019; 0.153]), and between digital activism and app authenticity ($\gamma = -0.111$, $p < .01$, [−0.177; −0.046]), supporting H8a, but not H8b. A positive moderating effect of health consciousness was expected for the relationship between digital activism and self-app connection.

A simple slope analysis was conducted to examine the moderation results for political ideology (Fig. 2a,b). The relationships between PDA digital activism and self-app connection, and between PDA digital activism and app authenticity, were positive for all three lines in Fig. 2a, b, shown by their upward slopes. Regarding self-app connection, the green line has a steeper slope compared to the red line, which is flatter. This simple slope plot illustrates a positive interaction, indicating that stronger right-wing orientations are associated with a stronger

Table 5
Results of hypotheses testing.

Hypothesis	Relationships	Study 1				Study 2			
		Path coefficient (γ)	t	CIs (Bias corrected)	Supported	Unstandardized Path coefficient (b)	t	CIs	Supported
H1	DAC → ULO (direct)	.082	1.547	[−0.030, 0.177]	**No**	.611***	4.639		**Yes**
H2	DAC → SAC	.316***	6.005	[.203, 0.412]	**Yes**	1.836***	10.464		**Yes**
H3a	SAC → ULO	.380***	7.506	[.281, 0.484]	**Yes**	.921***	23.180		**Yes**
H3b	DAC → SAC → ULO	.123***	4.688	[.076, 0.179]	**Yes**	1.691		[1.355, 2.039]	**Yes**
H4	DAC → AAU	.527***	12.409	[.431, 0.605]	**Yes**	2.019***	12.211		**Yes**
H5a	AAU → ULO	.347***	7.678	[.250, 0.440]	**Yes**	.810***	14.790		**Yes**
H5b	DAC → AAU → ULO	.184***	6.392	[.132, 0.244]	**Yes**	1.634		[1.289, 2.020]	**Yes**
H6	AAU → SAC	.370***	8.210	[.280, 0.459]	**Yes**	.689***			**Yes**
H7a	PID*DAC → SAC	.081*	2.062	[.001, 0.153]	**No**	−0.275*	−2.317		**Yes**
H7b	PID*DAC → AAU	−0.110*	2.141	[−0.199, −0.003]	**Yes**	−0.279*	−2.496		**Yes**
H8a	HCO*DAC → SAC	.079*	2.331	[.019, 0.153]	**Yes**	.486**	2.622		**Yes**
H8b	HCO*DAC → AAU	−0.111**	3.290	[−0.177, −0.046]	**No**	.257	1.432		**Yes**+
Control variables	Gender → ULO	−0.017		[−0.083, 0.060]	**No**				
	Age → ULO	.005		[−0.075, 0.076]	**No**				
	Income → ULO	.024		[−0.047, 0.116]	**No**				

* $p < .05$; ** $p < .01$; *** $p < .001$: DAC: Digital Activism; AAU: PDA Authenticity; SAC: Self-app Connection; ULO: User Loyalty; PID: Political Ideology; HCO: Health Consciousness; +: significant at lowest health consciousness (i.e., 2.15).



Note: SD=standard deviation

Fig. 2a,b. Moderating effects of political ideology for Study 1.

relationship between PDA digital activism and self-app connection.

In contrast, for the interaction with app authenticity, the green line—representing right-wing inclination—has a flatter slope compared to the red line, which is steeper. This simple slope plot illustrates a negative interaction: stronger left-wing orientations are associated with a stronger relationship between PDA digital activism and app authenticity.

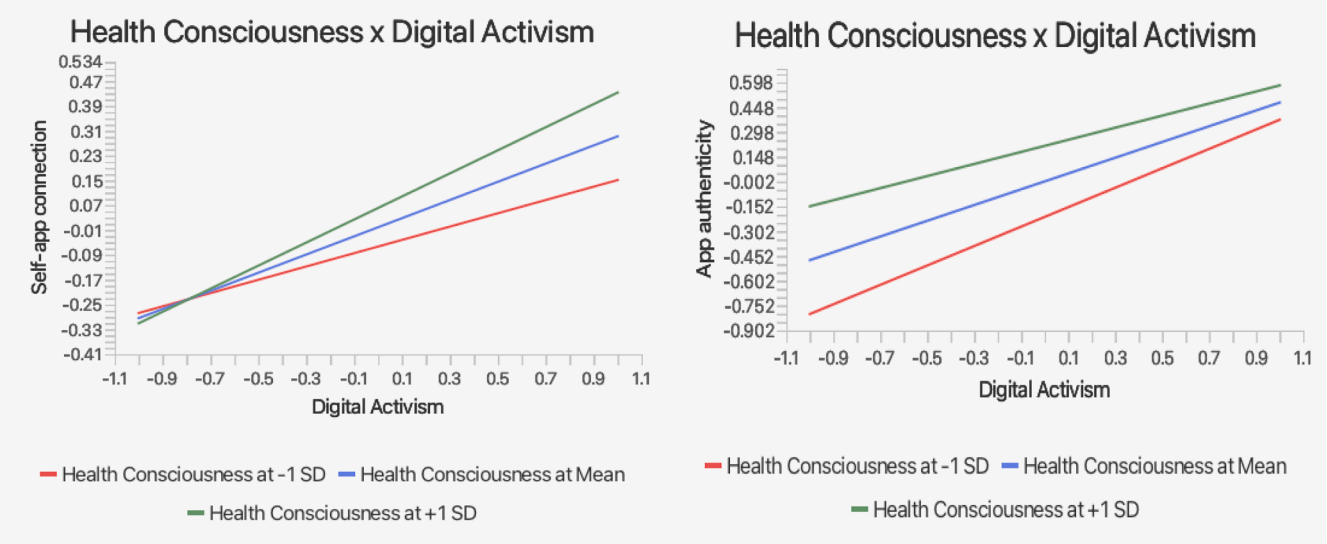
We also conducted a simple slope analysis to examine the moderation results for health consciousness (Fig. 2c,d). The relationships between PDA digital activism and self-app connection, and between PDA digital activism and app authenticity, were positive for all three lines in Fig. 2c,d, as indicated by their upward slopes.

Regarding self-app connection, the green line has a steeper slope compared to the red line, which is flatter. This simple slope plot illustrates a positive interaction, indicating that higher health consciousness is associated with a stronger relationship between PDA digital activism and self-app connection..

In contrast, for the interaction with app authenticity, the green line—representing health-unconscious users—has a flatter slope compared to the red line, which is steeper. This simple slope plot illustrates a negative interaction: lower health consciousness is associated with a stronger relationship between PDA digital activism and app authenticity.

4.4. Alternative tests of moderations and moderated mediations

To ensure the validity and robustness of our results, we conducted moderated mediation analyses using Hayes' [84] PROCESS macro for SPSS (version 3.5), with 5000 bootstrap samples, a 95 % confidence interval (CI), and mean centring. In a customised model, we specified PDA digital activism as the independent variable, self-app connection and PDA authenticity as continuous mediators, and user loyalty as the dependent variable. Additionally, we specified political ideology and health consciousness as moderators of the relationships between PDA



Note: SD=standard deviation

Fig. 2c,d. Moderating effects of health consciousness for Study 1.

digital activism and PDA authenticity, and between PDA digital activism and self-app connection.

The results reveal that PDA digital activism does not directly impact user loyalty (b = 0.091, SE = 0.057, p = .111, 95 % CI = [–0.021; 0.203]), further rejecting H1, but positively influences self-app connection (b = 0.367, SE = 0.057, p < .001, 95 % CI = [0.255; 0.480]) and PDA authenticity (b = 0.472, SE = 0.041, p < .001, 95 % CI = [0.392; 0.553]), in line with H2 and H4. In turn, self-app connection (b = 0.428, SE = 0.048, p < .001, 95 % CI = [0.334; 0.522]) and PDA authenticity (b = 0.500, SE = 0.061, p < .001, 95 % CI = [0.381; 0.619]) exert a positive effect on user loyalty, reconfirming H3a,b and H5a,b. PDA authenticity positively influences self-app connection (b = 0.461, SE = 0.063, p < .001, 95 % CI = [0.338; 0.585]). Again, H6 is accepted.

In addition, the interaction between PDA digital activism and political ideology is positive and significant for self-app connection (b = 0.075, SE = 0.034, p = .030, 95 % CI = [0.007; 0.142]), and negative and significant for PDA authenticity (b = –0.076, SE = 0.029, p = .008, 95 % CI = [–0.132; –0.020]), further confirming results obtained with PLS-SEM. The index of moderated mediation between PDA digital activism and user loyalty through the self-app connection path is positive and significant (index = 0.032, SE = 0.016, 95 % CI = [0.002; 0.064]), indicating that the positive effect of PDA digital activism on user loyalty through self-app connection is stronger for individuals with more left-wing political orientations. The index of moderated mediation between PDA digital activism and user loyalty through the PDA authenticity path is negative and almost significant (index = –0.038, SE = 0.019, 95 % CI = [–0.073; 0.001]), suggesting that the positive effect of PDA digital activism on user loyalty through PDA authenticity is weaker for individuals with more left-wing political orientations.

