This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Herrala, Juha-Matti; Vartiainen, Tero; Koskelainen, Tiina

Title: How Personal Finance Management Systems Emancipate and Oppress Young People

Year: 2023

Version: Published version

Copyright: © Authors 2023

Rights: CC BY-NC-ND 4.0

Rights url: https://creativecommons.org/licenses/by-nc-nd/4.0/

Please cite the original version:

How Personal Finance Management Systems
Emancipate and Oppress Young People

Juha-Matti Herrala
University of Vaasa
juha-matti.herrala@lemonsoft.fi

Tero Vartiainen
University of Vaasa
tero.vartiainen@uwasa.fi

Tiina Koskelainen
University of Jyväskylä
tiina.e.koskelainen@jyu.fi

Abstract

In order to achieve financial well-being, individuals need to make sensible financial decisions. Personal finance management (PFM) systems help individuals with saving, budgeting, consumption, borrowing, and lending tasks. As much as these systems help individuals, they may also have unintended consequences. This study increases the knowledge of how PFM systems emancipate and oppress young people. We used an interpretive research approach and collected qualitative data. Our major finding is that PFM systems emancipate young people by promoting agency (the freedom to act) due to the efficient implementation of PFM tasks, for example. These systems also oppress users by hindering rationality (the freedom to think) due to stress and encouraging users to make decisions too quickly, for example. Based on the results, we offer implications for the development and research on PFM systems to reduce oppression and promote emancipation in young people.

Keywords: financial well-being, emancipation, oppression, finance management systems, young people

1. Introduction

To make a sensible financial decision, individuals need a reasonable amount of knowledge—that is, financial literacy—to set their own financial goals and implement relevant actions (e.g., Xiao and O'Neill 2016; Brüggen et al. 2017; Netemeyer et al. 2018). In practice, individuals need to plan budgets and track basic transactional information (Torno et al., 2021). Personal finance management (PFM) systems (software and applications) can help individuals with this complicated task (Laukkanen 2016; Olafsson and Pagel 2018).

The ubiquitous nature of digital tools means that people have easy access to financial services and information in real time. While PFM systems enable digital emancipation (Polyviou et al., 2021), the constant use of various applications and services may also have some negative consequences, such as privacy concerns, overspending, and technology dependency. These, in turn, may lead to oppression that constrains the freedom to act, think, and belong. The extant IS research on emancipation and oppression states that technology itself is not considered oppressive, but that technologies as tools of power can be used in different ways to affect power dynamics (e.g., Lyytinen & Klein, 1985; Polyviou et al., 2021; Young et al., 2021). As digitalization is ubiquitous and operates in real time (Trittin-Ulbrich et al., 2021), we suspect that in the case of PFM, the systems developed may be efficient both at oppressing and emancipating their users. In addition, according to anecdotal evidence, monetary issues tend to lie in a gray area, and there might be hidden agendas behind the development of PFM systems. Taking the widespread use of PFM systems among the user population (Lewis & Perry, 2019)—and especially among young people (Lusardi et al., 2010)—into account, we argue that there might be underlying power- or freedom-related issues in the use of these systems. Our target group is young people, as we perceive that they are among the most vulnerable parties in our society with respect to PFM (e.g., Lusardi et al., 2010; Brown et al. 2016; Luukkanen and Uusitalo 2019). Therefore, we posit the following research question: *How do PFM systems emancipate and oppress young people?*

After this introduction, we review the literature on PFM, emancipation, and oppression. Then, in the research methods section, we explain how we collected and analyzed the data. Then, we present the results. In the discussion section, we reflect on the results and offer implications for practice and research.

2. Literature Review

2.1. Personal Finance Management

According to Xiao and Tao (2020), personal finance is a variation of consumer finance, as well as family finance. According to Tufano (2009), these functions are "moving funds, managing risk, advancing funds from the future to today and advancing funds from

today until a later date." Based on this definition, PFM involves managing one's overall finances (e.g. banking apps, investing apps) or easing one's daily use of money (e.g. mobile payment apps). Additionally, according to the earlier definition by Walker and Garman (1992), the purpose of personal finance is to provide information for individuals to effectively manage their money to achieve lifetime goals.

Mobile services have long had a notable advantage over computer-based services. By the start of the 21st century, personal phones were already more accessible devices than personal computers (Riivari, 2005). The use of mobile devices has been made easy, and there is a low threshold for starting to use PFM systems. Modern digital tools enable financial planning, the implementation of measures, and monitoring. Some tools specialize in one thing; others respond to more than one need.

