



# What makes virtual intimacy...intimate? Understanding the Phenomenon and Practice of Computer-Mediated Paid Companionship

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Virtual romance service (VRS), as a notable commodification of intimacy, is currently emerging in China. Such service is not similar to the kind of intimacy that fans and idols generate through parasocial relationships, but behaves as the direct dyadic intimacy between service providers (*virtual lovers*) and buyers (*customers*). To gain a deep understanding of computer-mediated paid companionship, we study emerging user behaviors in VRS through a mixed-method study, including a survey ( $N = 178$ ) and a follow-up semi-structured interview ( $N = 22$ ) with both virtual lovers and customers to learn about their motivations, perceptions, and how virtual lovers provide online paid companionship to meet customers' emotional needs. We found three behavioral strategies of virtual lovers and the fact that they provide service in surface and deep acting and real feeling. Customers see VRS as a way to obtain affective benefits with reduced affective cost. We also found that VRS customers paid for the tangible benefits of an idealized romantic partner, rather than long-term commitment and emotional investment, and we identified key characteristics that VRS reduces from intimate relationships that fit its pay-per-use feature. We conclude by discussing the nature of virtual lovers and design implications for computer-mediated paid companionship.

CCS Concepts: • **Human-centered computing** → **Empirical studies in HCI**.

Additional Key Words and Phrases: Intimacy; Computer-mediated Communication; CMC; Affective labor; Emotinal labor; Qualitative research; interview;

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## 1 INTRODUCTION

Imagine the perfect romantic partner who will console you when you're down, accompany you as you need, accept your entire being, whether good, bad or ugly—all for \$10 per hour. In China, lots of young adults go online and find pay-per-use relationships to get real-time companionship, namely virtual romance service (VRS).

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*Virtual lovers* (i.e., provider of the virtual romance service, also denoted as *providers* below) perform character roles of customers' (i.e., buyer of the service) choice and behave as actual lovers would. Shops selling virtual lovers can be found on Chinese online shopping platforms (e.g., Taobao or WeChat mini-programs). Virtual lovers provide customers with real-time communication, companionship, and comfort over the Internet in multiple modalities (including text, voice messages, and voice calls) via instant messaging (IM) apps (e.g., WeChat and QQ). In contrast commodification of intimacy like fans and idols [31, 67], which are formed by parasocial interactions and attachment [66], the relationship between providers and customers in VRS is a kind of commodification of dyadic intimacy - It resembles intimate relationships through CMC (Computer-Mediated Communication) more, such as online dating or long-distance relationship. Prior studies [71, 72] investigated VRS from the perspectives of feminist and labor relations, but none of them questioned the reason for the existence of such pay-per-use model of intimacy, even though it appears to meet barely, if any, real needs people have in relationships. Specifically, intimate relationships are known to involve a close, personal association and belonging together as a result of a bond formed through knowledge and experience of the other [14, 42, 82]. It takes to develop familiarity, trust, and emotional attachment to the partner regardless of being online or offline [21, 42]. How does a virtual lover that can be hired for only a few dozen yuan meet the emotional and intimate needs in a short time? How can this possibly meet the diverse needs people have in romantic relationships? How can unique characteristics of romantic relationships such as exclusivity [63, 65] and mutual self-disclosure [55] reconcile with the pay-per-use model? By studying emerging user behaviors, HCI and CSCW community can develop a deeper understanding of users' needs within computer-mediated paid companionship and how these needs may or may not be addressed by the pay-per-use model. Such knowledge can help to guide the design of better computer-mediated companionship and offer insights into how other digital platforms can facilitate the formation of social relationships and foster intimacy. Therefore, We are interested in the following research questions:

RQ1: *What motivates people to hire or to become paid virtual lovers?*

RQ2: *How do virtual lovers present and build intimacy during their service?*

RQ3: *How do customers perceive virtual romance service, especially on its difference from intimate relationships?*

In order to answer RQ1, an online survey was designed with both closed-form and open-ended questions to get the overall picture of the virtual lover services industry, to better understand the phenomenon, as well as to select the appropriate interviewees. Followed, we conducted semi-structured interviews with 22 people who had experience in virtual romance services including virtual lovers and customers to answer RQ2 and RQ3. We provide a lens on the motivations of both parties involved in these transactions. We identified several strategies that virtual lovers adopted to provide intimacy and understood how customers perceive online paid companionship.