Finally, the results further indicate that the interaction between PDA digital activism and health consciousness is positive and significant for self-app connection (b = 0.093, SE = 0.040, p = .020, 95 % CI = [0.015; 0.171]), and negative and significant for PDA authenticity (b = –0.110, SE = 0.031, p < .001, 95 % CI = [–0.172; –0.049]), reconfirming results with PLS-SEM. The index of moderated mediation between PDA digital activism and user loyalty through the self-app connection path is positive and significant (index = 0.040, SE = 0.020, 95 % CI = [0.008; 0.087]), indicating that the positive effect of PDA digital activism on user loyalty through self-app connection is stronger for more health-conscious individuals. The index of moderated mediation between PDA digital activism and user loyalty through the PDA authenticity path is negative and significant (index = –0.055, SE = 0.018, 95 % CI = [–0.095; –0.024]), indicating that the positive effect of PDA digital activism on user loyalty through PDA authenticity is weaker for more health-conscious individuals.

In summary, both approaches—PLS-SEM and ordinary least squares—produced converging results in our data.

4.5. Discussion

The study's results partially supported the proposed hypotheses. First, apps perceived as taking a stand on societal issues are viewed as authentic in a digital context. Users judge apps promoting digital activism as authentic because they perceive these actions to align with the values and commitments they expect from PDAs. Moreover, digital activism—understood as being independent of external stakeholder influence—can enhance the perceived authenticity of these apps.

Second, the results demonstrate that digital activism positively impacts self-app connection, indicating that an app's commitment to social debates can also serve as a means of building user relationships. Since users generally expect activism from companies, it can be assumed that an app promoting societal issues will encourage users to feel more connected to it. These findings align with branding literature, which shows that activism—depending on brand (dis)agreement—affects identification with the company. In the case of PDAs, digital activism positively influences self-app connection.

Third, the findings indicate that political ideology moderates the relationship between digital activism and app authenticity. Specifically, the positive effect of PDA digital activism on app authenticity is stronger for left-wing (liberal) users than for right-wing (conservative) users. These findings are consistent with previous studies showing that (social) change and its effects are more appreciated by left-wing users [85–87]. However, an unexpected result shows that PDA digital activism has a greater impact on self-app connection for conservative users than for liberal ones. This may be explained by the fact that PDAs are health applications, and empirical evidence suggests that conservatives generally have better physical health than liberals [88].

Fourth, the results suggest that health consciousness moderates the relationship between digital activism and self-app connection. PDA digital activism has a stronger influence on self-app connection for

highly health-conscious users. These users are more likely to experience the self-connection effect of PDA digital activism because they perceive the app as advocating for their health, as shown in previous research [89]. However, contradictory findings emerged regarding the moderating role of health consciousness in the relationship between digital activism and app authenticity. The positive impact of PDA digital activism on app authenticity is less pronounced for those with high health consciousness than for those with low health consciousness. This may be explained by prior research indicating that health-conscious individuals actively seek health information, which may enhance their ability to critically assess the legitimacy of authentic activism (Willis & Royne Stafford, 2016).

Because this study was correlational and could not demonstrate causality, a second study with an experimental design was conducted to replicate the findings. In Study 2, digital activism was manipulated to provide causal evidence of its positive effects.

5. Study 2: experimental design

5.1. Sample, procedure, and measurement

Study 2 employed a between-subjects experimental design to manipulate digital activism. Participants were recruited online via Prolific and received monetary compensation (€1.30) for their participation. The dataset included responses from 246 French individuals (54.5 % male, 87.4 % aged between 18 and 45 years, and 95.1 % earning a salary below €4500).

Participants were first instructed: "Imagine a situation where you need a mobile application that allows you to scan food and cosmetic products in stores using your smartphone. The principle of this application is to help you identify ingredients, nutritional contributions or compositions, in order to choose the best products for your health. While browsing the applications on the store, you notice that there are many similar applications. However, your attention is drawn to an application called Appio, and you decide to examine its description in more detail."

Next, participants were shown a professionally designed mock front page of a fictitious product scanning app, Appio (see stimuli in **Appendix 2**).

To accurately manipulate digital activism, participants were then asked to "Imagine the following situation: While browsing the internet, you discover information about the Appio application in the news. It appears that a recent study conducted by the Observatory of Entrepreneurial Activism reveals that the company offering the Appio application consistently resists [frequently bows to] the pressure exerted by major retailers and manufacturers. Indeed, Appio has developed a very strict [lenient] rating system with manufacturers based on the analysis of all the ingredients used in the composition of a product. Consequently, the company is strongly [weakly] committed because it [doesn't] remains firmly opposed to the use of ingredients that it considers harmful to the health of consumers. This study highlights that a very large [small] number of products scanned with Appio are rated red, while 92 % of users say they put the products back on the shelf when they are rated red in the application. Thus, the company is [not] strongly pushing companies to adapt to consumer demand for healthier products by forcing manufacturers to modify the composition of their products."

The same scales used in Study 1 were reused to measure app authenticity ($\alpha = 0.932$), self-app connection ($\alpha = 0.967$), user loyalty ($\alpha = 0.971$), political ideology (α=0.852), and health consciousness ($\alpha = 0.876$). Similar to Study 1, all items were rated on a 7-point Likert scale (from 1= "Strongly disagree" to 7= "Strongly agree"). As a manipulation check, participants indicated their perceived digital activism for the Appio company ($\alpha = 0.967$).

5.2. Results

As expected, and confirmed by a *t*-test for independent samples, the strong digital activism condition prompted a significantly stronger perception of digital activism ($M = 5.09$, $SD = 1.12$) than the weak digital activism condition ($M = 3.21$, $SD = 1.46$, $t = 11.352$, $p < .001$), providing support for our manipulation.

Regarding hypothesis testing, our initial analyses examined whether the results from Study 1 could be replicated. Instead of using PLS-SEM as in the previous study, the data were analysed using the PROCESS macro, which is designed for experimental data [84]. Two mediation models (Model 4) were conducted using 5000 bootstrap samples.

The first mediation involved digital activism conditions as the independent variable, user loyalty as the dependent variable, and self-app connection as the mediating variable. A pattern similar to Study 1 was observed. Specifically, the results again revealed that digital activism increases self-app connection ($b = 1.836$, $p < .001$), which in turn increases user loyalty ($b = 0.9214$, $p < .001$), supporting H2 and H3a. Additionally, a significant and positive mediation effect of self-app connection in the relationship between digital activism and user loyalty was found (index = 1.691, $SE = 0.175$, 95 % CI = [1.355; 2.039], supporting H3b.

The second mediation analysis regarding the role of perceived authenticity aimed to test H4, H5a, and H5b. The analysis was similar but involved authenticity (rather than self-app connection) as the mediating variable. Again, the results revealed a significant and positive effect of digital activism on perceived authenticity ($b = 2.018$, $p < .001$), which in turn increases user loyalty ($b = 0.810$, $p < .001$), in support of H4 and H5a. The findings also revealed that digital activism exerts a positive and indirect effect on user loyalty through perceived authenticity (index = 1.634, SE=0.186, 95 % CI = [1.289; 2.020], supporting H5b.

Additionally, a serial mediation analysis was conducted to examine the sequence of effects depicted in the model. This analysis included authenticity as the first mediating variable and self-app connection as the second. The results replicated the direct effects (digital activism → self-app connection: $b = 0.445$, $p < .001$; self-app connection: $b = 0.735$, $p < .001$; digital activism → perceived authenticity: $b = 2.018$, $p < .001$; perceived authenticity → user loyalty: $b = 0.303$, $p < .001$) and indirect ones (digital activism → self-app connection → user loyalty: index = 0.327, $SE = 0.154$, 95 % CI = [.044; 0.638]; digital activism → perceived authenticity → user loyalty: index = 0.611, $SE = 0.144$, 95 % CI = [.351; 0.922]. In addition, the results also revealed a positive and direct effect of perceived authenticity on self-app connection ($b = 0.689$, $p < .001$), in support of H6.

The next analysis tested H7a, which posits that political ideology moderates the effect of digital activism on self-app connection. This was tested using digital activism conditions as the independent variable, self-app connection as the dependent variable, and political ideology as the moderating variable (PROCESS Model 1; 5000 bootstraps). The results revealed significant main effects of digital activism and political ideology on self-app connection ($b = 1.836$, $p < .001$; $b = 0.442$, $p < .05$, respectively), and as predicted, there is a significant interaction between them ($b = -0.275$, $p < .05$), supporting H7a.

We plotted the interaction in Fig. 3a using a floodlight analysis [90]. Specifically, we use the Cahost procedure [91] and the Johnson-Neyman point technique, which identifies regions in the range of the moderator variable (political ideology) where the effect of the independent variable (digital activism) on the dependent variable (self-app connection) is and is not significant [92]. The Johnson-Neyman point for the political ideology moderator shows that digital activism leads to significantly greater levels of self-app connection when political ideology values are below 6.82. In other words, this indicates that when consumers are strongly right-wing oriented (above 6.82 on a 1–7 scale), digital activism does not impact self-app connection.

