The application of the sensemaking perspective for the examination of employees' behavioural responses to the HR chatbot

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Background and Purpose: The emergence of new technologies affects different business areas, including HR activities. Employee communication is an HR activity that can be automated with the application of chatbots. Besides the numerous advantages these artificial entities offer, the challenges generated by them also need to be considered. One such challenge is user acceptance, which plays a substantial role in the implementation. This study aims to explore employees' behavioural responses to HR chatbots. Thus, we applied the sensemaking perspective, according to which new, unknown phenomena induce the need for interpretation in individuals that simultaneously shape individuals' behaviour toward the phenomenon.

Methodology: For data collection, we conducted semi-structured interviews that were analysed with interpretive phenomenological analysis (IPA). The sample consisted of 6 HR professionals and ten general users. The study took place at the Hungarian organisations of a multinational company.

Results: The analysis revealed that subjects who attributed positive meanings to the HR chatbot typically engaged in actions that aligned with organisational expectations, i.e., using the digital assistant became part of their routine. Interestingly, the closer HR professionals are to technology in their work activities, the more positively they perceive it. However, having ambivalent feelings towards technology resulted in occasional use or avoidance, while experiencing negative feelings led to the rejection of use.

Conclusion: We explored the different meanings employees attributed to the HR bot and their actions directed towards it both in the initial and transitional technology adoption phase. The results contribute to understanding how an HR chatbot can be successfully implemented in an organisation.

Keywords: HR chatbot, HR bot, Human-chatbot interaction, Chatbot, Sensemaking

1 Introduction

The emergence of new technologies affects several business areas, including HR departments (Ekka & Singh, 2022). One such technology is chatbots able to perform several HR activities, thereby increasing the company's efficiency through constant availability, quick responses, and relatively low implementation costs. Chatbots are computer programs that can communicate with the user without human intervention based on pre-written scenarios and rules through a chat interface (Brandtzaeg & Følstad, 2017; Kenesei & Bognár, 2019). The key element of a chatbot's architecture is the response generation method, which can be rule-based (the chatbot works from predefined responses selected by pattern-matching algorithms), retrieval-based (using a neural network to generate the

most appropriate response), or generative (which uses natural language generation; Adamopoulou & Moussiades, 2020).

Regarding application possibilities in HRM, chatbots can be used for automating both external and internal organisational communication. Majumder and Mondal (2021) reviewed the various functionalities of HR bots, including candidate screening, employee onboarding and training, benefits enrollment, the automation of routine tasks, collecting feedback, and responding to FAQs. In recent years, scholars have studied how the use of chatbots affects HR functional areas. Mohan (2019) reviewed HR chatbots' benefits and challenges. Taule, Følstad & Fostervold (2020) considered how the characteristics of an organisation impact the implementation of an HR chatbot. Black and Van Esh (2020) focused on the usefulness of HR bots in the recruitment process. Majumder and Mondal (2021) provided an overview of the usefulness of chatbots in HRM. Vieru et al. (2022) examined whether AI-based chatbots can support human resources. Although a plethora of articles deal with the application possibilities of chatbots in HR, no study was hitherto conducted on how employees relate to HR bots. However, the human factor should also be taken into account in technology adoption (Kim et al., 2021) as it is influenced by users' cognitive and behavioural responses (Orlikowski & Iacono, 2001).

Based on the research gap identified in the literature, this study aims to explore how the perception of the HR chatbot affects employees' behaviour towards technology. To analyse this, we applied the sensemaking perspective first defined by Weick (1995), who stated that technology is equivocal and, therefore, may generate discrepancy among individuals. In order to diminish this discrepancy, individuals develop a need to find plausible explanations. The meanings attributed to an ambiguous phenomenon also shape individuals' actions. First, our goal was to examine the meanings attributed to HR chatbots - used for employee communication - by HR professionals whose roles and tasks are redefined due to virtual assistance (Mohan, 2019). We also attempted to discover the perspective of general users (i.e. employees whose professional activities are not influenced by the technology). The research questions are formulated based on the research gap using the sensemaking perspective:

What meanings do employees (HR professionals and general users) attribute to the HR chatbot used in their organisation?

How do these meanings affect the behaviour of employees (HR professionals and general users) towards the HR chatbot itself?

The empirical study took place at the Hungarian organisations of a multinational company. In the phase of data collection, 16 semi-structured interviews were conducted. For data analysis, the interpretive phenomenological analysis (IPA) was applied. The sample was divided into two groups, including 6 HR professionals and ten employees (general users). We examined the meanings attributed to the HR bot in the initial and transitional technology adoption phase, similar to Hsiao et al. (2008). The study revealed the meanings attributed to the HR chatbot by employees and employees' actions towards the chatbot. Regarding the practical implications, the results help to understand how the intended, regular use of the HR bot can be achieved in the organisation.

The study is organised as follows. In Sect. 2, we deal with chatbot technology, the role of chatbots in HRM, and the sensemaking perspective. Section 3 presents the methodology used. The results are presented in Sect. 4, grouped according to HR professionals' and general users' perspectives. This part is followed by the discussion (Sect. 5), and in Section 6, we describe theoretical and practical implications as well as the limitations of the study and suggest future research.