Insights from our qualitative study on VRS can provide important research and design implications. We show that people are paying for the tangible benefits of an idealized romantic partner with money instead of long-term commitment and emotional investment. Further, we discuss several desired characteristics reduced from relationships in VRS, which helps to guide better design in computer-mediated companionship. We conclude by discussing the nature of virtual lovers and design implications for computer-mediated paid companionship.

## 2 BACKGROUND AND RELATED WORK

In this section, we identify and explore VRS in China as a context for studying computer-mediated paid companionship. We first review research on intimacy, especially on intimacy computer-mediated

communication in HCI and CSCW. Second, work related to studies and theories of affective labor and emotional labor is reviewed.

## 2.1 Context of the Research: Computer-Mediated Paid Companionship in China

**2.1.1 Computer-Mediated Paid Companionship Practice.** Since 2014, computer-mediated paid companionship, also called “virtual-lover”, has been increasingly popular in China. It originated from Baidu Tieba (the largest multi-topic forum in China) and grew to a larger scale on the most popular shopping app in China, Taobao [1, 12]. On Nov 25, 2014, the term “virtual lover” were searched for a record-breaking 24,688 times on Taobao, according to a China Newsweek report [1, 74]. Initially, Taobao vendors hired teams of people, both male and female, to provide paid companionship in the form of text or voice [1]. However, by the end of 2014, Taobao cracked down on the industry, removing search results for keywords such as “virtual lovers” or “boyfriends/girlfriends” as some reports stated that the business entailed soliciting, which is illegal in China [1, 2]. But the vast demand decides that virtual romance industry will not disappear: numerous such stores are still listed on Taobao. Potential customers can easily find such stores by searching for keywords such as “叫醒” (“wake-up calls”) or “树洞” (“tree hollow”).

With the outbreak of the COVID-19 pandemic, the virtual lover industry has broken out again. Many videos of experiencing “virtual boyfriend” and “virtual girlfriend” have more than one million views on bilibili (one of the major Chinese video-on-demand over-the-top streaming platforms). Many of the videos have received over 100,000 views, with the most views reaching 6.5 million [3].

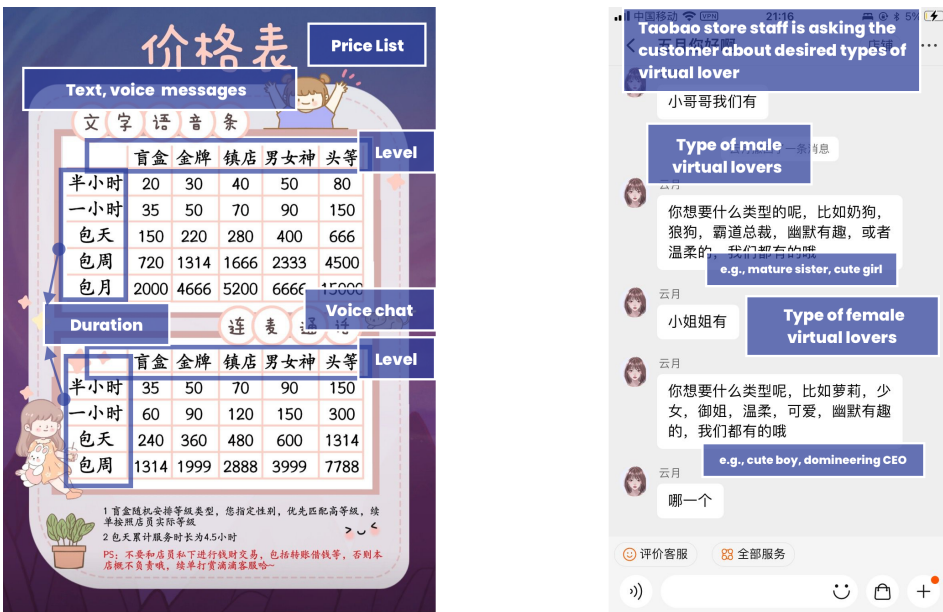


Fig. 1. Left: A list of prices for a store with a selection of service duration, modalities and level of virtual lovers. Right: The store staff is asking the customer about desired types of virtual lovers.