Similarly, when app authenticity is taken as the dependent variable to test H7b, the results also revealed significant main effects of digital activism and political ideology on app authenticity ($b = 2.019$, $p < .001$; $b = 0.453$, $p < .05$, respectively), and as predicted there is a significant

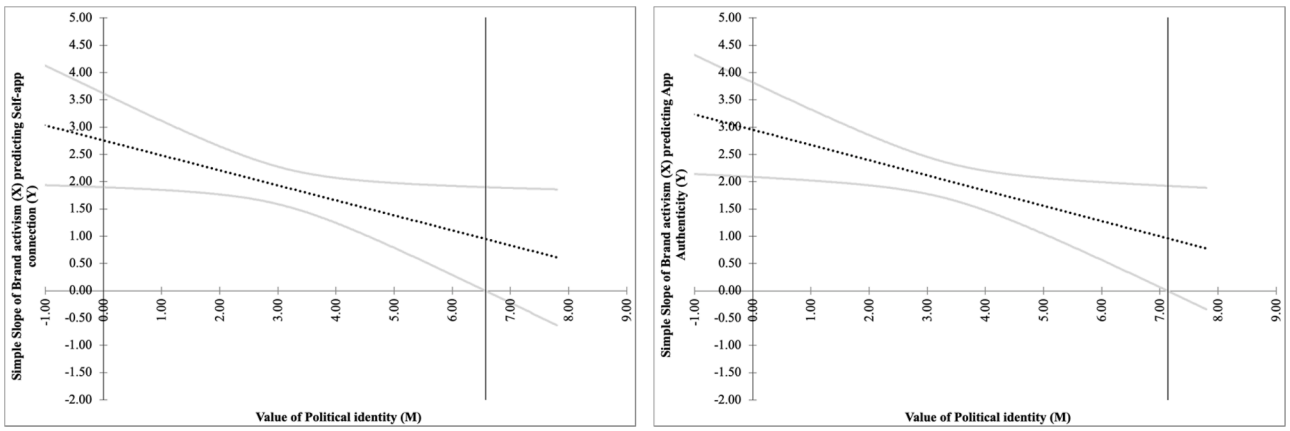


Fig. 3a,b. Floodlight analysis of the moderating effect of political ideology (Study 2).

interaction between them ($b = -0.279$, $p < .05$), supporting H7b. This interaction was also graphed in Fig. 3b using floodlight analysis. The Johnson-Neyman point for $p < .05$ for the moderating variable (i.e., political ideology) does not occur at any value (on a 1–7 scale). This indicates that the simple slope of the effect of digital activism on app authenticity is always different from zero for all values of political ideology.

The following analysis tested H8a, the hypothesis that health consciousness moderates the effect of digital activism on self-app connection. This was tested using the digital activism conditions as the independent variable, self-app connection as the dependent variable, and health consciousness as the moderating variable (PROCESS model 1; 5000 bootstraps). The results revealed a significant main effect of digital activism on self-app connection ($b = 1.859$, $p < .001$), but no direct effect of health consciousness on self-app connection ($b = -0.422$, $p > .05$). As predicted, there is a significant interaction between health consciousness and digital activism on self-app connection ($b = 0.486$, $p < .01$), supporting H8a. We graphed this interaction in Fig. 3c using the floodlight analysis. The Johnson-Neyman point for $p < .05$ for the moderating variable (i.e., health consciousness) occurs at the value of 3.302 (on a 1–7 scale). This indicates that the simple slope of the effect of digital activism on app authenticity is different from zero for all values of health consciousness greater than 3.302. In other words, for individuals with a low level of health consciousness (<3.302), digital activism does not impact app authenticity.

In addition, when app authenticity is taken as the dependent variable to test H8b, the results also revealed a significant main effect of digital activism on app authenticity ($b = 2.027$, $p < .001$) but not for health consciousness ($b = 0.120, p > .05$). The results also revealed that there is not a significant interaction between them ($b = 0.257$, $p > 0.05$), not supporting H8b. However, when using a Johnson-Neyman analysis (see Fig. 3d), we can observe that at a very low level of health consciousness (2.15 on a 1–7 scale), digital activism does not impact authenticity. However, at moderate and high levels of health consciousness (greater than 2.15), digital activism positively impacts app authenticity.

For more details about the mediating role of self-app connection and app authenticity (and moderated by political ideology and health consciousness) in the relationship between digital activism and user loyalty, see Table 6a and Table 6b

Furthermore, as in Study 1, we used a simple slope analysis for the moderating role of political ideology (Fig. 4a,b). The relationship between digital activism and self-app connection and between digital activism and app authenticity were positive for all three lines shown by their positive slopes. For both charts, the green line, representing right-wing orientation, has a flatter slope compared to the red line, which has a sharper slope. The simple slope plots illustrate both a negative interaction: more left-wing inclinations are associated with a stronger relationship between digital activism and self-app connection, and with a stronger relationship between digital activism and app authenticity.

In addition, the same simple slope analysis was done for the moderating role of health consciousness (Fig. 4a,b). The relationship between digital activism and self-app connection, and between digital activism and app authenticity were also positive for all three lines shown by their positive slopes. Regarding the effect on self-app connection, the green line, representing highly health-conscious users, has a sharper slope compared to the red line, which has a flatter slope. The simple slope plot illustrates a positive interaction: higher health consciousness is associated with a stronger relationship between digital activism and

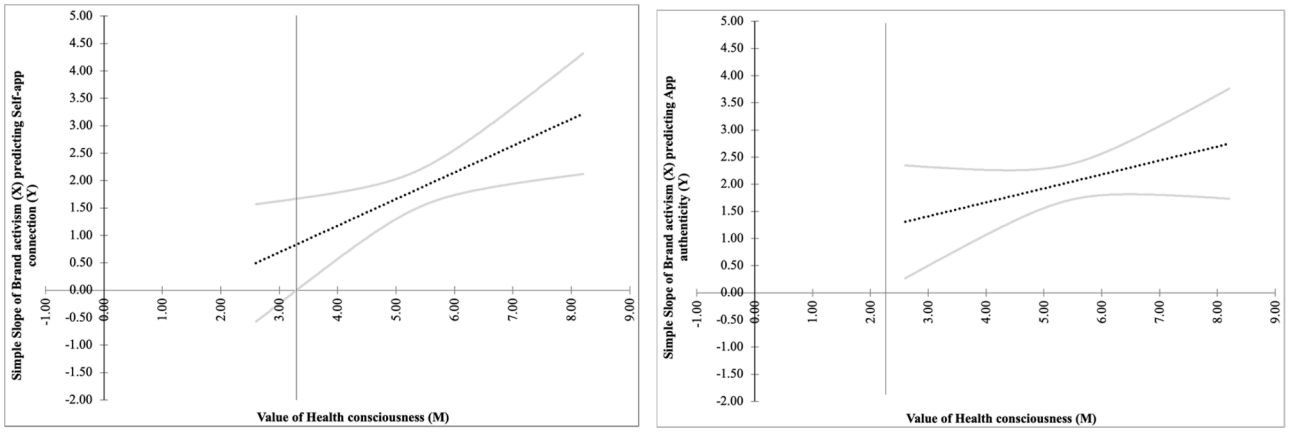


Fig. 3c,d. Floodlight analysis of the moderating effect of health consciousness.

Table 6a
Process moderation results for the path digital activism → self-app connection → use intention (Study 2).

	Self-app connection (M_{PID})			**Self-app connection (M_{HCO})**			**Use intention (Y)**		
	b	*SE*	*t*	*b*	*SE*	*t*	*b*	*SE*	*T*
Constant	.536	.278	1.933	.513	.272	1.887	−0.079	.175	−0.453
Digital activism (X)	1.836	.176	10.464***	1.859	.172	10.813***	.611	.132	4.639***
Political ideology (W_{PID})	.442	.189	2.336*						
XW_{PID} Interaction	−0.275	.119	−2.317*						
Health consciousness (W_{HCO})				−0.422	.285	−1.483			
XW_{HCO} Interaction				.486	.185	2.622**			
Self-app connection							.921	.040	23.180***
R^2	32.21 %, $F(3, 242) = 38.336$***			35.04 %, $F(3, 242) = 43.520$***			80.09 %, $F(2, 243) = 488.812$***		
ΔR^2 (for interaction)	1.50 %, $F(1, 242) = 5.369$*			1.84 %, $F(1, 242) = 6.872$**					

Note: *: $p < .05$; **: $p < .01$; ***: $p < .001$; ^{ns}: not significant. M_{PID}=Mediator moderated by Political Ideology (PID). M_{HCO}=Mediator moderated by Health Consciousness (HCO).

Table 6b
PROCESS moderation results for the path: digital activism → app authenticity → use intention.

	App authenticity (M_{PID})			**App authenticity (M_{HCO})**			**Use intention (Y)**		
	b	*SE*	*t*	*b*	*SE*	*t*	*b*	*SE*	*T*
Constant	1.252	.261	4.790***	1.245	.263	4.731***	−0.599	.236	−2.539*
Digital activism (X)	2.019	.165	12.211***	2.027	.167	12.178***	.669	.180	3.708***
Political ideology (W_{PID})	.453	.178	2.546*						
XW_{PID} Interaction	−0.279	.112	−2.496*						
Health consciousness (W_{HCO})				−0.265	.276	−0.962			
XW_{HCO} Interaction				.257	.180	1.432			
App authenticity							.810	.055	14.790***
R^2	39.13 %, $F(3242) = 51.859$***			38.38 %, $F(3242) = 50.246$***			66.36 %, $F(2243) = 239.664$***		
ΔR^2 (for interaction)	1.57 %, $F(1, 242) = 6.228$*			.52 %, $F(1, 242) = 2.051$					

Note: *: $p < .05$; **: $p < .01$; ***: $p < .001$; ^{ns}: not significant. M_{PID}=Mediator moderated by Political Ideology (PID). M_{HCO}=Mediator moderated by Health Consciousness (HCO).