2 Literature review

2.1 Chatbot technology

Certain concepts refer to the chatbot as an AI-based technology (Selamat & Windasari, 2021; Youn & Jin, 2021), others as a computer program (Sheehan et al., 2020; Suhaili et al., 2021). Some authors highlight the way a chatbot communicates (Ashfaq et al., 2020; Adamopoulou & Moussiades, 2020), while others focus on the goal of developing a chatbot, namely, the need to provide more accurate and personalised responses (Selamat & Windasari, 2021). We define chatbots based on Brandtzaeg and Følstad (2017) and Kenesei and Bognár (2019). Chatbots are computer programs that can communicate with the user without human intervention based on pre-written scenarios and rules through a chat interface. This definition does not exclude that the chatbot is AI-based, nor does it limit the concept of a chatbot to a group of agents operating on such a principle. It also does not detail how the chatbot communicates, but it does emphasise the automation of communication with the help of algorithms.

Adamopoulou and Moussiades (2020) group chatbots along seven dimensions: (1) the knowledge domain, (2) the service type, (3) the goals, (4) the response generation method, (5) the human aid, (6) the permissions, and (7) the communication channels. As a classification dimension, the knowledge domain refers to the information available to the chatbot. A generic chatbot can answer any user question. An open domain indicates that the chatbot works from multiple databases, while a closed domain refers to a specific area. Regarding the service type, chatbots that help a person as a friendly social actor by answering asked questions or book services represent the interpersonal category. The intrapersonal chatbot knows the user's personal needs

well and responds to them. Inter-agent service indicates that the chatbot can communicate with other chatbots. The goals of creating a chatbot can be to provide information, chat, entertain, and perform certain tasks, such as making a room reservation or to aid in searching a webshop. The chatbot's response generation method can be rule-based, retrieval-based or generative. Human aid as a grouping criterion indicates whether human intervention is required for a chatbot to function or whether the agent works autonomously. The chatbot can be open-source or commercial in terms of permission. Open source means that the code is available, so the developer has complete control over the interface design, while in the case of commercial platforms, the developer does not have complete control over the chatbot. Finally, the chatbot's communication channel can be text, voice, or video. Text-based chatbots can communicate with freehand text input or text bubbles. Many chatbots work in a hybrid way (i.e. they use multiple channels at once).

2.2 The application of chatbots in HRM

Chatbots can perform many HR activities, as stated by Majumder and Mondal (2021). Among recruitment and selection process activities, providing information on the organisation and the job to applicants, interview scheduling (Majumder & Mondal, 2021; Van Esch & Black, 2019; Gärtner & Kern, 2021; Mohan, 2019; Allal-Chérif et al., 2021), and interview conducting (Kurek, 2021) can be automated. Chatbots are available 24/7 and can communicate with all applicants at once. Therefore, their introduction allows for improving candidate experience by answering questions right away, adapting to potential candidates' preferred communication channels when contacting, and informing applicants about the status of their application throughout the entire recruitment process (Van Esch & Black, 2019; Venusamy et al., 2020). With the help of chatbots in pre-screening, candidates can participate in the interview in their own homes, in a safe environment (Majumder & Mondal, 2021). During pre-screening, a chatbot compares the answers given by candidates with the answers of the high-performing employees of the organisation (Black & Van Esch, 2020), analyses their sentence structure and vocabulary, which is combined with content analysis to determine the candidate's score rating (Black & Van Esch, 2020; Mohan, 2019). The chatbot thus allows HR to focus only on candidates who passed the pre-screening (Allal-Chérif et al., 2021). In addition, chatbots can also help in searching for talent (Gärtner & Kern, 2021). To improve candidate experience, evaluating their feedback and incorporating it into the recruitment process is extremely important, which is also made easier by implementing an HR chatbot (Majumder & Mondal, 2021).

The use of chatbots contributes to the strengthening of employer branding by allowing the organisation to treat candidates for open positions in a unified manner, helping to differentiate the company (Majumder & Mondal, 2021), and conveying the message that the organisation is open to innovation. The employer brand can play a decisive role when an applicant has to choose between several job opportunities (Sivertzen et al., 2013). Applicant's interest in the organisation is often negatively affected by poor responsiveness and low interpersonal communication. However, chatbots can interact with all applicants and keep them informed (Allal-Chérif et al., 2021), thus creating a positive image of the organisation.

With the support of a chatbot during the onboarding process, new employees feel safe, as they can always turn to the chatbot with questions (Majumder & Mondal, 2021; Venusamy et al., 2020; Kurek, 2021). An onboarding chatbot also facilitates the social integration of new employees and the acquisition of knowledge about the job and the organisation (Kurek, 2021; Majumder & Mondal, 2021; Venusamy et al., 2020), providing step-by-step guidance for them when learning with the help of videos and tutorials. Chatbots can also accomplish knowledge measurement by gaining information about which learning modules employees have fulfilled based on the evaluation of responses (Mohan, 2019). By giving immediate feedback to employees on the outcome of their work, chatbots also support performance management (Majumder & Mondal, 2021).