In the service of virtual lovers, customers get to choose the time, duration, modalities (texts, voice messages or voice chat), and type (sweet love, wake-up calls, depressed relief tree hole, etc.)

of the service that they want. They can also choose from different categories (for example, “neighborhood sweetie”, and “mature sister”, “cute girl” for men; and “domineering CEO”, “understanding uncle” or “funny lad” for women), which means virtual lovers play different roles with distinct profiles to meet the needs of customers. Also, virtual lovers are divided into different levels by the vendors on the platform based on past performance. Therefore, prices charged for different virtual lovers generally range from just 5 CNY to 300 CNY per hour. Figure 1 shows a list of prices for a store with a selection of service duration, modalities and level of virtual lovers and a store staff is asking a customer what type of virtual lovers he prefers.

**2.1.2 Computer-Mediated Paid Companionship Research.** Previous research on paid companionship in China has mainly been conducted in the fields of HCI and social sciences. Of most relevance to the present study on computer-mediated paid companionship within HCI is the research on paid gaming teammates [64]. Paid gaming teammates services enable gamers to play games with others in exchange for payment, which is a particular sharing economy. Previous studies in social sciences have also studied the phenomenon of virtual lovers in China and its macroscopic significance [71, 72] from the perspectives of social factory [72] and emergent femininity [71].

## 2.2 Intimacy and Computer-Mediated Communication

**2.2.1 Intimacy.** Intimacy is essential to people’s social existence, life satisfaction and happiness [9]. However, due to multiple elements and mechanisms in the formation of intimacy [37, 39, 56, 69], coupled with the fact that the development of digital technology has enriched the theory of intimacy [21], the concept of intimacy is rarely defined and its meanings are ambiguous and various [51, 62].

Traditional social science studies (e.g., [26]) tend to agree that intimacy is an interpersonal relationship in face-to-face interaction to make partners feel understood, accepted, and connected in a close relationship [21]. Some HCI and CSCW research on intimacy is based on this theory to simulate face-to-face interaction to enhance intimacy between users [11, 38, 86]. Berlant and Warner [7] defined distant intimacy as a “nonstandard intimacy” that can be experienced not only as part of a group but also in the absence of physical proximity as typically defined. Through the study of the ASMR Whisper Community, Andersen [5] proposed that emotional value can be conveyed through distant intimacy and that sensations can be remotely induced by both strangers and acquaintances via social media. Some studies focused on digital space and put forward theories about intimacy suggesting that intimacy in the Internet is actually mixed with users’ own fantasies. It “brings together fantasies, desires for intimacy, the traditional role of text in expressing these two, and sexuality” [21]. Intimacy can even happen between strangers. According to Koch [36], stranger intimacy involves the willingness to engage in conversations with unknown individuals and share experiences and inner feelings, and can also stem from open personal spaces such as Airbnb [59].

In general, intimacy can actually be face-to-face or online and it may happen between acquaintances or strangers. It is not only about loving and caring, but it also involves self-disclosure. In essence, it involves a close connection between people and the process of building it.

In addition, previous research suggested that intimacy has been commoditized. Berryman et al. [8] argued that the success of YouTube “influencer” economy depends on commodification through intimacy. A typical example is the intimacy between fans and idols. The emotional companionship and attachment between fans and idols help form tactile relationships and diffuse unions, allowing fans to gain a sense of companionship and satisfaction that they cannot get in real life [18, 47, 85].

**2.2.2 Intimacy in Computer-Mediated Communication.** Virtual romance service shares some interest with previous studies that have investigated the use of computer-mediated communication

(CMC) in specific situations, especially on family and romantic relations. We share a similar perspective and explore how CMC makes users feel connected to other people. Previous studies have demonstrated that CMC tools can facilitate intimate activities, alleviate loneliness, and increase feelings of closeness [4]. And technology plays an important role in the process of users conveying and feeling intimacy. For example, mobile messaging enables a state of “connected presence” as it provides the never-ending exchange of mundane interactions flows [40]. Audio recordings can enhance the intimacy in remote co-dining experience [87] while voice chats can deepen social connections by enabling users to perceive each other’s emotions [90]. Video chats for couples help them share presence over distance and also reduce idealization [49]. Social VR supports long-distance couples to focus on embodied physical contacts and give them a sense of co-presence [88]. Virtual romance service needs to make users feel connected and intimate without limiting the form of interaction, though most of its forms are voice chat and text.