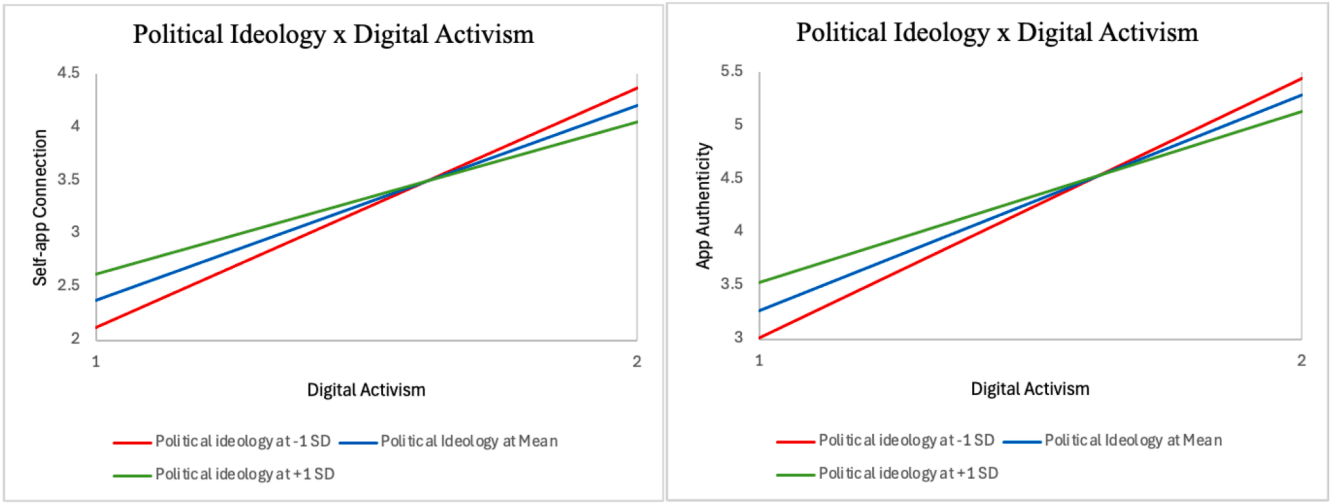


Fig. 4a,b. Moderating effects of political ideology for Study 2.

self-app connection. However, regarding the effect on app authenticity, the inclinations of the lines are not really differentiable, which means that the simple slope plot illustrates a no significant interaction between digital activism and app authenticity.

Fig. 4c.

5.3. Discussion

Overall, Study 2 yielded partial support for the proposed hypotheses, illustrating how digital activism influences app authenticity and self-app connection. The findings also highlight the moderating roles of political ideology and health consciousness in shaping these relationships. It was observed that apps genuinely involved in addressing social and societal issues are perceived as authentically committed by users. These findings are consistent with those of Deeds Pamphile and Ruttan [93], who suggested that value congruence plays a key role in driving perceptions of organisational authenticity. This authenticity is enhanced when organisations' external expressions or identity representations align with their stated [94,95].

Our experimental findings also confirm the results of Study 1, showing that digital activism positively influences self-app connection. This implies that users feel a closer connection with apps that actively engage in highlighting and addressing social or societal issues. This effect likely stems from users' expectations that companies and digital

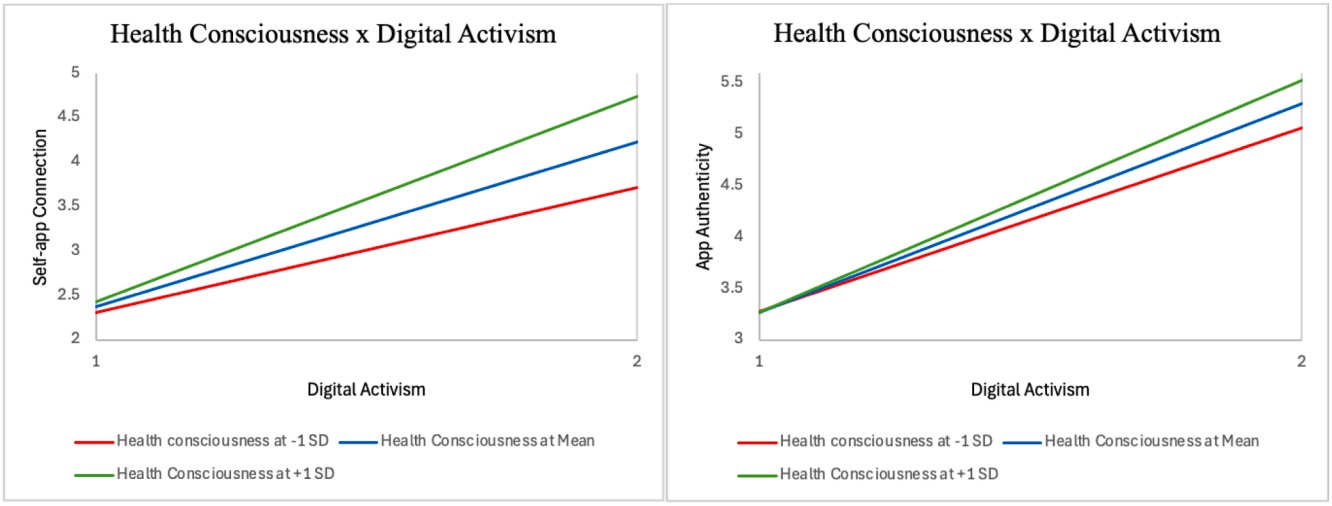


Fig. 4c,d. Moderating effects of health consciousness in Study 2.

platforms should participate in societal activism, leading them to associate more strongly with apps involved in digital activism. We can therefore infer that by aligning their advocacy with users' values, PDA digital activism fosters stronger emotional bonds, making the app not just a tool but a trusted platform. These results complement earlier literature (e.g., [96]), which found that users of social networking websites strongly associate with online groups engaged in online citizenship behaviours. Similarly, Leong et al. [97] found that social media digital activism empowers individuals by helping them overcome the costs and risks of collective participation. PDAs provide an ideal platform for such engagement, thereby enhancing users' self-app connection and increasing app usage.

Consistent with Study 1, Study 2 reveals that political ideology (left- vs right-wing orientation) moderates the relationship between PDA digital activism and app authenticity. However, unlike Study 1—which did not confirm a moderating role of political ideology in the relationship between PDA digital activism and self-app connection—Study 2 provides evidence supporting this moderation. These findings align with prior research, such as Freelon et al. [98], which found that left-wing actors primarily rely on "hashtag activism," whereas right-wing actors tend to favour traditional and partisan media for information dissemination and are more likely to embrace disinformation. Our study confirms that PDA apps, being non-partisan and perceived as more authentic, are more strongly associated with app authenticity by left-wing users, who perceive value congruence between themselves and the app. These results also align with information systems literature on fake news, where Gupta et al. [21] found that higher levels of conservatism increase individuals' susceptibility to believing fake news shared on social platforms. This suggests that right-wing users are less likely to associate with authenticity and more likely to connect with activist apps when their values align.

Finally, our moderation analysis for health consciousness confirmed that health consciousness moderates the relationship between digital activism and self-app connection. In line with literature showing that health-conscious users strongly associate with online platforms reflecting their personal values (e.g., [99]) and similarly for technology use [22] and online information seeking [62], our study supports these findings. PDA digital activism significantly enhances self-app connection for users with strong health consciousness. Previous research has shown that health-conscious users are more susceptible to the self-connection impact of PDA digital activism, as they perceive the app as advocating for their health [89]. Furthermore, in contrast to Study 1—which did not validate a moderating effect of health consciousness on the relationship between PDA digital activism and app authenticity—Study 2 provides evidence supporting this moderation. Our results align with other research, including Albornoz et al. [100], indicating that health consciousness positively and substantially affects both perceived social and emotional value.

6. Conclusions

6.1. Theoretical contributions

This research offers a threefold contribution to the literature. First, it extends existing theoretical knowledge on the mechanisms underlying the effects of digital activism on user loyalty, drawing on Tajfel's [29] social identity theory and Burks and Robbins's [31] authenticity framework in the context of PDAs. To this end, the study develops and empirically tests a conceptual model with digital activism as the central construct. Building on these frameworks, the model identifies two relevant paths—app authenticity and self-app connection—that should be considered when making informed decisions about developing activist apps. Our findings thus contribute to existing theory by moving beyond traditional offline group dynamics to digitally mediated activism, where identification with a cause is facilitated through app-based interactions and community features. Furthermore, the results underscore the importance of platform design choices that align with activist messaging, thereby grounding authenticity not only in individual behaviour but also in digital interface and communication design.

Second, this research contributes to theoretical understanding of the boundary conditions that shape the impact of digital activism on user loyalty in the context of PDAs. Specifically, it introduces two relevant boundary conditions—political ideology and health consciousness—into the conceptual model, based on Jost et al.'s [51] political ideology framework and Sparks and Guthrie's [61] health consciousness framework. These variables should be considered when evaluating user profiles.

Third, from a methodological perspective, this research proposes a reliable and valid measurement scale of digital activism from the user's standpoint. Its robustness is supported by four distinct quantitative studies (exploratory pre-study, confirmatory pre-study, cross-sectional study, and experimental study) using multiple samples. Additionally, the construct items underwent external validation (cosmetic and application contexts) and nomological validation (effects on app authenticity, self-app connection, and user loyalty). This research also contributes methodologically by conducting an experimental study to test the proposed conceptual model and establish causal relationships.

6.2. Managerial implications

The findings offer several managerial implications for product deciphering application (PDA) providers. First, the results suggest that PDA providers engaging in digital activism should focus on highlighting authenticity and symbols that resonate with users' self-concept. For example, decision-makers at Yuka could share more information about their philosophy and core values on their website, within the app, or on social media platforms such as LinkedIn. This would help ensure that their activism-related actions are perceived as authentic. As a result, current or prospective users may feel a personal connection with the app, which can positively influence user loyalty.