With the automation of employee communication, chatbots relieve HR of a significant burden (Claus, 2019; Majumder & Mondal, 2021). Questions regularly asked by workers may arise in connection with leave, payroll, benefits, organisational procedures, regulations, career opportunities, and the skills required for filling in a position (Raj, 2019; Jitgosol et al., 2020). Employee interactions with HR chatbots can be stored, which helps to obtain information about the topics that concern employees the most (Kurek, 2021). For the measurement of employees' happiness index and level of commitment, chatbots can be applied for the prediction of potential workforce-related challenges, as well (Mohan, 2019).

As state-of-the-art research has pointed out, although HR chatbots have numerous application possibilities, the achievement of their regular use may generate challenges for the organisation in terms of user acceptance and the management of user expectations (Taule et al., 2020). Vieru et al. (2022) revealed that not only the individual's background and previous experiences in the HR management software field but also individuals' perception of HR tasks influenced their attitude towards the application of virtual assistants in trainee management software. Hence, employees' beliefs and previous experiences should be considered when implementing a chatbot. Moreover, Majumder and Mondal (2021) claimed that chatbot designers must understand the employees' needs and create innovative functions to provide a more user-friendly interaction

based on these needs. Fadhil and Gabrielli (2017) and Hristidis (2018) proposed the constant review, maintenance, and optimisation of HR bots. The results of Taule, Følstad & Fostervold (2020) confirmed that internal marketing of the chatbot is critical for implementation success. Mohan (2019) stated that KPIs should be defined to measure the HR chatbots' performance and contribution to a company's efficiency. As Nosrabadi et al. (2020) state, the application of AI can contribute to optimising employee lifecycle management from recruitment to offboarding. Generative, AI-based chatbots can provide customised interaction through learning from interactions (Jitgosol et al., 2019). I made them more anthropomorphic or helped with candidate pre-screening (Majumder & Mondal, 2021). However, AI-based technologies may raise ethical concerns regarding personal data storage or the automation of decision-making processes. To avoid the rejection of chatbot usage due to these issues, transparency of HR bots' functioning should be guaranteed.

2.3 Technology and Sensemaking

According to Weick (1990), introducing a new technology may induce sensemaking because technology is equivocal and generates several plausible interpretations. The fragmented literature on sensemaking requires precise clarification of the definition. Contradictions appear as to whether sensemaking is merely an interpretation (Berger & Luckmann, 1967; Gioia, 1986; Gephart, 1993; Gioia & Thomans, 1996) or whether it also includes the action (Weick, 1995; Thomas et al., 1993; Taylor & Van Every, 2000; Cecez-Kecmanovic & Dalmaris, 2000; Klein et al., 2006; Seligman, 2006); and if it should have liaised with events causing ambiguity and discrepancy (Cornelissen, 2012; Maitlis & Christianson, 2014; Weick, 1995) or not (Gioia, 1986; Berger & Luckmann, 1967; Louis, 1980; Mandler, 1984); and if it should be understood as an individual process (Cornelissen, 2012; Maitlis & Christianson, 2014) or a result of social interaction (Berger & Luckmann, 1967; Balogun & Johnson, 2004; Gephart et al., 2010). The retrospective nature of sensemaking also appears in some concepts (Weick et al., 2005), but other research approaches suggest that sensemaking may also be prospective (Gioia et al., 1994).

We define sensemaking by Weick (1969, 1995), Louis (1980), Weick et al. (2005); Bogner and Barr (2000); Cornelissen (2012); and Maitlis and Christianson (2014) as follows. The sensemaking process is triggered by ecological changes that are new, unexpected, unknown, confusing, cause discontinuity, disruptive ambiguity and equivocality, thus forcing members of the organisation to retrospectively interpret the discrepant cues and stimuli from the environment in order to find a plausible yet not necessarily accurate explanation. As a result of this, individuals can reduce and rationalise ambiguity and contradiction. Thus, their continuity becomes restored. Sensemaking goes beyond interpretation, as it also affects their actions and enactment by perceiving and responding to cues interrupting their continuity.

The sensemaking process starts when the perceived situation deviates from what is expected. At this point, individuals do not know exactly what is causing discrepancies, whether they need to act differently to reduce uncertainty, or whether this event caused only a momentary interruption in their activities. In this phase, individuals break down the event into smaller parts and organise them into their existing mental patterns to fit into their cognitive framework. Then, they notice the cues coming from the environment, which process is driven by their previously constructed mental models. They name the unknown cues and link them to their existing knowledge elements. Once individuals name the new stimuli, they try to find plausible explanations for the events. In this step of the sensemaking process, it is not the accuracy that matters but the acceptability, as the explanation seeks to allow the activity to continue, for which a reassuring explanation is sufficient. Sensemaking goes beyond the interpretation of the event ("What is the story here?"), as action ("What should I do?") is just as important to the individual. Interpretation and action are cyclical; the process is iterative, and sensemaking can begin and end with action (Weick et al., 2005, p. 410; Szőts-Kováts, 2012).