Still, virtual romance service has a different standpoint that it is a kind of labor and they make users feel connected to get paid. In this sense, our research has some similar interest to idol economy and live-streaming as they are required to balance connectedness and economical validity when using CMC. For instance, Yakura [84] examined how Japanese idol groups have adopted computer-mediated communication technologies during COVID-19 focusing on economical validity, connectedness, and technical availability. Wohn et al. [81] indicated that viewers tending to give money become emotionally attached to the streamers and Wang et al. [77] further analyzed how digital gifting affects live-streamers’ streamer-viewer social interactions.

Compared with idol economy and live-streaming, virtual romance is particularly different because of its dyadic essence. In live-streaming, streamer avoids becoming too intimate with viewers due to a concern of the relationship with other viewers [77]. Virtual romance services are usually private and virtual lovers and consumers are more inclined to communicate and disclose with each other. This involves the issue of self-disclosure in intimacy.

**2.2.3 Self-Disclosure in Intimacy.** Prior research proposed that intimacy develops primarily through self-disclosure. Reis and Shaver’s [55] conceptualization suggested that intimacy is a dynamic process whereby an individual discloses personal information, feelings to a partner and receives a response. It also involves exposure of vulnerability, requiring individuals to trust their partner to respond in a nurturing and supportive manner before self-disclosure. Self-disclosure increases in depth (i.e., how personal the information communicated is) and breadth (i.e., the sheer number of topics discussed) [73] as the relationship develops and individuals might selectively disclose and forgo privacy for a specific goal like increasing the level of intimacy with their partner [15, 24]. Self-disclosure could bring many benefits. It can increase trust, liking [61] and maintain relationships [33]. The fulfillment in marriage is proportional to the frequency or amount of self-disclosure in the relationship [35]. But self-disclosure can also have harmful effects such as being disliked by close friends when disclosing negative information to others [43]. In couples, very high levels of self-disclosure can also lead to high levels of conflict [13].

### 2.3 Affective Labor and Emotional Labor

Emotional labor was first introduced by Arlie Hochschild [29]. She analyzed how service workers’ emotions are distorted and alienated in commercial organizations, e.g., their “smiles” become part of the service product, so they are emotional laborers who create value and lose their authentic selves through emotional labor. Hochschild further explains that emotional workers use two different emotion management strategies, i.e., surface acting and deep acting. The real self and the acted self also come into conflict. Influenced by Hochschild, a number of studies have begun to examine emotional labor, focusing on the emotional demands and control of capital and customers



on workers (e.g., [10, 23, 78]) on the one hand, and the construction of emotional labor's own subjectivity and identity (e.g., [6, 30, 41]) on the other. HCI and CSCW have particularly focused on emotional labor in the casual labor economy [41, 48, 53, 54], and have also explored emotional labor in online communities [16, 46, 80].

Affective labor refers to work that aims to produce or modify emotional experiences in individuals [25]. Hardt and Negri define it as 'labor that produces an immaterial good, such as a service, a cultural product, knowledge, or communication'. With the development of the Internet and social technologies, various forms of online affective labor, such as live streaming, game escorting, and virtual idols, have emerged. In order to get more traffic and material rewards, streamers will consciously cater to the emotional needs and fantasies of the viewer, mobilizing the feelings of the users by creating a diverse personal [83]. E-commerce live streaming also affects consumer engagement directly and indirectly via affective commitment [32]. Tan et al [72] previously suggested that the work of virtual lovers is affective labor.

### 3 METHODS

Inspired by the growing popularity of virtual romance services in China and research on computer-mediated paid companionship [64, 71, 72], a mixed-methods research methodology was utilized to better explore our research questions. We focus on both virtual lovers and customers because their practice and perceptions of them are all important for us to understand computer-mediated paid companionship.

#### 3.1 Data Collection: Pre-interview Online Survey

To dig into RQ1, a pre-interview online survey was developed with both closed-form and open-ended questions. The survey could help to understand the common motivations and background of the users, and to obtain a comprehensive portrait of the industry of VRS. The online survey is also to select the appropriate interviewees, i.e. users that need online companionship from VRS.

We designed two questionnaires respectively for consumers and virtual lovers. The questionnaires were developed in Mandarin by the research team, all of whom are native Mandarin speakers. The survey took approximately 5–15 minutes to complete, depending on the detail that was provided within the open-ended questions. Both questionnaires began by asking respondents about their practice and experience with VRS. These questions included mostly yes/no, multiple-choice, or 5-point Likert-style questions and focused on whether the respondent is a customer, a virtual lover, or both, how long s/he engaged in the VRS, amount of consumption, and other similar questions. In addition, demographic data regarding their gender, age, occupation, location, and education was gathered. Following these questions were two open-ended questions that probed VRS experiences. All respondents were asked to share a story about their most profound experience with VRS in the past two months, as well as their motivations for engaging in VRS.