Second, the study indicates that PDA providers should consider political ideology as a key individual variable in the user–app relationship. To enhance authenticity, PDA providers should target left-wing users in today's politically polarised climate. However, they should prioritise self-app connection for right-wing users. We suggest that PDA providers tailor their messaging to either a left-wing or right-wing orientation depending on which mechanism—authenticity or self-connection—is more influential for user loyalty. For instance, in liberal markets such as the United States, where individuals often reside in politically aligned regions, PDA providers like Fooducate may have greater impact in "blue states," where liberal values dominate. Conversely, if self-connection is the primary driver of loyalty, PDA providers should target more conservative markets such as "red states."

Third, this research suggests that PDA providers should incorporate health consciousness as an important individual variable in the user–app relationship. To enhance authenticity, PDA providers could focus on attracting users with lower health consciousness. However, they should emphasise self-app connection for highly health-conscious users. As with political ideology, PDA providers should tailor their strategy to either low or high health consciousness depending on the most effective mechanism for fostering loyalty. In countries like Nigeria or Norway, where health consciousness may be lower due to short-term cultural orientations [101], PDA providers should prioritise authenticity. In contrast, in nations such as Japan or China, where long-term orientation and health concerns are more prevalent, PDA providers should focus on building self-app connection to attract loyal users.

6.3. Limitations and future research

As with any study, this research has limitations that future studies could address. First, the data were collected in France, meaning that cultural factors specific to the French context may have influenced the findings. Further research is needed to validate the proposed mediating mechanisms (app authenticity and self-app connection) and moderating variable (political ideology) across diverse economic and cultural settings. France is often considered a predominantly left-leaning nation due to its support for pro-social policies and reform initiatives [102]. In countries with stronger right-wing tendencies, such as Russia or Hungary, the influence of political ideology may differ.

Second, the role of political ideology should be examined through its social and economic dimensions. Some researchers argue that individuals may be economically liberal but socially conservative, or vice versa [103,104]. It is plausible that the effects of digital activism on user loyalty may be stronger (or weaker) for socially liberal (or conservative) users, but not necessarily for those with differing economic views.

CRediT authorship contribution statement

Richard Huaman-Ramirez: Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Aranzazu Gaztelumendi:** Writing – original draft, Methodology, Investigation, Conceptualization. **Zeeshan A. Bhatti:** Writing – original draft, Validation. **Francisco Guzman:** Writing – original draft, Validation. **Jean Pfiffelmann:** Writing – review & editing.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendices

Appendix 1. Literature review on digital activism in the field of IS

Authors (year); Journal	Objectives	Key concepts	Theory	Setting	Research design	Analysis method
[6]; *Government Information Quarterly*	To explore how the internet both reinforces existing political behaviours and mobilizes new activism	Political activism, Reinforcement, Mobilization	Social Movement Theory	Political contexts	Qualitative design (Case study)	Content analysis and thematic analysis
[8]; *Government Information Quarterly*	To examine the evolution of cyberactivism and the impact of social media on political engagement	Cyberactivism, Social media, Political activism	Social Movement Theory	Social movements	Qualitative design	Content analysis, Case study
[10]; *Information and Organization*	To explore the dynamics of online activism and its impact on social movements	Critical mass, Online activism	Social Movement Theory	Online platforms and communities	Qualitative design	Thematic analysis
[11]; *Information and Organization*	To explore the role of ICT in organizing collective action	Collective action, ICT, Social movements	Social Movement Theory	Social movements	Qualitative design (Case study)	Thematic analysis
[26]; *Information and Organization*	To understand the evolution of digital activism and its implications	Clicktivism, Hacktivism	Social Movement Theory	Digital platforms	Qualitative design	Thematic analysis
[9]; *New Media + Society*	To explore how consumer activists use Change.org to challenge corporate practices	Online consumer activism, Publicity	Communication, Political Science	Online platform (Change.org)	Qualitative design (Case study)	Netnography
[12]; *Information and Organization*	To analyse how social media fosters solidarity in activism	Solidarity, Activism, Social media	Social Constructivism	Online activism	Qualitative design	Thematic analysis

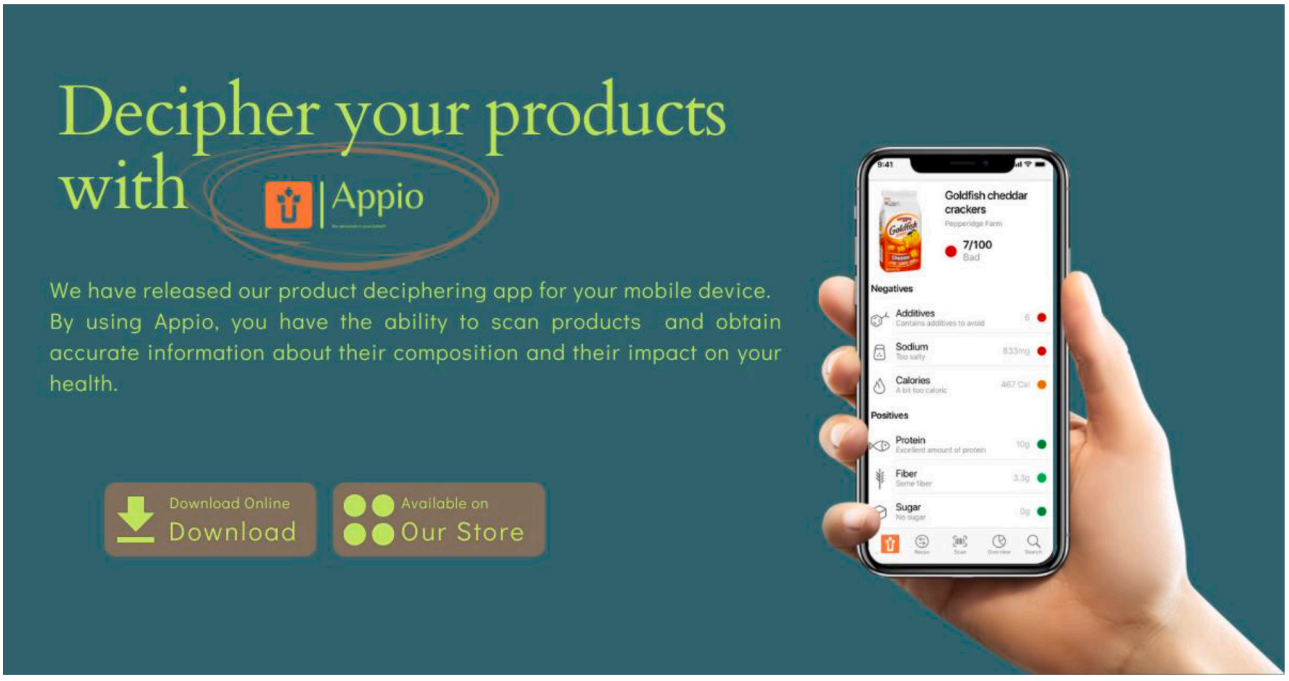
(*continued on next page*)

(*continued*)

Authors (year); Journal	Objectives	Key concepts	Theory	Setting	Research design	Analysis method
[7]; *Journal of Broadcasting & Electronic Media*	To explore the evolution and impact of Consumer Video Activism in China	Online consumer activism	No Theory (Grounded Theory Approach)	Protest of Chengdu Homebuyer in China	Qualitative design	Content analysis
[5]; *Telematics and Informatics*	To explore motivations for online and offline activism against racism and xenophobia	Activism, Racism, Xenophobia	Social Movement Theory	Covid 19 pandemic, Asian American Publics	Qualitative design	Thematic analysis
[105]; *Social Media + Society*	To segment social-mediated publics in digital activism using a network perspective	Social-mediated publics, Digital activism	Network Theory	Chinese #MeToo movement on Sina Weibo	Mix-method design	Content analysis, Social network analysis
[106]; *Information, Communication & Society*	To explore how slideshow formats on Instagram shape political activism and identity	Slideshow, Political identity	Constructivist Theory	Online social media platforms	Qualitative design	Thematic analysis
[107]; *Information, Communication & Society*	To analyse the dual role of Sina Weibo in promoting and censoring online activism in China	Censorship, Social media, Online activism	Media Control Theory	Sina Weibo	Qualitative design	Content analysis (posts and user interactions)
[27]; *Social Media + Society*	To examine consumer video activism tactics in China and their social impact	Short video activism	Techno-cultural construct	China	Qualitative design	Case study analysis, Semi-structured Interviews
[25]; *Journal of the Association for Information Systems*	To explore how SMOSs use digital activism to promote broader social change through collaboration	Digital activism, Social change, Collaboration	Social Movement Theory	Global	Qualitative design	Thematic analysis
[47]; *Internet Research*	To explore the heterogeneous impact of the Black Lives Matter movement on crowdfunding	Charitable crowdfunding, Social justice, Anti-discrimination	Construal Level Theory	Online platforms (e.g., GoFundMe)	Quasi-experimental design	Econometric analysis
[108]; *Global Networks*	To analyse Global Unions' social media practices and their effectiveness in engaging online crowds	Digital activism, Social agenda, Crowd-focused communication	Social movement theory, Networked communication theory	Online platforms (Facebook)	Mixed-method design	Quantitative content analysis, Qualitative analysis

SMO: Social Movement Organizations; ICT: Information and Communications Technology.

Appendix 2. Stimulus used in Study 2



Note: This is the translated version of the poster, originally in French

References

[1] B. Soutjis, The new digital face of the consumerist mediator: the case of the 'Yuka' mobile app, J. Cult. Econ. 13 (1) (2020) 114–131, https://doi.org/10.1080/17530350.2019.1603116.