2.2. Emancipation and Oppression

According to Young et al. (2021), emancipation is a crucial element of critical theories. Critical theory (CT) tries to clarify human needs and extend human autonomy in different areas of life. From this CT perspective, Alvesson and Willmott (1992) discussed emancipation that is efficiently directed into social relations and, for example, into reducing power asymmetries. In social and organizational contexts, emancipation encompasses liberation from oppression and anti-emancipatory forces.

Oppression can be perceived as the opposite of emancipation. Oppression is mentioned in several conceptualizations of emancipation (in the information systems [IS] field), which Young et al. (2021) identified. There are some variations in the definitions of oppression, but in general, it limits openness and freedom in individual interactions. Oppression involves constraining individuals' freedom in a harmful way. Oppression affects power dynamics. Whereas emancipation dynamics are neutral or equal, oppression dynamics tend to marginalize individuals.

2.2.1. Emancipation and oppression in IS research. In critical IS research, emancipation addresses social aspects, such as freedom, power, social control, and values related to information technology's development, use, and impact (Myers & Klein, 2011). Polyviou et al. (2021) use the term "digital emancipation," and define it as an "IS-enabled state where individuals are set free from time, place and device restrictions in the different contexts (personal, social or work) of their everyday life" (2021, p. 166). Polyviou et al. (2021) recognize the need to increase our understanding of "the balancing effort of the digitally emancipated individual" (p. 165). According to them, IS

offers new ways for individuals to operate in multiple contexts simultaneously, which was impossible before this technological development. A single device, such as a mobile phone, enables digital emancipation, which may have the desired benefits in multiple contexts. However, effects across multiple contexts may also result in an unwanted adverse effect in one context.

One takeaway from IS's perspective is that all social relationships involve power, leading to a struggle. In that previously accepted view, technology itself is not considered oppressive, but technologies as tools of power can be used in different ways to affect power dynamics. However, even though it requires some more research, Young et al. (2021) also raise the possibility that technologies can be oppressive. They also contemplate whether theories of emancipation should be used at all in positive or harmless contexts or if they should only be used in intensely oppressive contexts. However, the IS literature contains varying examples in different contexts, and the concept of emancipation is quite flexible.

2.2.2. Emancipation and oppression: Concepts and components. To understand theories of emancipation in IS, it is helpful to break emancipation down into a few relevant concepts. Young et al. (2021) identified four distinct components of emancipation: agency (the freedom to act), dialogue (the freedom to express), inclusion (the freedom to belong), and rationality (the freedom to think). Regarding agency, Young et al. (2021) refer to limits around the freedom to act, which is a corresponding component of emancipation. A dominant theme in this stream of research relates to IS design and how it affects users' abilities to exert agency and accomplish goals. In terms of dialogue, Young et al. (2021) state that dialogue relates to people's freedom of expression. In one research stream, this relates to studying how to foster ideal communication between individuals. Regarding inclusion, many streams of IS research study marginalized groups. For example, according to Aker and Mbiti (2010), mobile phones have reduced communication costs in societies where technology has become widely available. As for rationality, Young et al. (2021) define it as the freedom to think. This relates to constrained rationality and ideological control, for example.

2.3. Toward Filling the Gap in Knowledge

Studies on users perceptions on using PFMs exists (e.g., Huebner et al. 2018; Olafsson and Pagel 2018) but we have not found emancipation related studies on PFM systems. We argue that there is a connection between the emancipation (oppression) of young people and PFM systems: Young people are in the process of

learning to manage their lives and finances, and they may use PFM systems (e.g., Lewis & Perry, 2019; Lusardi et al., 2010). These systems have been developed to help users with their finances, but there may also be business interests involved. These systems may have unintended consequences, such as oppression, but there may be business-motivated intended consequences of enslaving users to their applications. To summarize, we argue that there is a need to understand how PFM systems emancipate and oppress young people. To achieve this goal, we next present our empirical research to fill this knowledge gap.

3. Research Method

3.1. Method of Empathy-Based Stories (MEBS)

This research uses the method of empathy-based stories (MEBS) (Eskola, 1997; Särkelä & Suoranta, 2020) as a data-gathering method. This method involves informants writing short narratives based on a frame story provided by the researcher. Only a few variations are used in framing stories, enabling researchers to observe how narratives differ when some aspects of the stories are changed (Wallin et al., 2019).