Sense made to technology influences its organisational implementation (Orlikowski & Iacono, 2001). In this study, we examine the phases of technology generated sensemaking process based on Hiso et al. (2008), who distinguished three stages. In the initial technology adoption phase, members become familiar with the technology, gain initial tangible experience, make primary sense of it, and decide whether to accept or reject it. The next stage is a period of transitional adoption, characterised by the new meanings given to the technology due to its use. Finally, in the post-adoption phase, technology becomes institutionalised and unnoticed in the organisation; it becomes meaningless to organisation members and is part of the organisational practices.

3 Methods

3.1 The Company

The research was conducted at the Hungarian organisations of a leading technology multinational company. The company decided to launch a rule-based HR chatbot that works from predefined responses using pattern-matching algorithms to help meet modern information retrieval needs by replacing existing corporate intranet pages. The HR chatbot was also introduced due to the need to signifi-

cantly reduce the number of inquiries received by the HR department.

3.2 The HR chatbot

Besides the chat function, the HR chatbot has a search function that helps find HR-related documents employees seek. The digital assistant became available in Hungary in 2021. Filling the chatbot with content is a constant challenge. It requires intense teamwork from HR professionals, as the chatbot's knowledge needs to be regularly updated based on changes in various policies and employee interactions with the chatbot. The HR chatbot development team reviews the chatbot usage reports monthly, along which the digital assistant can constantly be improved.

3.3 Sample

For data analysis, interpretive phenomenological analysis (IPA) was used. IPA suggests a sample size that "allows for detailed analysis and is still suitable for describing the similarities and differences between individual cases" (Rácz et al., 2016, p. 322). In accordance with this methodological recommendation, two small homogeneous groups of subjects were formed. The number of subjects in the sample proved to be sufficient, and theoretical saturation was achieved, as redundant information appeared during the conversation with the interviewees. The first group consisted of HR professionals (some of them are involved in the development of the HR chatbot) (6 subjects), and the other group included the general users of the HR chatbot, i.e. employees of the organisation (10 subjects). Regarding HR employees, 66% of the subjects (n=4) are between the age of 30-40, and 33% (n=2) are between 20-30 years old. All participants in the HR department are female. 40% of the general users (n=4) are between the age of 30-40, 30% of them (n=3) are between the age of 40-50, 2 participants are between the age of 20-30, and 1 subject (10%) is between the age of 50-60. 60% of the second group's subjects are male, and 40% are female.

The sample was selected on the recommendation of the company contact, considering the different perspectives of the two study groups: HR professionals are developing the chatbot, and the chatbot takes over some of their tasks, while the employees use the digital assistant, and hence they gain different experiences with the chatbot. In accordance with this, an important aspect of the sample selection was to find interviewees in different positions.

3.4 Data collection

Before the data collection process took place between September 2021 and March 2022, we conducted a pilot interview with an HR professional whose responsibilities included the development of the chatbot. The purpose of the pilot interview was to review and supplement the questions in the preliminary interview outline, as suggested by Kallio et al. (2016).

As part of the data collection process, we conducted 16 semi-structured interviews on the MS Teams interface, spanning approximately one hour each. A literal transcript of the audio recordings was made with the subject's consent. We found that most subjects were open to interview as we entered the research field. Employees who had no experience with the chatbot, only tried it a few times or expressed a negative attitude towards technology felt uncomfortable at the beginning of the interview. In the case of these interviews, we took more time at the beginning of the conversation to create a climate of trust and to reassure that the subjects were not required to be technologically optimistic.

3.5 Data analysis

For data analysis, interpretive phenomenological analysis (IPA) was applied. This qualitative method aims to explore subjects' experiences in as much detail as possible and understand how the individual interpreted them. The IPA begins the data analysis with a literal transcript of the interview texts, in which the reactions given by individuals (e.g. laughter or silence) are also noted. The next step is to "immerse in the data" by reading the texts multiple times, during which the researcher "picks up the subjects' shoes". The researcher "makes descriptive, explanatory, interpretive and conceptual notes on the right margin of the transcript" line by line (Smith et al., 2009, cited by Kassai et al., 2017: 31). In this phase, the dialogue occurs between the researcher's prior knowledge and what the interviewee says, to understand the subject's interpretations. The next step is to identify the emerging topics; that is, what the subject tells the interviewer is dismantled by the researcher from a different perspective than the point of view that appears in the interview. When creating the topics, it is not the vocabulary of the subject that is used but that of the researcher, which is written on the left margin of the transcripts. The researcher then can incorporate theoretical constructs not used by the interviewee. In the following phase, the researcher looks for connections between the topics and identifies the main topics that cover multiple sub-topics intending to explore patterns. Thus, IPA allows double interpretation, as the researcher interprets how the subjects interpreted their experience of the given phenomenon and then makes a conscious, systematic interpretation to identify the emerging topics (Rácz et al., 2016, p. 322).