Multiple online platforms were used to recruit participants, including wjx.cn (a firm specializing in recruiting study participants in China), virtual romance services forums on Baidu Tieba (the built-in forums of Baidu), virtual romance services Super-Topic on Weibo (the online sub-community created in the most popular Chinese microblogging platform), and virtual lovers' chat groups on QQ. Only Chinese-speaking adults who had previously engaged in the virtual romance services were recruited. Screener questions ensured that all participants met this requirement. Participants were provided with a 5-10 CNY ( $\approx$  \$0.80 - \$1.60 USD) honorarium based on the quality of the open-ended questions for their participation in the survey. The survey was active for three weeks in October of 2021, and 189 responses were collected. The data of eleven individuals that gave gibberish answers were excluded from data analysis, resulting in a sample size of 178.

### 3.2 Data Collection: Semi-structured Interviews

To explore RQ2 and gain a deeper understanding of the survey responses, semi-structured interviews were conducted with 22 participants from the first survey. Respondents were selected with reference to the quality of their survey responses. The selection was also made as diverse in background and demographic as possible based on statistical characteristics including age and gender.

The interviews were conducted during November 2021 and December 2021. The average length of interviews was 50 minutes and participants were provided with a 50 CNY ( $\approx$  \$7.80 USD) honorarium for their time. The interviews were semi-structured and the main interview questions were related to participants' virtual romance experience, important interactive activities they had in their virtual romance services, their perceptions and understandings of virtual romance services and their concerns about virtual romance services. Interviews were conducted in Mandarin, audio-taped, and transcribed word by word after removing identifiable information.

### 3.3 Data Analysis

We used thematic analysis for open-ended questions. And we used an empirical, in-depth qualitative analysis [68] to explore interview data. As per the guidelines [44] for qualitative analysis in CSCW and HCI practice, the analysis process herein placed emphasis on generating concepts and themes in the end (recurring topics or meanings which reflect a phenomenon) instead of highlighting agreements among coders, due to the fact that even if coders agreed on codes, the meaning of these codes might be interpreted by these coders in a different way. For that reason, the inter-rater reliability was not highlighted in the analyses herein, whereas we strove to determine recurrent themes of interest, identify the associations amongst them, and organize them into more intricate clusters and broader themes.

## 4 FINDINGS

First, we provide a profile of the participants of the survey and the interviewees selected from the survey, which aids the understanding of the VRS industry. We then present the motivations of common users to hire or become virtual lovers. Third, we explore the labor strategies and perceptions of virtual lovers. Finally, we highlight the perceptions of users who have gained some intimacy in the service, especially regarding its differences from intimate relationships.

### 4.1 Profile of Participants

*4.1.1 Demographics of First-Round Survey.* The questionnaire took participants 8 minutes on average to complete ( $M = 8.40$ ,  $SD = 25.29$ ). The results were collected from 82 males, 94 females and 2 with non-binary gender. Among these participants, there are 76 customers and 49 virtual lovers. The other 53 participants, interestingly, are both customers and virtual lovers.

Most respondents are between the ages of 20 and 25 and are largely from developed regions in China or, while some are Chinese college students studying abroad.

All respondents have completed high school. Among them 13% are college graduates, 78% are holding or pursuing a bachelor's degree, and 9% have achieved a master's degree or higher. 58% of respondents (includes customers and virtual loves) are students and 9% of non-customers respondents are full-time virtual lovers. Other than that, respondents reported they were office workers (8%), working professionals (7%), teachers (6%), and so on. Most of the respondents began to participate in VRS after the outbreak of COVID-19 (fig. 2c).