[2] P. Gerbaudo, From cyber-autonomism to cyber-populism: an ideological analysis of the evolution of digital activism. TripleC: communication, capitalism & critique, Open Access J. Glob. Sustain. Inf. Soc. 15 (2) (2017) 477–489, https://doi.org/10.31269/triplec.v15i2.773.

[3] K.Z.K. Zhang, S.J. Barnes, S.J. Zhao, H. Zhang, Can consumers be persuaded on brand microblogs? An empirical study, Inf. Manag. 55 (1) (2018) 1–15, https://doi.org/10.1016/j.im.2017.03.005.

[4] S. Molinillo, A. Navarro-García, R. Anaya-Sánchez, A. Japutra, The impact of affective and cognitive app experiences on loyalty towards retailers, J. Retail. Consum. Serv. 54 (2020) 101948, https://doi.org/10.1016/j.jretconser.2019.101948.

[5] Y. Lee, W. Tao, J.-Y. Queenie Li, Motivations of online and offline activism against racism and xenophobia among Asian-American publics during the COVID-19 pandemic, Telemat. Inform. 67 (2022) 101751, https://doi.org/10.1016/j.tele.2021.101751.

[6] T. Nam, Dual effects of the internet on political activism: reinforcing and mobilizing, Gov. Inf. Q. 29 (2012) S90–S97, https://doi.org/10.1016/j.giq.2011.08.010.

[7] E. Treré, Z. Yu, The evolution and power of online consumer activism: illustrating the hybrid dynamics of "consumer video activism" in China through two case studies, J. Broadcast. Electron. Media 65 (5) (2021) 761–785, https://doi.org/10.1080/08838151.2021.1965143.

[8] R. Sandoval-Almazan, J. Ramon Gil-Garcia, Towards cyberactivism 2.0? Understanding the use of social media and other information technologies for political activism and social movements, Gov. Inf. Q. 31 (3) (2014) 365–378, https://doi.org/10.1016/j.giq.2013.10.016.

[9] X. Minocher, Online consumer activism: challenging companies with Change.Org, New. Media Soc. 21 (3) (2019) 620–638, https://doi.org/10.1177/1461444818803373.

[10] S. Ghobadi, S. Clegg, These days will never be forgotten …": a critical mass approach to online activism, Inf. Org. 25 (1) (2015) 52–71, https://doi.org/10.1016/j.infoandorg.2014.12.002.

[11] A. Cardoso, M.-C. Boudreau, J.Á. Carvalho, Organizing collective action: does information and communication technology matter? Inf. Org. 29 (3) (2019) 100256 https://doi.org/10.1016/j.infoandorg.2019.100256.

[12] M. Stewart, U. Schultze, Producing solidarity in social media activism: the case of my stealthy freedom, Inf. Org. 29 (3) (2019) 100251, https://doi.org/10.1016/j.infoandorg.2019.04.003.

[13] K.J.A. Agyemang, J.N. Singer, A.J. Weems, 'Agitate! Agitate! Agitate!': sport as a site for political activism and social change, Organization 27 (6) (2020) 952–968, https://doi.org/10.1177/1350508420928519.

[14] C.L. Newman, K. Wachter, A. White, Bricks or clicks? Understanding consumer usage of retail mobile apps, J. Serv. Market. 32 (2) (2018) 211–222, https://doi.org/10.1108/JSM-08-2016-0289.

[15] Y. You, Y. He, Q. Chen, M. Hu, The interplay between brand relationship norms and ease of sharing on electronic word-of-mouth and willingness to pay, Inf. Manag. 58 (2) (2021) 103410, https://doi.org/10.1016/j.im.2020.103410.

[16] S. Mukherjee, N. Althuizen, Brand activism: does courting controversy help or hurt a brand? Int. J. Res. Market. 37 (4) (2020) 772–788, https://doi.org/10.1016/j.ijresmar.2020.02.008.

[17] K.C. Van Cranenburgh, K. Liket, N. Roome, Management responses to social activism in an era of corporate responsibility: a case study, J. Bus. Ethics 118 (3) (2013) 497–513, https://doi.org/10.1007/s10551-012-1597-7.

[18] D.-T. Vo, L.V.T. Nguyen, D. Dang-Pham, A.-P. Hoang, What makes an app authentic? Determining antecedents of perceived authenticity in an AI-powered service app, Comput. Human. Behav. 163 (2025) 108495, https://doi.org/10.1016/j.chb.2024.108495.

[19] M. Schallehn, C. Burmann, N. Riley, Brand authenticity: model development and empirical testing, J. Product Brand Manag. 23 (3) (2014) 192–199, https://doi.org/10.1108/JPBM-06-2013-0339.

[20] L.J. Skitka, B.E. Hanson, D.C. Wisneski, Utopian hopes or dystopian fears? Exploring the motivational underpinnings of moralized political engagement, Personal. Soc. Psychol. Bull. 43 (2) (2017) 177–190, https://doi.org/10.1177/0146167216678858.

[21] M. Gupta, D. Dennehy, C.M. Parra, M. Mäntymäki, Y.K. Dwivedi, Fake news believability: the effects of political beliefs and espoused cultural values, Inf. Manag. 60 (2) (2023) 103745, https://doi.org/10.1016/j.im.2022.103745.

[22] M.-F. Chen, N.-P. Lin, Incorporation of health consciousness into the technology readiness and acceptance model to predict app download and usage intentions, Internet Res. 28 (2) (2018) 351–373, https://doi.org/10.1108/IntR-03-2017-0099.

[23] L. Huang, X. Song, M.T. Liu, Marketing placebo effect on consumption of reduced-sugar labeled products, Asia Pac. J. Market. Logist. 36 (1) (2024) 148–166, https://doi.org/10.1108/APJML-10-2022-0864.

[24] L. Sherriff, This app deciphers food labels so you can see just how healthy they are to eat, Forbes (2019). https://www.forbes.com/sites/lucysherriff/2019/10/30/this-app-deciphers-food-labels-so-you-can-see-just-how-healthy-they-are-to-eat/.

[25] S. Ghobadi, Creating collaboration: how social movement organizations shape digital activism to promote broader social change, J. Assoc. Inf. Syst. 25 (3) (2024) 781–803, https://doi.org/10.17705/1jais.00847.

[26] J.J. George, D.E. Leidner, From clicktivism to hacktivism: understanding digital activism, Inf. Org. 29 (3) (2019) 100249, https://doi.org/10.1016/j.infoandorg.2019.04.001.

[27] Z. Yu, J. Hou, O.T. Zhou, Short video activism with and on Douyin: an innovative repertoire of contention for Chinese consumers, Soc. Media Soc. 9 (1) (2023) 20563051231157603, https://doi.org/10.1177/20563051231157603.

[28] C. Sarkar, P. Kotler, Brand Activism from Purpose to Action, Idea Bite Press, 2020.

[29] H. Tajfel, Social identity and intergroup behaviour, Soc. Sci. Inf. 13 (2) (1974) 65–93, https://doi.org/10.1177/053901847401300204.

[30] M.B. Brewer, The social self: on being the same and different at the same time, Personal. Soc. Psychol. Bull. 17 (5) (1991) 475–482, https://doi.org/10.1177/0146167291175001.

[31] D.J. Burks, R. Robbins, Are you analyzing me? A qualitative exploration of psychologists' Individual and interpersonal experiences with authenticity, Humanist. Psychol. 39 (4) (2011) 348–365, https://doi.org/10.1080/08873267.2011.620201.

[32] A.P. Lenton, M. Bruder, L. Slabu, C. Sedikides, How does "being real" feel? The experience of State authenticity, J. Pers. 81 (3) (2013) 276–289, https://doi.org/10.1111/j.1467-6494.2012.00805.x.

[33] S. Alimamy, M.A. Kuhail, I will be with you Alexa! the impact of intelligent virtual assistant's authenticity and personalization on user reusage intentions, Comput. Human. Behav. 143 (2023) 107711, https://doi.org/10.1016/j.chb.2023.107711.

[34] I. Pentina, T. Hancock, T. Xie, Exploring relationship development with social chatbots: a mixed-method study of replika, Comput. Human. Behav. 140 (2023) 107600.

[35] P. Maroufkhani, S. Asadi, M. Ghobakhloo, M.T. Jannesari, W.K.W. Ismail, How do interactive voice assistants build brands' loyalty? Technol. Forecast. Soc. Change 183 (2022) 121870.

[36] C. Flavián, M. Guinalíu, R. Gurrea, The role played by perceived usability, satisfaction and consumer trust on website loyalty, Inf. Manag. 43 (1) (2006) 1–14, https://doi.org/10.1016/j.im.2005.01.002.

[37] H.-C. Wang, J.G. Pallister, G.R. Foxall, Innovativeness and involvement as determinants of website loyalty: II. Determinants of consumer loyalty in B2C e-commerce, Technovation 26 (12) (2006) 1366–1373, https://doi.org/10.1016/j.technovation.2005.11.003.

[38] D. Lee, J. Moon, Y.J. Kim, M.Y. Yi, Antecedents and consequences of mobile phone usability: linking simplicity and interactivity to satisfaction, trust, and brand loyalty, Inf. Manag. 52 (3) (2015) 295–304, https://doi.org/10.1016/j.im.2014.12.001.

[39] H.-H. Lin, Y.-S. Wang, An examination of the determinants of customer loyalty in mobile commerce contexts, Inf. Manag. 43 (3) (2006) 271–282, https://doi.org/10.1016/j.im.2005.08.001.

[40] L. Zhang, Z. Shao, J. Benitez, R. Zhang, How to improve user engagement and retention in mobile payment: a gamification affordance perspective, Decis. Support. Syst. 168 (2023) 113941, https://doi.org/10.1016/j.dss.2023.113941.