4 Results

This chapter presents the results based on Kassai et al.'s (2017) suggestion for IPA research. We list the main and emerging topics in tables and present them one by one in detail, also assigning citations to them. Following the methodological recommendation of Hsiao et al. (2008), we first deal with the initial sensemaking processes, and then we focus on the transitional meanings shaped by the subjects' new experiences gained during the HR chatbot's use.

4.1 HR professionals

One of the research goals was to explore the initial and transitional meanings (and actions) attributed to the HR chatbot by HR professionals. As a result of the analysis, different meanings were identified that we present in the following chapters.

4.1.1 Distrust and Fear vs Privilege

HR professionals interpreted the introduction of the chatbot differently (Table 1). For some subjects, it was a surprising event. This novelty filled them with excitement and interest, as the appearance of the virtual agent gave them the feeling that the organisation was innovative, which also meant they had the privilege of using the technology:

"When I first opened it, I had such a futuristic feeling that it was unbelievable that such things could already happen in Hungary." (HR professional 1)

This interpretation led subjects to explore the technology and made them willing to learn about its features and to incorporate the chatbot's usage into their daily routine.

The HR chatbot's organisational appearance also aroused mistrust in some subjects. This had different causes. On the one hand, there appeared doubts among individuals about whether the chatbot will be more useful than previously used technologies, which they have found to be cumbersome, slow to use, and therefore not worth using in their work. Distrust was also caused by a need for more knowledge about the use of technology, which led to the assumption that they were subject to a surveillance system that tracked their activities. Hence, they needed to be careful where they clicked and what they did. Experiencing the threatening sense of control led them to take action to resist the technology, not to use it:

"When a new system is introduced, no matter how digitalised we are, it is not necessarily a better solution than the previous ones." (HR professional 2)

"I have not used the chatbot in a very long time. I was distant from it because; I am distrustful when I am online and in digital stuff like that; it was always my first thought, what to do if I click and do something? Who sees it, then? What are you doing there in the background? What will they now use it for?" (HR professional 3)

The digital agent also caused fear on the part of the HR staff, which, like distrust, resulted from a lack of information about the operation of the chatbot. The existence of uncertainty prompted subjects to find a plausible explanation. The subjects interpreted the chatbot as an automatic system, and this meaning led them to resist to use of the technology:

"I remember when I heard of it, and it was a little weird that it was really a robot, so it could send something by itself; I was more scared, too, and I said, if it is really necessary, I will use it, but I rather would not." (HR professional 3)

Subjects also had two interpretations that did not trigger a sensemaking process. Such was the interpretation of the introduction of the chatbot as a task that did not create

Table 1: Initial sensemaking of HR professionals

Event interpretation	Attitude	Initial meaning	Initial action
novelty	positive, openness, excitement	privilege	discovery
distrust	negative	surveillance system	resistance
fear	negative	automatic system	resistance
a task	neutral	non-sensemaking	performing a task
task of others	neutral	non-sensemaking	ignorance

Source: own edition

Table 2: Transitional sensemaking of HR professionals

Main meaning	Sub-meaning	Action
strengthener of professional commitment	(1) tool of influencing (2) creation (3) learning (4) challenge	Enjoy the HR chatbot's development.
Google search engine	(1) search engine (2) HR's Google (3) the company's Google	promotion as a Google search engine to organisational members.
HR digital assistant	(1) future HR Assistant (2) help (3) transformation of work	directing users to the chatbot consistently
		directing users to the chatbot sometimes
project	(1) one project among the others (2) a clear task (3) leading project	performance of tasks related to the HR chatbot
tool of digitalisation	(1) strategic objective (2) positive change	actions that meet organisational expectations

Source: own edition

ambiguity and did not interrupt the continuity in their organisational existence, so they acted simply by completing the new task:

"I noticed that the chatbot was introduced, I did my job, and that is it." (HR professional 4)

Some subjects interpreted the chatbot as a task of others that did not induce action towards the virtual agent. Its use was omitted:

"I did not particularly deal with it because I did not perform any task related to it. I did not feel the need to use it." (HR professional 5)

4.1.2 Ambivalent feelings vs simple searching tool

The experience gained with the chatbot in the initial phase of technology adoption has shaped the meanings given to the digital assistant. The data analysis revealed that some subjects for whom the technology introduction did not generate a sensemaking process made sense of the chatbot. However, it has also become apparent that some HR professionals still do not interpret the chatbot as an ambiguous organisational phenomenon ("Well, the chatbot is really one project among the others." – HR professional 4). Five interpretations were identified in the transitional technology adoption stage, including the strengthener of professional commitment, Google search engine, HR digital assistant, project, and digitalisation tool (Table 2), from

which three resulted from a sensemaking process.

Some HR professionals interpreted the chatbot's development as strengthening their professional commitment. This meaning has four sub-meaning, including (1) the impact on the employees ("I love working on the chatbot because the results of my work are immediately visible. Feedback also comes immediately from colleagues; they love it. We look at the statistics and will be very happy if our colleagues can find the information as soon as possible." (HR professional 2), (2) creation ("Working on the chatbot is a good experience because we are shaping it, and it is creative compared to my other monotonous tasks. I never got bored of it. I really like doing it." (HR professional 1), (3) learning, and (4) challenge as the development of the HR chatbot requires new skills. HR professionals with these positive interpretations enjoy the development of the chatbot, so their actions are congruent with the organisational goals related to the digital assistant.