*4.1.2 Participants of Second-Round Interview.* Among the 22 participants of the second-round interview, 9 are male, 13 are female. The participants age from 18 to 27 (average is 22.3) and have diverse occupation and experiences of virtual lover services, with duration ranging from 1 to 28

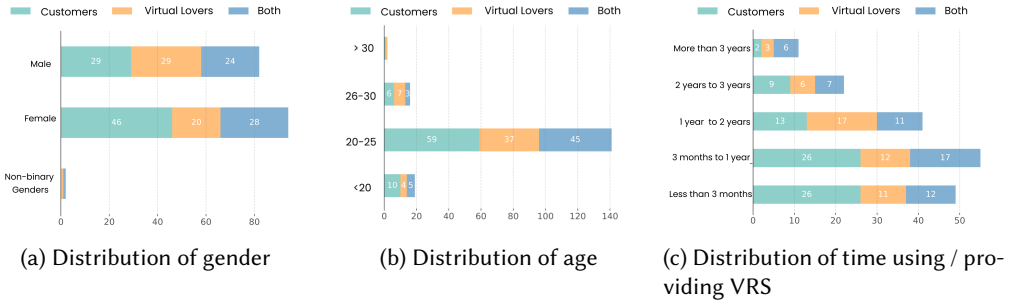


Fig. 2. Profile of participants

months (average is 9.2 months). The participants include 10 customers, 4 virtual lovers, and 8 are both customers and virtual lovers. The participants are all Chinese. Most of them are in economically developed cities in China, and 4 (P2, P4, P13, P21) are Chinese students studying abroad. Table 1 summarizes the demographic information of the participants.

Table 1. Demographic information of interviewees

ID	Gender	Age	Occupation	Role of VRS	Education (E: expected)	Experience (months)	Location
P1	Male	19	Student	Both	Bachelor (E)	12	Guangdong, China
P2	Female	20	Student	Both	Bachelor (E)	18	Japan
P3	Female	22	Full time virtual lover	Virtual lover	College	20	Shandong, China
P4	Female	24	Student	Customer	Master (E)	4	United States
P5	Male	23	Teachers	Virtual lover	Bachelor	10	Shanghai, China
P6	Male	24	Technition	Customer	Bachelor	3	Shenzhen, China
P7	Female	18	Student	Customer	Bachelor (E)	10	Henan, China
P8	Male	27	Full time virtual lover	Both	Bachelor (E)	4	Zhejiang, China
P9	Female	21	Student	Both	Bachelor (E)	1	Human, China
P10	Female	23	Office worker	Both	Bachelor	10	Beijing, China
P11	Female	25	Professional	Customer	Bachelor	8	Zhejiang, China
P12	Male	20	Student	Customer	College (E)	20	Jiangsu, China
P13	Female	21	Student	Customer	Bachelor (E)	12	Australia
P14	Female	24	Student	Customer	Master (E)	2	Zhejiang, China
P15	Female	26	Teachers	Both	Bachelor	6	Shenzhen, China
P16	Male	24	Professionals	Customer	Bachelor	8	Jiangsu, China
P17	Male	22	Student	Both	Bachelor (E)	4	Fujian, China
P18	Female	18	Student	Virtual lover	College (E)	3	Gansu, China
P19	Male	23	Professionals	Virtual lover	Bachelor	10	Shanghai, China
P20	Female	22	Office worker	Customer	Bachelor	28	Beijing, China
P21	Female	19	Student	Both	Bachelor (E)	3	United States
P22	Male	25	Self-employed	Customer	Msater	7	Zhejiang, China

## 4.2 Motivations for Being and Hiring Virtual Lovers

As respondents include both customers and virtual lovers, the interview data and answers to open questions in survey provide a lens through which to understand both parties that participate in these transactions. A discussion of the motivations reported by customers who hire virtual lovers is provided first, followed by motivations from people who are virtual lovers.



**4.2.1 Customers' motivations for hiring virtual lovers.** Interviewees reported a number of different reasons for wanting to hire virtual lovers, including the need to satisfy curiosity, relieve negative emotions, pass the time, have fun, feel accompanied and cared for, and serve functional purposes, such as being woken up and supervised on learning. Each of these motivational themes will be discussed next.

**Satisfy curiosity.** According to the responses to the questionnaires, more than half (53%) of respondents reported that satisfying curiosity is the main reason why customers hire virtual lovers for the first time. For users who frequently browse videos (on *Bilibili*) or short video platforms (on *Dou Yin: Chinese version of Tiktok*), many vloggers have made their own experience videos of purchasing VRS. These videos are often amusing, which piques viewers' curiosity. Answers to open-ended questions about motivation in many questionnaire responses point to this:

*"The first time I tried the virtual lover service, I ordered all levels of virtual lovers in a store. I was wondering if there was any difference between these levels, and if it was really as interesting as the video showed." (survey, R129)*

According to the results of the questionnaire, some customers did not hire virtual lovers again after satisfying their curiosity. The customers who frequently hire virtual lovers can be mainly attributed to the following four reasons.