In the typical MEBS setup, the study participants are asked to connect to the story and imagine themselves in a particular situation and role. Roles can be assigned from the imagine-self or imagine-target perspective (Davis et al., 2004). Despite the name of the method, the essential idea is not to imagine emotion. The emphasis is on taking on a pre-defined role in a fictional situation. This setup gives significant freedom to study participants to develop a short story that is not personal and liberates them so that they can more easily answer sensitive questions. The result can be seen as a subjective, constructed view of reality (Wallin et al., 2019). MEBS is useful in finding new, divergent, and upcoming research areas, as stories can provide unexpected insights into research (Wallin et al., 2019).

MEBS has primarily been used in sociology and educational science studies, but we argue that MEBS is suitable for our study. First, the use of MEBS produces subjectively constructed views of reality (Wallin et al., 2019). Emancipation and oppression can be perceived as experiences, although one might be emancipated or oppressed without being aware of it. MEBS makes it possible to understand emancipation and oppression as perceived by a large population. Second, all of the possibilities for PFM systems to emancipate and oppress are unknown. When using MEBS, the participants engage in role-taking, meaning that they may reveal new insights into this topic. Third, issues of emancipation and oppression may be sensitive in nature. MEBS makes

it possible to study a sensitive topic in such a way that the participants do not need to expose their own experiences, as by role-taking, they can reflect on those issues through story writing.

Our MEBS research data collection was organized around a group of university students who were participating in a course to develop their ability to manage their finances. This course is mandatory for 1st-year finance students and is also available in optional studies for other students. There were a total of 191 respondents, of whom 49% were female and 51% male. Data collection was conducted by distributing one of eight alternative stories to each student participating in the survey.

Respondents were asked to write a story following this framework. They were allowed to prepare and return the responses electronically without supervision. According to Eskola (1997), 10–15 stories for each variation of a frame story can be sufficient to reach saturation point. Based on that finding, Eskola (1997) suggests that 15 stories are sufficient for each variation of a frame story. In this research, we used eight different variations of frame stories. The variations were based on variable A (themes) and variable B (variations in the negative/positive setup). The lowest and highest number of variation responses was 17 and 33, respectively, while the average was 24 (Table 1).

Table 1. Stories from X1 to X8.

Attitude Themes	Opportunities and benefits	Risks and threats	TOTAL
Saving & Investing	story X1 n = 18	story X2 n = 27	n = 45
Budgeting	story X3 n = 22	story X4 n = 28	n = 50
Consumption	story X5 n = 22	story X6 n = 17	n = 39
Borrowing & Lending	story X7 n = 24	story X8 n = 33	n = 60
TOTAL	n = 86	n = 105	n = 191

The basic structure of the frame story is that the narrator meets a friend who says he is using a phone to manage his finances. Then, the story continues with a description of his attitude (negative/positive setup), which is followed by the theme (reason for use). After this introduction, the narrator describes his thoughts in this context. The respondent is asked to continue the story from that point.

What follows is an example of a frame story with a positive attitude in the context of budgeting (translated from the original Finnish text): "I met my friend in the

morning, and he said he uses his phone to manage his finances. He was excited about the opportunities and benefits of using the phone to plan his revenue and expenses. He said that… (Continue narration)."

3.2. Analysis Process

The analysis process used a data-driven approach accompanied by the lenses of PFM, the personal and social contexts (modified from Polyviou et al., 2021), and components of emancipation (Young et al., 2021). The analysis proceeded as follows: i) the stories were read to get a general understanding of the data; ii) the stories were coded to identify the sub-themes; iii) the sub-themes were abstracted and the main themes were identified; iv) the contexts of the themes (PFM, personal, and social) were identified (modified from Polyviou et al., 2021, who examined work, personal, and social contexts); v) the components of emancipation were identified (Young et al., 2021); and vi) the results were summarized.

4. Results

The themes are reported in the order of PFM, and then personal and social contexts. The PFM themes represent the direct emancipation and oppression themes found. The themes in the personal and social contexts represent generic emancipation and oppression in the use of digital applications.

4.1 Personal Finance Management

The PFM context directly considers the use of PFM systems and the emancipatory and oppressive consequences of their use.

Cost savings with offers. The responses describe the possibilities for saving money in daily consumption by taking advantage of loyalty discounts or discounts offered to students.

I16: He also has customer benefit cards from various stores as an app on his phone. He can view his recent purchases and any bonuses or customer benefits he has received in the app. This is also good for saving.

Enhanced management and improved budgeting and consumption habits. According to the responses, users can experience a sense of enhanced management by using PFM applications. It was interpreted that these themes were interlinked.