Some subjects referred to the chatbot as a Google search engine. The chat function of the virtual agent became available in Hungary only in September 2021, and employees could use only its search functions for two years, which may explain this interpretation. Some HR professionals perceived the chatbot as HR's Google – highlighting that it belongs to the HR department – while for other subjects, the digital assistant meant the company's Google.

The third meaning we identified was the HR digital assistant. Some subjects see the chatbot as a future HR as-

sistant: "Maybe one day it will become an HR assistant. For now, it is a Google search engine. I would not say HR assistant yet because the chat is still a very fresh function" (HR professional 5). The second sub-meaning was the recognition of the help provided by the chatbot ("The chatbot is a help to us, I would rather say that. Someone who supports us in the background. But I would not personalise it." (HR professional 6). A third interpretation was the transformation of work which induced ambivalent feelings because, despite its advantages, HR professionals also experience reduced interactions with the employees, posing a threat to their current job and forcing them to rethink their careers: "On the one hand, I am very happy to have the chatbot because I am more effective. On the human side, I weep because I really like interactions with the employees." (HR professional 3)

Interpreting the chatbot as a digital assistant evoked different actions among the subjects. Some HR professionals consistently directed employees to the chatbot, while others' reactions were inconsistent, and they only directed employees to the virtual agent when they were busy.

The experience gained while using the virtual assistant in the stage of transitional technology adoption did not induce a sensemaking process among HR professionals who interpreted the chatbot as a project and a digitalisation tool. Three sub-meanings were identified in relation to projects, including (1) just one project among the others, (2) a clear task and (3) a leading project. The tool of digitalisation interpretation has two sub-meanings: (1) a strategic objective and (2) positive change. The HR professionals having the earlier interpretations act according to organisational expectations as they accept the chatbot and regularly perform the related tasks.

4.2 General users

To consider another perspective in addition to that of HR professionals, our study also attempts to discover the meanings attributed to the HR chatbot by the general users (whose professional roles and tasks are not affected by the introduction of the technology). As a result of the analysis, more meanings emerged that are presented below.

4.2.1 Facilitating operation vs unrecognised tool

As a result of the interview, the analysis identified four different initial event interpretations, two of which (facilitating operation and digitalisation tool) did not lead to a sensemaking process (Table 3). The group of research subjects who interpreted the introduction of the HR chatbot as a joyful event had a positive attitude and were open to trying its functions. This resulted from finding the chatbot useful and interpreting it as a tool to facilitate their day-to-day operations. The expectations of these subjects coincided with their experiences related to the HR bot, so in this case, the sensemaking process could not be identified.

Some employees saw the chatbot's introduction as a necessary organisational event: "These innovations are part of our lives, so the introduction of this interface also served this purpose" (Employee 4). This group of subjects experienced the appearance of the chatbot as neutral, and the lack of expectations about the chatbot resulted in no discrepancy, so they did not have to give a meaning to the virtual agent to reduce cognitive dissonance: "It did not affect me too much, I had no expectations (Employee 5). These organisational users interpreted the chatbot as a digitalisation tool and integrated its use into their routine.

Certain subjects of the group did not recognise the importance of the chatbot as they thought that the digital assistant was just another useless tool: "Well, the introduction of the chatbot did not affect me well because when a new tool or any new thing gets into our lives, it usually means technical problems arise, and it causes stress about the device. When I found out they were introducing it, I thought it was something stupid again." (Employee 3). This negative interpretation resulted in the avoidance of use.

Among some subjects, the introduction of the chatbot induced mistrust because they had negative beliefs about robots and AI, which led to being interpreted the chatbot as a test system: "I do not really like the fact that I am the subject on which these things are tested, and this system learns through me." (Employee 7). Employees who did not trust the chatbot were afraid of it and refused to use it.

Table 3: Initial sensemaking of employees

Event interpretation	Attitude	Initial meaning	Initial action
joy	positive, openness	facilitating operation	trying its functions
necessity	neutral	digitisation tool	use
non-recognition	negative	another useless tool	avoidance of use
distrust	negative	becoming a test subject	rejection of use

Source: own edition

4.2.2 Self-service vs self-service rejection tool

In the case of some subjects, no attitude change occurred towards the chatbot, which led to the absence of sensemaking processes. These employees interpreted the technology as a search page which had three sub-interpretations, including (1) a collection page, (2) search engine or a (3) intelligent website: "Search engine, more like a search website. A bit like Google. That sounds a little silly, but it is like that." (Employee 5) "I would compare the chatbot to a smarter website. I do not see anything special in it" (Employee 4). These interpretations caused the rejection of chatbot use. As a result of the analysis, three meanings were identified during the transitional technology adoption stage, including the self-service system, the operation facilitating tool and the HR assistant (Table 4).