**Relieve negative emotions.** According to the results of the survey, relieving negative emotions is one of the significant reasons for hiring virtual lovers. Among the interviewees, 12 interviewees had used VRS to relieve their negative emotions. Participants explained that when they were in a bad mood, they wanted to talk to someone about their troubles. For example, P14 (female, 24, customer) said:

*"No one likes to hear you keeping talking about the bad things that happen to you, but when you spend money, others have to listen and find ways to comfort you."*

For customers, virtual romance services provide a more private and liberating way to vent their emotions. For example, P6 (male, 24, customer) and P9 (female, 21, both) highlighted the outlet offered by VRS to speak out about their troubles anytime and anywhere:

*"When I get home from work, I'm stressed, and I can't talk to my friends about the trivialities of work every time, so I hire a virtual lover." (P6)*

*"I hired a virtual lover mainly because when I was a part-time virtual lover, if I would be affected by the negative emotions of customers, I would find another way to say it." (P9)*

Some customers with mental issues pointed out that they are more willing to hire virtual lovers to relieve negative emotions than psychological counselors, even though they know that the latter will be more professional and scientific, like P2 (female, 20, both):

*"When I was studying in Japan, I consulted with a lot of online and offline counselors due to my anxiety disorder. They kept asking me questions that reminded me of what I wanted to avoid remembering. But sometimes I just want to divert my attention (from these bad memories). A virtual lover can do that. Even if it doesn't solve the problem, it can alleviate my anxiety at the time."*

Although P2 still sought the help of a psychologist for her anxiety, she found VRS to be a beneficial supplementary tool. Because in this way, she would not disturb the people around her, and she can also talk about her anxiety all the time to help divert her attention. She believed that interacting with people was a more effective distraction than playing video games or any other activity.

**Pass time and have fun.** Many customers use VRS for entertainment and to pass the time because virtual lovers allow customers to experience different people and different voices, to talk about novel topics, and to play games together:

*“Just to pass the time, if I am lucky I can chat with very interesting virtual lovers.”(P1, male, 19, both)*

*“I think it’s like opening a mystery box. You don’t know what you will encounter. Wouldn’t it be nice to have someone play with you and chat with you? Haha is just a game to me, I don’t take it seriously.” (Survey, R34)*

Some participants like to talk and listen to people with pleasing voices, which was their main goal in finding a virtual lover. They found it quite interesting. P16 (male, 24, customer) mentioned he frequently utilized the store’s sound audition service. Before making an order, he’d specify his preferred voice type. The store would then create a WeChat group and add virtual lovers who matched his preferred voice, allowing him to choose the one with the voice he liked best to hire.

**Feel accompanied and cared.** The feeling of companionship is what customers are looking for. For some customers, they even do not need in-depth communication during the process of accompany. P11 (female, 25, customer) described why she hire virtual lovers every night:

*“I hire a virtual lover to help me to sleep every night. I usually don’t talk, just listen. She tells me some stories to put me to sleep. If I fall asleep, the virtual lover can hang up the voice call. The feeling of companionship reassures me. I don’t look forward to other relationships other than trading, so I change a virtual lover to hire every day.”*

Some customers explained that they were concerned about falling into loneliness and that there was no other way to have one-on-one companionship on call. Thus, VRS is a good way to feel taken care of and not alone.

**Serves functional purposes, such as being woken up and supervised on learning** Virtual romance services are also widely used for functional purposes, such as waking up customers and supervising them in their weight loss or learning efforts. Customers expressed they are more likely to wake up because someone has to keep calling you to make sure you actually wake up. It is more reliable than your own alarm clock. P20 (female, 22, customer) added:

*“I often feel very resisted to wake up. If I wake up with a nice voice every day, I will be in a good mood. My virtual lover would chat with me for a few minutes after waking me up, which makes me awake very quick. ”*

P13 (female, 21, customer) highlighted virtual lover was really supportive and kept her company during her weight loss journey:

*“When I lose weight, I have quite a few moments of frustration and shaking, wanting to overeat, so I found a virtual lover to supervise my weight loss. She’s really helped me a lot as I can call her anytime I struggle with sticking to my weight loss goals”*

In the survey, some respondents said they used virtual lovers to supervise their studies, exercise, and to encourage themselves. However, they also noted that the effectiveness of this method diminished over time as the novelty wore off.