[41] R. Discetti, M. Anderson, Hybrid consumer activism in Fairtrade Towns: exploring digital consumer activism through spatiality, Consumpt. Markets Cult. 26 (4) (2023) 280–297, https://doi.org/10.1080/10253866.2022.2144265.

[42] C.-L. Hsu, Enhancing brand love, customer engagement, brand experience, and repurchase intention: focusing on the role of gamification in mobile apps, Decis. Support. Syst. (2023) 114020, https://doi.org/10.1016/j.dss.2023.114020.

[43] K. Eli, C. Dolan, T. Schneider, S. Ulijaszek, Mobile activism, material imaginings, and the ethics of the edible: framing political engagement through the Buycott app, Geoforum. 74 (2016) 63–73, https://doi.org/10.1016/j.geoforum.2016.04.002.

[44] L. Zheng, How to make users fall in love with a mobile application: a moderated-mediation analysis of perceived value and (brand) love, Inf. Technol. People 37 (3) (2024) 1360–1378, https://doi.org/10.1108/ITP-06-2022-0465.

[45] D. Sangroya, R. Yadav, Y. Joshi, Does gamified interaction build a strong consumer-brand connection? A study of mobile applications, Austral. J. Inf. Syst. (2021) 25. http://journal.acs.org.au/index.php/ajis/article/view/3105.

[46] S. Roy, A. Ponnam, S. Mandal, Comprehending technology attachment In the case of smart phone-applications: an empirical study, J. Electron. Commerce Org. 15 (1) (2017) 23–43, https://doi.org/10.4018/JECO.2017010102.

[47] J. Seutter, M. Müller, S. Müller, D. Kundisch, Moment or movement – the heterogeneous impact of the Black Lives Matter movement on personal and societal charitable crowdfunding campaigns, Internet Res. 34 (6) (2024) 2151–2174, https://doi.org/10.1108/INTR-11-2022-0904.

[48] X.-L. Jin, X. Chen, Z. Zhou, The impact of cover image authenticity and aesthetics on users' product-knowing and content-reading willingness in social shopping community, Int. J. Inf. Manage 62 (2022) 102428, https://doi.org/10.1016/j.ijinfomgt.2021.102428.

[49] S. Zhu, A. Gupta, D. Paradice, C. Cegielski, Understanding the impact of immersion and authenticity on satisfaction behavior in learning analytics tasks, Inf. Syst. Front. 21 (4) (2019) 791–814, https://doi.org/10.1007/s10796-018-9865-4.

[50] D.J. Grove, R.C. Remy, L.H. Zeigler, The effects of political ideology and educational climates on student dissent, Am. Polit. Q. 2 (3) (1974) 259–275.

[51] J.T. Jost, B.A. Nosek, S.D. Gosling, Ideology: its resurgence in social, personality, and political psychology, Perspect. Psychol. Sci. 3 (2) (2008) 126–136.

[52] N. Bobbio, Left and Right: The Significance of a Political Distinction, University of Chicago Press, 1996.

[53] J.T. Jost, The marketplace of ideology: "elective affinities" in political psychology and their implications for consumer behavior, J. Consum. Psychol. 27 (4) (2017) 502–520.

[54] D.R. Carney, J.T. Jost, S.D. Gosling, J. Potter, The secret lives of liberals and conservatives: personality profiles, interaction styles, and the things they leave behind, Polit. Psychol. 29 (6) (2008) 807–840.

[55] N.J. Shook, R.H. Fazio, Political ideology, exploration of novel stimuli, and attitude formation, J. Exp. Soc. Psychol. 45 (4) (2009) 995–998.

[56] J. Duckitt, C.G. Sibley, Personality, ideology, prejudice, and politics: a dual-process motivational model, J. Pers. 78 (6) (2010) 1861–1894.

[57] L. Graf-Vlachy, T. Goyal, Y. Ouardi, A. König, The politics of piracy: political ideology and the usage of pirated online media, Inf. Technol. Manag. 23 (1) (2022) 51–63, https://doi.org/10.1007/s10799-021-00341-9.

[58] L. Graf-Vlachy, T. Goyal, Y. Ouardi, A. König, Reviews left and right: the link between reviewers' Political ideology and online review language, Bus. Inf. Syst. Eng. 63 (4) (2021) 403–417, https://doi.org/10.1007/s12599-020-00652-1.

[59] N. Chaudhuri, G. Gupta, A. Popovič, Do you believe it? Examining user engagement with fake news on social media platforms, Technol. Forecast. Soc. Change 212 (2025) 123950, https://doi.org/10.1016/j.techfore.2024.123950.

[60] S. Ketron, S. Kwaramba, M. Williams, The "company politics" of social stances: how conservative vs. liberal consumers respond to corporate political stance-taking, J. Bus. Res. 146 (2022) 354–362, https://doi.org/10.1016/j.jbusres.2022.03.086.

[61] P. Sparks, C.A. Guthrie, Self-identity and the theory of planned behavior: a useful addition or an unhelpful artifice? [1], J. Appl. Soc. Psychol. 28 (15) (1998) 1393–1410, https://doi.org/10.1111/j.1559-1816.1998.tb01683.x.

[62] A.S. Ahadzadeh, S. Pahlevan Sharif, F. Sim Ong, Online health information seeking among women: the moderating role of health consciousness, Online Inf. Rev. 42 (1) (2018) 58–72, https://doi.org/10.1108/OIR-02-2016-0066.

[63] M.M. Elsotouhy, M.A. Ghonim, T.H. Alasker, M.A. Khashan, Investigating health and fitness app users' Stickiness, WOM, and continuance intention using S-O-R model: the moderating role of health consciousness, Int. J. Hum.–Comput. Interact. 40 (5) (2024) 1235–1250, https://doi.org/10.1080/10447318.2022.2135813.

[64] R. Yadav, S. Chatterjee, A. Giri, Understanding the factors influencing the continuous usage intention of healthcare apps: analysing the moderating impact of psychological distance and health consciousness, Behav. Inf. Technol. (2024) 1–19, https://doi.org/10.1080/0144929X.2024.2333945.

[65] Y. Fang, X. Gao, C. Sun, H. Gao, Y. Wang, Y. Hu, The mediating role of health consciousness in the relation between time-related personality and health-promoting behavior, Curr. Psychol. 43 (4) (2024) 3649–3656, https://doi.org/10.1007/s12144-023-04617-x.

[66] E. Willis, M. Royne Stafford, Health consciousness or familiarity with supplement advertising: what drives attitudes toward dietary supplements? Int. J. Pharm. Healthc. Mark. 10 (2) (2016) 130–147, https://doi.org/10.1108/IJPHM-06-2015-0026.

[67] F. Baltar, I. Brunet, Social research 2.0: virtual snowball sampling method using Facebook, Internet Res. 22 (1) (2012) 57–74, https://doi.org/10.1108/10662241211199960.

[68] C. Xiao, A.M. McCright, Gender Differences in environmental concern: revisiting the institutional trust hypothesis in the USA, Environ. Behav. 47 (1) (2015) 17–37, https://doi.org/10.1177/0013916513491571.

[69] A. Villar, M. Callegaro, Y. Yang, Where Am I? A meta-analysis of experiments on the effects of progress indicators for web surveys, Soc. Sci. Comput. Rev. 31 (6) (2013) 744–762, https://doi.org/10.1177/0894439313497468.

[70] P.M. Podsakoff, S.B. MacKenzie, J.-Y. Lee, N.P. Podsakoff, Common method biases in behavioral research: a critical review of the literature and recommended remedies, J. Appl. Psychol. 88 (5) (2003) 879–903, https://doi.org/10.1037/0021-9010.88.5.879.

[71] T.R. Hinkin, A brief tutorial on the development of measures for use in survey questionnaires, Organ. Res. Methods 1 (1) (1998) 104–121, https://doi.org/10.1177/109442819800100106.

[72] J.F. Hair, M. Sarstedt, C.M. Ringle, S.P. Gudergan, Advanced Issues in Partial Least Squares Structural Equation Modeling, SAGE Publications, 2017.

[73] J.E. Escalas, J.R. Bettman, Self-construal, reference groups, and brand meaning, J. Consum. Res. 32 (3) (2005) 378–389, https://doi.org/10.1086/497549.

[74] K. Gelbrich, I have paid less than you! the emotional and behavioral consequences of advantaged price inequality, J. Retail. 87 (2) (2011) 207–224, https://doi.org/10.1016/j.jretai.2011.03.003.

[75] A. Mehrabian, Relations among political attitudes, personality, and psychopathology assessed with new measures of libertarianism and conservatism, Basic Appl. Soc. Psych. 18 (4) (1996) 469–491, https://doi.org/10.1207/s15324834basp1804_7.

[76] R.E. Plank, S.J. Gould, Health consciousness, scientific orientation and wellness: an examination of the determinants of wellness attitudes and behaviors, Health Mark. Q. 7 (3–4) (1990) 65–82, https://doi.org/10.1300/J026v07n03_06.

[77] J.F. Hair, M.C. Howard, C. Nitzl, Assessing measurement model quality in PLS-SEM using confirmatory composite analysis, J. Bus. Res. 109 (2020) 101–110, https://doi.org/10.1016/j.jbusres.2019.11.069.

[78] D.A. Dillman, M.D. Sinclair, J.R. Clark, Effects of questionnaire length, respondent-friendly design, and a difficult question on response rates for occupant-addressed census mail surveys, Public Opin. Q. 57 (3) (1993) 289, https://doi.org/10.1086/269376.