Interpreting the chatbot as a self-service system carries conflicting sub-meanings. Some employees see the HR chatbot as a tool to support self-service, while in the case of others, it enhances the rejection of the technology. Subjects rejecting the use of chatbots are impatient and unmotivated to learn the digital assistant's features: "I think we are still thinking it is easier to ask someone than to search for something for hours." (Employee 8). Employees with positive interpretations feel empathy with HR professionals and are proactive, so they try out the chatbot's functions and learn its operation: "I have tried the chatbot once before but with success, rather less. But I am an experienced Google user, so I approached it this way. I did not formulate complete sentences but reworded the keywords that seemed relatively simple; if there were no results, I typed in a different word." (Employee 2)

Table 4: Transitional sensemaking of employees

Main meaning	Sub-meaning	Action
self-service system	(1) self-service support tool (2) self-service rejection tool	(1) regular use (2) rejection of use
operation facilitating tool	(1) time-saving tool (2) a tool to help you become more competent	regular use
Search page	(1) collection page (2) search engine (3) intelligent website	rejection of use
HR Assistant	(1) rudimentary tool (2) a tool to assist in private matters (3) a tool to help with HR topics	(1) occasional use (2) special use (3) rejection of use

Source: own edition

The chatbot is perceived as an operation-facilitating tool by employees who feel that the virtual agent saves them time and provides them with information that makes them more competent in the eyes of their colleagues. These positive meanings shape the actions taken towards the chatbot in a way that the subjects turn to the digital assistant when they need information quickly and incorporate its use into their day-to-day work to keep them up to date, making their work more professional: "It is good that as soon as you click on it, the answer comes right away, you did not have to wait. The answers made sense and were helpful." (Employee 9)

The interpretation of the chatbot as an HR assistant has three sub-meanings. A group of subjects reduced the uncertainty caused by the virtual assistant by defining it as a rudimentary technology. These employees recognised the chatbot's organisational role but added that "it provides limited assistance", thus retaining the option to contact human HR professionals.

Some employees saw the chatbot as a tool to assist in private matters. This meaning stemmed from comparing the virtual agent to human HR professionals and finding the advantage that it is more comfortable for them to ask questions from the digital assistant in some sensitive matters, such as termination, loans or cafeteria. Interpreting the chatbot as a rudimentary technology has resulted in its occasional use, while its perception as a tool to assist in private matters has resulted in the special use of technology: "If someone is interested in terms of termination, they did not have to speak about this with his/her supervisor, or with HR which is more comfortable." (Employee 10)

The third sub-interpretation of the HR assistant meant a tool to help with HR topics. In this case, no sensemaking process has occurred, the employees realised the fact that the chatbot was introduced, but they did not start to use it: "The HR chatbot is an assistant that basically provides information on HR topics to users, in a user-specific way. I do not use this service." (Employee 1)

5 Discussion

The aim of this study was to explore employees' behavioural responses to the HR chatbot used for internal organisational communication. Taule, Følstad & Fostervold (2020) claimed that user acceptance is crucial in successfully implementing HR chatbots. Our findings contribute to understanding what emotions and attitudes lead to the willingness or rejection of technology usage. Distrust and fear stemming from the interpretation that chatbots are surveillance systems resulted in the avoidance of use, while having the feeling of privilege, becoming more competent and experiencing the possibility of self-service led to the regular use of the HR bot.

Vieru et al. (2022) found that the perception of HR tasks also influences individuals' attitudes towards virtu-al assistants. Our results showed that it is very important for HR professionals to experience that other employees can count on them, so they interpret their role as a helper. Therefore, they prefer personal interactions and direct employees to the HR chatbot only when they have no time to help them.

Fadhil and Gabrielli (2017) and Hristidis (2018) proposed the ongoing review and maintenance of HR bots. Our research findings revealed that this activity is one of the favourite tasks of HR professionals because they can be creative and feel their impact in terms of what answers the chatbot gives.

Taule, Følstad & Fostervold (2020) highlighted the role of internal marketing in achieving the regular use of HR chatbots. Our study also confirms this statement, as general users missed the detailed information about the functioning of the chatbot, which led them not to use it. In addition, the lack of transparency about the chatbot's operation contributed to employees' distrust and fear that held them back from trying the HR bot.

6 Conclusions

This paper explored the meanings attributed to the HR chatbot and the employees' actions towards it. Regarding HR professionals, in the phase of initial technology adoption, we identified the following meanings: privilege, surveillance system, and automatic system. The first meaning led subjects to discover the functions of the HR bot, while the latter two resulted in rejection. In the transitional stage, the HR bot was interpreted as a tool that strengthens professional commitment, a Google search engine and HR digital assistant. In the first case, individuals enjoyed the development of the chatbot. The second meaning promoted the chatbot as a Google search engine for general users, while the third led to two different actions. HR professionals who found the chatbot helpful directed employees to it consistently, but those who had negative feelings (because they experienced the transformation of their work) directed employees to the chatbot only when they were busy, thereby reinforcing the norm that the use of the chatbot is not obligatory in the organisation.