I103: I asked if all that effort was worth it; in my own opinion, using all the apps and programs just sounded cumbersome and time-consuming. He replied that this is not the case at all; on the contrary, carrying apps on the phone makes everything easy and hassle-free. The

stress of managing your own finances is wholly gone with them.

Enhanced money transactions. The theme of enhanced money transactions was recognized in many answers with different frame stories. According to the findings, enhanced money transactions relate to individuals' freedom to act as consumers.

I10: Money transfers between friends is also easy with the phone. If you even shop with friends, you don't have to start sharing your purchases from there, but everyone immediately puts the money in the person's account who paid the total price.

Enhanced saving and investing. Many stories positively describe the possibility of being able to save and invest as a long-term financial management process. This seems to relate emancipation to the concept of agency, as building long-term financial management plans enables individuals to exert agency now, and later accomplish their financial objectives. Striving for financial goals also supports inclusion.

I125: After hearing this, my friend said to himself, "You can even manage your investments on the go with your phone." Here, he is absolutely right. You'll be able to react to market changes right away, and you won't have to wait to get home to your computer. Quick inspections of investments are also quick and agile.

Positive lending opportunities. Some narratives describe enhanced possibilities of lending and borrowing. IS enables individuals to improve their chances of getting a different kind of loan or credit. It also affects borrowing in one direction from one person to another.

I87: After going through the loan application, he approved it through a mobile application, and the loan could be drawn down. After the experience, both of us gained confidence in using the phone to manage our own finances and will continue to use it in the future.

Bad consumption decisions. Applications enable users to make impulsive buying decisions. These decisions do not support the achievement of a person's short-term financial goals. This phenomenon is oppression caused by behavioral control (the concept of agency) but likelier affects users' cognitions (the concept of rationality).

I129: Sometimes, you can make quick consumption decisions for ease of use and transfer even larger amounts without even thinking about it by simply swiping the screen.

Bad investment decisions. Applications enable users to access investment markets painlessly. Access provides new possibilities for new users and enhances emancipation (the concepts of agency and inclusion). However, ease also exposes users to risks of impulsive behavior.

I27: According to him, buying and selling shares on a mobile phone is so effortless ... When the phone is always included and ready to use, it is difficult to take a long-term investment approach.

Difficulty understanding the value of digital money. Several answers highlight the problem of perceiving the amount and value of money when it is handled exclusively in digital form.

I183: My friend also warned that the sense of reality in the use of money was a little blurred. As all purchases and payments were made from a small screen, he found himself thinking less and less about how much money he was actually spending.

Excessive ease of money transfers. In several responses, the excessive ease of transferring money is linked to the themes of excessive consumption and knowing the value of money.

I132: The phone can be used to pay in so many places today that spending money could get out of control. For example, my friend used the case where he had gone for a walk downtown and intentionally left his wallet at home so he couldn't spend the money. The phone was still in his pocket to listen to music. While walking downtown, he got lost in the store "just looking around." Before he even realized it, he was paying for the products on his phone at the checkout. So, this is a convenient feature, but according to my friend, wasting money has been made way too easy.

Negative side of lending. In these stories, money lending is perceived as so effortless that one can easily run into debt.

I172: Borrowing money today is insanely easy, and it only takes five minutes to withdraw a consumer loan. This brings absurd problems to low-educated people, especially young people who are hardly interested in economic matters. Easy money, which can be added quickly and effortlessly, leads to default entries and the loss of credit information for up to several years.

Summary of the PFM context. Table 2 summarizes the impacts of digital emancipation in the PFM context. Some impacts are linked to more than one component of emancipation. Observations occur in all other components of emancipation, except freedom to express. The general impression is that applications primarily increase emancipation in this context. However, oppression is also genuinely present.

4.2 Personal Context

The personal context relates to themes that relate to user experiences that indirectly relate to the use of PFM systems but exclude the direct use of PFM systems.

Ease and speed of use. Many applications are designed so that they aim to make users' lives easier. Ease itself is neutral from the perspective of emancipation. However, if ease enables individuals to do things that would not have been done if the task was too hard, that ease is emancipating. In some stories, personal emancipation related to ease can be understood as better productivity.

I17: According to my friend, it is also easy to check your own financial situation via the phone and mobile banking, and it only takes a minute or two.

The negative variations of the stories have a more critical view of the speed and ease of applications. However, in many stories, the actor may lack self-control. According to that kind of narrative, PFM offers an easy way to get quick loans and may lead to over-indebtedness.