[79] C.M. Ringle, S. Wende, J. Becker, SmartPLS 3 [Computer Software], SmartPLS GmbH, 2015.

[80] G. Shmueli, S. Ray, J.M. Velasquez Estrada, S.B. Chatla, The elephant in the room: predictive performance of PLS models, J. Bus. Res. 69 (10) (2016) 4552–4564, https://doi.org/10.1016/j.jbusres.2016.03.049.

[81] C. Fornell, D.F. Larcker, Structural equation models with unobservable variables and measurement error: algebra and statistics, J. Market. Res. 18 (3) (1981) 382–388, https://doi.org/10.1177/002224378101800313.

[82] L. Hu, P.M. Bentler, Fit indices in covariance structure modeling: sensitivity to underparameterized model misspecification, Psychol. Methods 3 (4) (1998) 424–453, https://doi.org/10.1037/1082-989X.3.4.424.

[83] J. Henseler, W.W. Chin, A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling, Struct. Eq. Model.: Multidiscip. J. 17 (1) (2010) 82–109, https://doi.org/10.1080/10705510903439003.

[84] A.F. Hayes, Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach, Guilford Press, 2017.

[85] A. Farmer, B. Kidwell, D.M. Hardesty, The politics of choice: political ideology and intolerance of ambiguity, J. Consum. Psychol. 31 (1) (2021) 6–21.

[86] N. Garg, G. Saluja, A tale of two "ideologies": differences in consumer response to brand activism, J. Assoc. Consum. Res. 7 (3) (2022) 325–339, https://doi.org/10.1086/719584.

[87] R. Khan, K. Misra, V. Singh, Ideology and brand consumption, Psychol. Sci. 24 (3) (2013) 326–333, https://doi.org/10.1177/0956797612457379.

[88] E.Y. Chan, Political orientation and physical health: the role of personal responsibility, Pers. Individ. Dif. 141 (2019) 117–122, https://doi.org/10.1016/j.paid.2019.01.005.

[89] L. Souza Olegario, A. González-Mohino, M. Estévez, M.S. Madruga, S. Ventanas, Emotional response to healthier foods: influence of culture and health consciousness, J. Food Sci. 88 (12) (2023) 5248–5265, https://doi.org/10.1111/1750-3841.16824.

[90] S.A. Spiller, G.J. Fitzsimons, J.G. Lynch, G.H. Mcclelland, Spotlights, floodlights, and the magic number zero: simple effects tests in moderated regression, J. Market. Res. 50 (2) (2013) 277–288, https://doi.org/10.1509/jmr.12.0420.

[91] S.W. Carden, N.S. Holtzman, M.J. Strube, CAHOST: an excel workbook for facilitating the Johnson-Neyman technique for two-way interactions in multiple regression, Front. Psychol. 8 (2017) 1293, https://doi.org/10.3389/fpsyg.2017.01293.

[92] A.F. Hayes, J. Matthes, Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations, Behav. Res. Methods 41 (3) (2009) 924–936, https://doi.org/10.3758/BRM.41.3.924.

[93] V. Deeds Pamphile, R.L. Ruttan, The (Bounded) role of stated-lived value congruence and authenticity in employee evaluations of organizations, Org. Sci. 34 (6) (2023) 2332–2351, https://doi.org/10.1287/orsc.2022.1578.

[94] D. Demetry, How organizations claim authenticity: the coproduction of illusions in underground restaurants, Org. Sci. 30 (5) (2019) 937–960, https://doi.org/10.1287/orsc.2018.1260.

[95] N. Radoynovska, B.G. King, To whom are you true? Audience perceptions of authenticity in Nascent Crowdfunding ventures, Org. Sci. 30 (4) (2019) 781–802, https://doi.org/10.1287/orsc.2018.1253.

[96] Z.A. Bhatti, G.A. Arain, H.M. Yasin, M.A. Khan, M.S. Akram, The role of integrated offline/online social activity and social identification in Facebook citizenship behaviour formation, Inf. Technol. People 34 (5) (2021) 1419–1438.

[97] C. Leong, S.L. Pan, S. Bahri, A. Fauzi, Social media empowerment in social movements: power activation and power accrual in digital activism, Euro. J. Inf. Syst. 28 (2) (2019) 173–204, https://doi.org/10.1080/0960085X.2018.1512944.

[98] D. Freelon, A. Marwick, D. Kreiss, False equivalencies: online activism from left to right, Science (1979) 369 (6508) (2020) 1197–1201, https://doi.org/10.1126/science.abb2428.

[99] R. Yadav, A. Giri, S. Chatterjee, Understanding the users' motivation and barriers in adopting healthcare apps: a mixed-method approach using behavioral reasoning theory, Technol. Forecast. Soc. Change 183 (2022) 121932, https://doi.org/10.1016/j.techfore.2022.121932.

[100] R. Albornoz, E.E. García-Salirrosas, D.Y. Millones-Liza, M. Villar-Guevara, G. Toyohama-Pocco, Using the theory of perceived value to determine the willingness to consume foods from a healthy brand: the role of health consciousness, Nutrients. 16 (13) (2024) 13, https://doi.org/10.3390/nu16131995. Article.

[101] L. Alkire, S. Myrden, S. Köcher, G.E O'Connor, Cultural drivers of health engagement, J. Int. Market. 31 (1) (2023) 90–105, https://doi.org/10.1177/1069031×221127938.

[102] M. Baloge, N. Hubé, How populist are populist parties in France? Understanding parties' strategies within a systemic approach, Eur. J. Cult. Polit. Sociol. 9 (1) (2022) 62–82, https://doi.org/10.1080/23254823.2021.2016455.

[103] H.M. Crowson, Are all conservatives alike? A study of the psychological correlates of cultural and economic conservatism, J. Psychol. 143 (5) (2009) 449–463.

[104] J. Lacroix, D. Ruedin, E. Zschirnt, Discrimination driven by variation in social and economic conservatism: evidence from a nationwide field experiment, Eur. Sociol. Rev. (2022) jcac051, https://doi.org/10.1093/esr/jcac051.

[105] L. Ma, Y. Zhang, Three social-mediated publics in digital activism: a network perspective of social Media public segmentation, Soc. Media Soc. 8 (2) (2022) 20563051221094775, https://doi.org/10.1177/20563051221094775.

[106] D. Dumitrica, H. Hockin-Boyers, Slideshow activism on Instagram: constructing the political activist subject, Inf., Commun. Soc. 26 (16) (2023) 3318–3336, https://doi.org/10.1080/1369118X.2022.2155487.

[107] M. Li, Promote diligently and censor politely: how Sina Weibo intervenes in online activism in China, Inf., Commun. Soc. 26 (4) (2023) 730–745, https://doi.org/10.1080/1369118X.2021.1983001.

[108] M. Ford, A. Sinpeng, Beyond workplace-related issues: how Global unions use digital activism to engage in social agenda-setting, Glob. Netw. 25 (1) (2025) e12485, https://doi.org/10.1111/glob.12485.

Richard Huaman-Ramirez (PhD, Aix-Marseille University, France)
Associate Professor of Marketing at KEDGE Business School, France
Email: richard.huaman-ramirez@kedgebs.com

His research interests include branding and consumer behavior. His work has been published in Journal of Business Research, Psychology & Marketing, European Journal of Marketing, Journal of Retailing and Consumer Services, European Business Review, Journal of Strategic Marketing, Journal of Consumer Marketing, Journal of Marketing Theory and Practice, among many others.

Aranzazu Gaztelumendi (PhD, University of Burgundy, France)
Assistant Professor of Marketing at ESSCA Business School, France
Email: aranzazu.gaztelumendi@gmail.com

Her research focuses primarily on innovation and experiential marketing. Her work has been presented in relevant academic conferences such as Association for Consumer Research (ACR) Conference and Consumer Culture Theory (CCT) Conference and published in VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations.

Zeeshan A. Bhatti (PhD, Aix-Marseille University, France)
Associate Professor in Information Systems Management at the School of Organisations, Systems and People
Faculty of Business & Law, University of Portsmouth, United Kingdom
Email: xeeshan@gmail.com

His research focuses on the interaction of technology, society and businesses. His research has been published in various refereed journals such as British Journal of Management, Personnel Psychology, Technological Forecasting & Social Change, Industrial Marketing Management, Information Technology & People, Journal of Knowledge Management, Journal of Business Ethics, Behaviour and Information Technology, Personnel Psychology, Journal of Retailing and Consumer Services among others. He currently belongs to the Editorial Board of Technological Forecasting & Social Change.

Francisco Guzman (PhD, Universitat Ramon Llull, ESADE, Spain)
Professor of Marketing at the G. Brint Ryan College of Business at the University of North Texas
Email: francisco.guzman@unt.edu

His research focuses on branding and social transformation, particularly on brand cocreation, brand equity, brand conscientiousness, public-private collaborations and political branding. His research has been published in Journal of International Marketing, Journal of Business Research, European Journal of Marketing, Industrial Marketing Management, Psychology & Marketing, International Marketing Review, Journal of Marketing Management, Journal of Brand Management among many others. He currently serves as an Associate Editor of the Journal of Business Research.

Jean Pfiffelmann (PhD, University Jean Moulin, Lyon 3)
Assistant Professor of Marketing at EM Strasbourg, France
Email: jean.pfiffelmann@em-strasbourg.eu

His doctoral research was awarded the Best Doctoral Research in 2020 from the French Association of Marketing (Association Française du Marketing). His research has been published in Journal of Business Research, Psychology & Marketing, European Journal of Marketing, International Journal of Advertising, Journal of Interactive Advertising, and Canadian Journal of Administrative Sciences.