General users attributed the following meanings to the chatbot in the initial technology adoption phase: another useless tool, becoming a test subject. The first meaning led to avoidance, while the second was the rejection of technology. The following meanings emerged in the transitional technology adoption stage: a self-service system, an operation facilitating tool and an HR assistant. Two contradictory behavioural responses were associated with the first meaning: those of regular usage and the rejection of usage. Users who considered the chatbot as a tool that facilitates operation used it regularly. At the same time, the interpretation as an HR assistant resulted in occasional, casual use or the rejection of use.

Table 5: Interpretation of events and actions

Interpretation of the event	Attitude	Action	Example
Experiencing equivocality	positive	regular use	tool for self-service
	negative	rejection of use	rejecting self-service
Experiencing obviousness	neutral	use	project
	neutral	avoidance of use	a tool to help with HR topics

Source: own edition

Our research has shown that the HR chatbot has yet to arrive at the post-adoption phase in the organisation. By comparing the perspective of the two study groups, we identified the reason for that. As mentioned above, HR professionals need to have personal interactions with the employees, as this way, they can feel that their colleagues can count on them (an important element of their professional identity). General users have social needs; therefore, they also prefer personal interactions. In addition to this, they find it easier the call HR rather than make efforts to learn how the HR chatbot operates. Hence, the needs of the two study groups coincide regarding social interactions, hindering the appearance of the use of the HR chatbot in the organisational routines.

6.1 Theoretical implications

6.1.1 HR chatbots from the sensemaking perspective

Several studies applied the sensemaking perspective for examining technology adoption (Prasad, 1993; Hsiao et al., 2008; Siino & Hinds, 2004; 2005; Gretzel & Murphy, 2019). However, research has yet to be conducted on sensemaking processes generated by HR chatbots used for employee communication. Our results contribute to sensemaking literature by exploring different meanings attributed to HR bots.

6.1.2 Obviousness and the success of technology implementation

Technology is equivocal in nature and, therefore, may generate sensemaking processes (Weick, 1995). The research results showed that equivocality does not necessarily generate negative emotions among individuals since some positive meanings (e.g. a tool for strengthening professional commitment and a self-service system) were also identified and resulted in the active use of the HR chatbot.

Besides equivocality, obviousness has also appeared among some subjects, which caused opposite actions: the regular use of the chatbot, and its avoidance or rejection, which means that the lack of experiencing discrepancy does not necessarily contribute to the easier implementation of technology (Table 5).

6.2 Practical implications

The results can be useful for managers and HR professionals when considering the implementation of a digital assistant. The analysis revealed that subjects who associated positive meanings with the HR chatbot typically engaged in actions that matched organisational expectations, i.e., using the digital assistant became part of their routine. Interestingly, the closer HR professionals are to technology as they work, the more positively they perceive it. Therefore, HR professionals' acceptance may be increased by assigning tasks related to the chatbot.

Ambivalent feelings about the technology resulted in occasional use or avoidance, but experiencing negative feelings led to the rejection of use. The avoidance of technology also stemmed from the need for more information. Some of the subjects formulated the need for being provided with more information about the HR chatbot's operation. Companies must provide enough information about the technology, which is advisable to do through the following steps. First, clear communication is required regarding the use of the chatbot (stating that the application of the HR bot is obligatory, not optional). Second, individual assistance should be provided for workers who have difficulties in terms of the chatbots' use. In addition, the HR department should send e-mails more times about the HR bot's introduction and functioning – including data storage and anonymity information -and must consistently direct the users to the chatbot to reinforce the new norms. Workshops must be held for organisation units' leaders who must also dedicate time to presenting the HR chatbot to their teams, focusing on companies' real goals related to the chatbot. The transparency they provide may dispel the fear among workers (i.e. if the HR bot is used for surveillance). If their negative feelings cannot be handled, even so, it should be taken into consideration whether employees have distrust towards the organisation itself. It would

also help to have the first impressions about the technology if the chatbot wrote a letter to the employees about their presence in the organisation. In the beginning, communication needs to be intense and consistent about the technology, but through this, the uncertainty among employees may be reduced, and the chatbot may become part of the routine, which can lead the organisation in the post-adoption phase (Hsiao et al., 2008).

6.3 Limitations

One of the limitations was that we needed to conduct a longitudinal study. Therefore, the turning points leading to the post-adoption stage of the technology (i.e., the phase when the technology becomes meaningless and the organisation will be part of routines) could not be identified. Also, longer-term fieldwork would have allowed us to observe whether, with the development of the chatbot, the demand from organisational users to satisfy their social or the need for anthropomorphic characteristics appears. Data was collected from one company that did not allow the comparison of subjects' perspectives from different organisations.

6.4 Future research

Further research may reveal meanings attributed to chatbots in organisations where users cannot decide about the use of the technology, which may change their attitudes towards technology. It may also be interesting to examine what sensemaking processes are induced by more anthropomorphic chatbots. Also, a longer-term study would have allowed us to observe whether, with the development of the chatbot, the demand from organisational users to satisfy their social needs or the need for anthropomorphic characteristics do appear.

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