I164: My friend said his brother doesn't understand the responsibility involved in borrowing money. When you run out of money, a new amount is just a few clicks away.

Freedom of time and place. Freedom of time and place is clearly positively emancipating in the personal context. However, this may also cause oppression because of, for example, the stress of excessive information or the stress of IS safety and security phenomena.

I77: On the other hand, my friend praised the phone because it always goes with it and provides real-time information on expenses and income and the current bank account balance. This information makes it easy to plan and control your daily shopping behavior. Sure, all of this, keeping in mind that following the figures can be stressful.

Stress of safety and security. Many answers included anxiety about cybersecurity. These concerns are also connected to many other themes of emancipation, but in the context of the sensation of these freedoms, it is a paradoxical cost.

I20: He fears security risks or the loss of his data. He realizes that there are many online scams and password thieves who could gain access to his information. Because of this, he should always be guarded and think about what data networks he is using.

Stress of privacy, surveillance, and monitoring. According to the data, the stress of privacy is a negative feeling that is experienced alongside the stress of cybersecurity. Two types of privacy concerns emerged: 1) What if someone (a person) can access information and see what they have done, and 2) how is information collected and used, for example, for marketing purposes?

I95: In addition, he wondered about the security of third-party applications and whether to sell his plans to advertisers, for example.

Technical dependency. Technical dependency has an oppressive impact that makes mobile phones visible as technical artifacts.

Table 2. Components of emancipation: Findings in the material on PFM (E = emancipation; O = oppression).

Relevant Concept	Component of Emancipation	Theme	Impact	E	O
Agency	Freedom to act	Enhanced Management and Budgeting	Promotes users' financial control	x	
Agency	Freedom to act	Enhanced Money Transactions	Enhances users' autonomy	x	
Agency	Freedom to act	Lending Opportunities	IS enables a fast and easy application process	x	
Agency	Freedom to act	Excessive Ease of Money Transfers	Speeding up and facilitating actions	x	x
Dialogue	Freedom to express	[No observations in this context]	[No observations in this context]		
Inclusion	Freedom to belong	Enhanced Money Transactions	Mitigates but also intensifies power asymmetries	x	x
Inclusion	Freedom to belong	Enhanced Saving and Investing	Increases the sense of empowerment and inclusion	x	
Inclusion	Freedom to belong	Lending Opportunities	a) Promotes individuals' economic inclusion b) Reduces economic inclusion	x	x
Rationality	Freedom to think	Enhanced Management and Budgeting	Enables users to see their financial overview	x	
Rationality	Freedom to think	Bad Consumption Decisions	Affects users' cognitions—unfavorable choices		x
Rationality	Freedom to think	Bad Investment Decisions	Indirect manipulation—unfavorable choices		x

Table 3. Components of emancipation: Findings in the material on the personal context (E = emancipation;   O = oppression).

Relevant Concept	Component of Emancipation	Theme	Impact	E	O
Agency	Freedom to act	Speed and Ease	Speeds up and facilitates actions	x	x
Agency	Freedom to act	Freedom of Time and Place	Promotes accessibility	x	
Agency	Freedom to act	Stress of Safety and Security	Limits a person's ability to act		x
Agency	Freedom to act	Stress of Privacy	Limits a person's ability to act		x
Agency	Freedom to act	Stress of User Error	Limits determination to act		x
Agency	Freedom to act	Stress of Lack of Competence	Limits determination to act		x
Agency	Freedom to act	Digital Distraction	Limits ability to focus and prioritize actions		x
Agency	Freedom to act	Behavior Controlled by IS	Influences a person's behavior		x
Dialogue	Freedom to express	[No observations in this context]	[No observations in this context]		
Inclusion	Freedom to belong	Freedom of Time and Place	Promotes inclusion	x	
Rationality	Freedom to think	Stress of Safety and Security	Limits a person's ability to think		x
Rationality	Freedom to think	Stress of Privacy	Limits a person's ability to think		x
Rationality	Freedom to think	Behavior Controlled by IS	Manipulates a person's thinking and choices		x
Rationality	Freedom to think	Stress of Excessive Information	Interferes with a person's thinking and choices		x

Table 4. Components of emancipation: Findings in the material on the social context (E = emancipation; O = Oppression).

Relevant Concept	Component of Emancipation	Theme	Impact	E	O
Agency	Freedom to act	Enhancing Communication	Speeds up and facilitates actions	x	
Dialogue	Freedom to express	Limiting Human Interaction	Limits the possibility to express ideas and emotions		x
Inclusion	Freedom to belong	Shared Experiences	Promotes inclusion	x	
Inclusion	Freedom to belong	Limiting Human Interaction	Marginalizes from social contact		x
Rationality	Freedom to think	Enhancing Communication	Provides information for decision-making (Note: negative in the case of disinformation)	x	x
Rationality	Freedom to think	Stress of Social Medial	Influences a person's behavioral perspective		x

I31: He was also anxious about the thought of what would happen if his phone were lost or stolen, and how much essential and vulnerable information the phone would contain. Valuable investments could be lost instantly, and all this could be done at the touch of a button.

Stress of user error. IS helps users to do specific tasks, but it also requires users to follow rules and processes. If the user fails to act as required, it may cause IS to operate in an undesirable way.

I191: While chatting, a friend made me a mobile bank transfer and just stated how easy it was to transfer money today. ... I checked my account balance and was surprised why I was 1,000 € richer. I was browsing through the history of events, and oddly enough, my friend had added two zeros to his payment.

Stress of a lack of competence. It was possible to identify oppressive stress for two different types of lack of competence. One reason for this type of stress was incompetence at using IS artifacts, such as mobile applications.

I31: He also found several e-invoices distressing. He has received all his invoices in the mail in the past and has experienced it as simple. Now, he is worried about the new e-invoices.

Digital distraction. The stories describe situations in which distraction caused by mobile applications disturbed other activities.

I81: My friend also thought that while the phone makes it easy to manage your finances, the phone also acts as a distraction, as you may end up browsing through various apps and completely forgetting about your financial management activities.

Behavior controlled by IS. The stories describe attempts to change behavior linked to various financial perspectives. The stories describe different ways of influencing, such as conventional digital advertising, but especially personalized advertising.

I42: She had also observed that the algorithm of the social media applications she used had excellently tailored the ads targeted to her, which in turn increased the temptation to buy unnecessary products impulsively.

Stress of excessive information. The availability of information can increase perceived financial and personal stress. According to the responses, an application user can develop an addiction in which a person compulsively reviews the current budget situation and money available. This may not promote or disturb achieving one's financial goals (current money management) but may oppress them, limiting their freedom of thinking.

I42: And another side effect that didn't directly detract from his investments per se, but instead from his mental health, was that nowadays, phone apps allow him to track his own stocks and funds in real time. He talked

about how he had developed perhaps even a small addiction to constantly monitoring the generation of potential returns.

Summary of the personal context. Table 3 summarizes the findings regarding the impacts of digital emancipation and oppression in the personal context. The findings related to the concept of agency are emphasized over the other concepts. The observations focus on agency—how IS enhances individuals' perceived ability to meet their personal goals. This means positive emancipation in a personal context in terms of the concept of agency. On the other hand, the observations reveal various phenomena limiting individuals' freedom to act. However, the applications' positive impacts, such as speeding up and facilitating actions or liberating individuals from the limits of time and place, appear strongly in the data.

4.3 Social Context

The social context relates to themes that consider relations between actors and that indirectly relate to PFM systems.

Enhancing communication. The responses include two kinds of narratives relating to themes of communication: 1) how a person has obtained information from social media and used it in the investment decision-making process, and 2) how a person can communicate with professionals and get help with investment decisions or other money-related questions.

I112: Because you can get just about anything and all services on your phone, in addition to tracking your finances, you can get help and advice quickly. Getting support from professionals relieves stress and helps to take your own finances in the right direction.

Shared experiences. According to some stories, applications can enable individuals to share investment portfolios and monitor them in a gamified way.

I4: A friend opened my book-entry account and savings account on the site I recommended. There, we have been following our own portfolios together.

Limiting human interaction. Reduced social contact caused by the applications emerged.

I38: For the older generation, resistance to change on the Internet is easy to understand. After all, dealing with a computer is not the same as a personal face-to-face service.

Stress of social media. Some narratives describe social media as a source of unreliable information, as demonstrated earlier, and as an element affecting their consuming behavior.

I88: People on social media who seem to have a "perfect" life can also pressure their spending. This life

may include a lifestyle full of beautiful trips abroad, designer clothes, lavish houses, and cars.

Summary of the social context. Table 4 summarizes the findings regarding the impacts of digital emancipation in the social context. In general, there are findings relating to both positive and negative perspectives regarding different components.

5. Discussion

To summarize our core contribution, we were able to develop explanatory knowledge that contributes to the literature on financial literacy (e.g., Lewis & Perry, 2019; Lusardi et al., 2010; Torno et al., 2021) and digital emancipation and oppression (e.g., Polyviou et al., 2021; Young et al. 2021). We found different ways in which PFM systems emancipate and oppress users during PFM tasks (the PFM context). Emancipation occurred in budgeting, money transfer, saving, lending, and investment tasks. PFM enhanced these activities by making them easier and faster. Oppression emerged as impulsive buying, difficulty in understanding the value of digital money, and the excessive ease of money transfers (e.g., lending).

In addition, our results revealed that emancipation and oppression were also indirectly related to PFM (personal and social contexts). Regarding the personal context, emancipation emerged as speeding up and facilitating actions or liberating individuals from the limits of time and place, for example. Oppression emerged as the stress of safety, security, privacy, and user error, for example. In terms of the social context, oppression emerged as limiting human interaction and the stress of social media. Emancipation emerged as enhancing communication and sharing experiences.

When considering the components of emancipation (Young et al., 2021), agency and rationality emerged in the stories, whereas dialogue and inclusion emerged less frequently. Based on this, we argue that a major problem area of emancipation in PFM systems relates to the freedom to act (both promoting acts and hindering them) and to the freedom to think (both making it possible to think and hindering it) with respect to PFM. To summarize, PFM systems emancipate their users in the tasks of financial management (saving, budgeting, consumption, borrowing, and lending; promoting the "freedom to act") but they also oppress users in the form of stress and by encouraging users to make decisions too rapidly, for example (opposing the "freedom to think").

5.1 Implications

Based on our research, we propose the following implications:

Implication 1: Development of a rationality viewpoint in PFM systems. Our results show that in PFM systems, rationality (Young et al., 2021) is hindered. Future research and development work (e.g., design science) should target upholding rationality in PFM systems.

Implication 2: Development of the sensitivity of developers regarding emancipation and oppression in PFM systems. Our results suggest that PFM systems emancipate users during PFM tasks. It seems that the design of these applications has taken into account their functional objectives, but the effects on the user have not been carefully considered. Developers should be educated about the emancipation- and oppression-related consequences of PFM systems.

Implication 3: Development of the use of technologies (e.g., ML/AI) to avoid oppression and promote emancipation. We need development work and research on how to use different technologies to avoid oppression in PFM systems (cf. Kane et al., 2021 on emancipatory assistants).

5.2 Limitations

The MEBS' story frames for the original data collection were set at a very general level. This is the recommended practice for this method. On the other hand, the responses were mainly at a very general level. However, the study provided information and insights that can be considered trustworthy. MEBS makes it possible for the respondent to projectize sensitive issues, possibly experienced by the respondent him- or herself, to the written stories. Saturation of the results was achieved with this setup.

To interpret the reliability and generalizability of the research results, it is important to take into account the homogeneity of the target group. In this qualitative study, it is estimated that the number of answers received (approximately 191) reliably describes the perceptions of the selected target group regarding the research questions. However, the representativeness of these results is limited outside this target group.

References

Aker, J. C., & Mbiti, I. M. (2010). Mobile phones and economic development in Africa. *Journal of Economic Perspectives, 24*(3), 207–232. https://doi.org/10.1257/jep.24.3.207

Alvesson, M., & Willmott, H. (1992). On the idea of emancipation in management and organization studies. *Academy of Management Review, 17*(3). https://doi.org/10.2307/258718

Brown, M., Grigsby, J., van der Klaauw, W., Wen, J., & Zafar, B. (2016). Financial education and the debt behavior of

the young. *Review of Financial Studies, 29*(9), 2490–2522. https://doi.org/10.1093/rfs/hhw006

Brüggen, E. C., Hogreve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of Business Research, 79*, 228–237. https://doi.org/10.1016/j.jbusres.2017.03.013

Davis, M. H., Soderlund, T., Cole, J., Gadol, E., Kute, M., Myers, M., & Weihing, J. (2004). Cognitions associated with attempts to empathize: How do we imagine the perspective of another? *Personality and Social Psychology Bulletin, 30*(12). https://doi.org/10.1177/0146167204271183

Eskola, J. (1997). *Eläytymismenetelmäopas*. Tampereen yliopisto.

Huebner, J., Frey, R. M., Ammendola, C., Fleisch, E., & Ilic, A. (2018, November). What people like in mobile finance apps: An analysis of user reviews. Proceedings of the 17th International Conference on Mobile and Ubiquitous Multimedia, 293–304. https://doi.org/10.1145/3282894.3282895

Kane, G. C., Young, A. G., Majchrzak, A., & Ransbotham, S. (2021). Avoiding an oppressive future of machine learning: A design theory for emancipatory assistants. *MIS Quarterly, 45*(1). https://doi.org/10.25300/MISQ/2021/1578

Torno, A., Muntermann, J., & Werth, O. (2021, July 12–14). *More than mobile banking: a taxonomy-based analysis of mobile personal finance applications.* Twenty-Fifth Pacific Asia Conference on Information Systems (PACIS).

Laukkanen, T. (2016). Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the Internet and mobile banking. *Journal of Business Research, 69*(7), 2432–2439. https://doi.org/10.1016/j.jbusres.2016.01.013

Lewis, M., & Perry, M. (2019, May). *Follow the money: Managing personal finance digitally.* In Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (pp. 1–14).

Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young. *Journal of Consumer Affairs, 44*(2), 358–380.

Luukkanen, L., & Uusitalo, O. (2019). Toward financial capability: Empowering the young. *Journal of Consumer Affairs, 53*(2), 263–295. https://doi.org/10.1111/joca.12186

Lyytinen, K. J., & Klein, H. K. (1985). The critical theory of Jurgen Habermas as a basis for a theory of information systems. In E. Mumford & R. Hirschheim (Eds.), *Research methods in information systems* (pp. 207–226). Elsevier.

Myers, M. D. & Klein, H. K. (2011). A set of principles for conducting critical research in information systems. *MIS Quarterly, 35*(1), 17–36. https://doi.org/10.2307/23043487

Netemeyer, R. G., Warmath, D., Fernandes, D., & Lynch, J. G. (2018). How am I doing? Perceived financial well-being, its potential antecedents, and its relation to overall well-being. *Journal of Consumer Research, 45*(1), 68–89. https://doi.org/10.1093/jcr/ucx109

Olafsson, A., & Pagel, M. (2018). The liquid hand-to-mouth: Evidence from personal finance management software. *Review of Financial Studies, 31*(11), 4398–4446. https://doi.org/10.1093/rfs/hhy055

Polyviou, A., Pouloudi, N., Pramatari, K., & Dhillon, G. (2021). Digital emancipation: Are we becoming prisoners of our own device? In C. Metallo, M. Ferrara, A. Lazazzara, & S. Za (Eds), *Digital transformation and human behavior* (pp. 165–171). Springer. https://doi.org/10.1007/978-3-030-47539-0_12

Riivari, J. (2005). Mobile banking: A powerful new marketing and CRM tool for financial services companies all over Europe. *Journal of Financial Services Marketing, 10*(1), 11–20. https://doi.org/10.1057/palgrave.fsm.4770170

Särkelä, E., & Suoranta, J. (2020). The method of empathy-based stories as a tool for research and teaching. *Qualitative Report, 25*(2), 399–415. https://doi.org/10.46743/2160-3715/2020.4124

Torno, A., Muntermann, J., & Werth, O. (2021, July 12–14). *More than mobile banking: A taxonomy-based analysis of mobile personal finance applications.* Twenty-Fifth Pacific Asia Conference on Information Systems (PACIS).

Trittin-Ulbrich, H., Scherer, A. G., Munro, I., & Whelan, G. (2021). Exploring the dark and unexpected sides of digitalization: Toward a critical agenda. *Organization, 28*(1), 8–25. https://doi.org/10.1177%2F1350508420968184

Tufano, P. (2009). Consumer finance. *Annual Review of Financial Economics, 1*, 227–247. https://doi.org/10.1146/annurev.financial.050808.114457

Walker, R., & Garman, E. T. (1992). The meanings of money. *American Behavioral Scientist, 35*(6), 781–789. https://doi.org/10.1177/0002764292035006012

Wallin, A., Koro-Ljungberg, M., & Eskola, J. (2019). The method of empathy-based stories. *International Journal of Research & Method in Education, 42*(5). https://doi.org/10.1080/1743727X.2018.1533937

Xiao, J. J., & O'Neill, B. (2016). Consumer financial education and financial capability. *International Journal of Consumer Studies, 40*(6), 712–721. https://doi.org/10.1111/ijcs.12285

Xiao, J. J., & Tao, C. (2020). Consumer finance/household finance: The definition and scope. *China Finance Review International, 11*(1), 1–25. https://doi.org/10.1108/CFRI-04-2020-0032

Young, A., Zhu, Y., & Venkatesh, V. (2021, January 5–8). *Emancipation research in information systems: Integrating agency, dialogue, inclusion, and rationality research.* Proceedings of the 54th Hawaii International Conference on System Sciences, 6359.