**4.2.2 Motivations for being hired by customers.** Income is the primary motivation for people to be hired as virtual lovers. Multiple participants are students, so they see virtual lovers as another source of income (usually to spare more money) in addition to their parents. Virtual lovers who are students noted that the income from this part-time job was enough for them to buy things they wanted to buy, so they didn’t need to ask for extra money from their parents. According to two full-time virtual lovers, they were currently in a job gap period, during which working as virtual lovers can be a transition and a good source of income. For example, P8 (male, 27, virtual lover)

explained he lost his job during the COVID-19 pandemic, so he tried to be a virtual lover to make a living:

“There is still a great demand for male virtual lovers in the virtual lover service industry. As long as you are diligent and willing to spend time, you can get a higher income.”

In addition, the flexible nature of the job is a big factor that attracts people to become virtual lovers. They think this job can be done anywhere they can talk. They can take orders on their own schedule and not work if they don’t want to. For example, P3 (female, 27, virtual lover) shared how she benefited from the flexibility of this job:

“I used to work in Beijing. The first-tier cities have high consumption, so I can’t save money easily. But soon I realized that I could do this job anywhere, so I went back to my hometown, a small county. I’m able to make a good income while living with low expenses.”

While our participants noted that there were other reasons for being a virtual lover, such as learning about different people’s lives and regions, one participant shared a story in survey responses about how he learned more about his hometown by becoming a virtual lover:

“Since junior high school, I have not been in China, but I think I have a deep sense of identification with Chinese culture. There are very few Chinese people in the small town I live in, so I learned about the Chinese world through the Internet. Coincidentally, I hired virtual lovers to chat with me. I found that chatting with them gave me a strong sense of cultural identity and learn about the different lives of Chinese people. Therefore, later I become a virtual lover.” (survey, R66)

### 4.3 Perceptions and Labor Strategies of Virtual Lovers

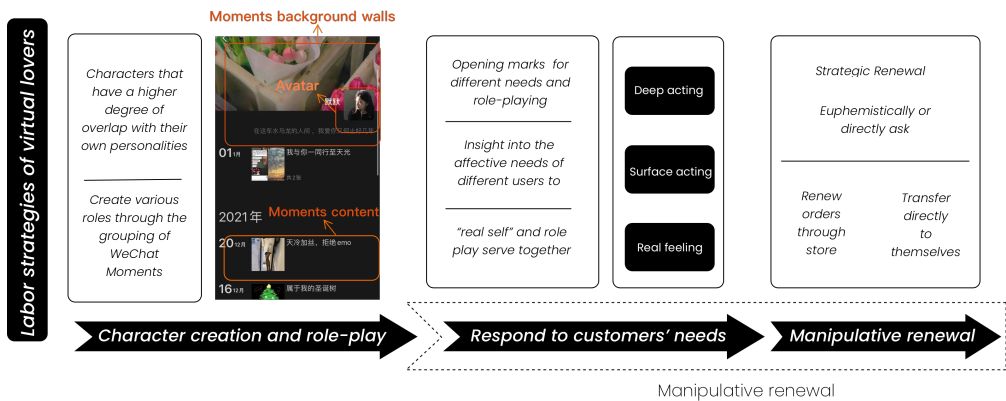


Fig. 3. Labor strategies of virtual lovers

4.3.1 Character creation of role-playing and virtual lovers. Since customers often choose virtual lovers based on virtual lovers’ characters and roles, virtual lovers need to create their own characters from all aspects before providing services. Virtual lovers often pay attention to WeChat avatars, content and wallpaper of WeChat Moments. Full-time virtual lovers sometimes buy complete sets of fake photos from the internet to protect their privacy and to make the images more aligned with the personality they have created for their customers. A full-time virtual lover P3 (female, 22, virtual lovers) explains the reason for using fake pictures:

*“There are more than 200 sets of pictures I purchased, and I post them to WeChat Moments every few days. Anyway, customers don’t know whether it’s true or not, and most of them won’t ask. And posting on Moments will make some previous customers think of me and continue to hire me.”*

She said that she sends different content in WeChat Moments to different customers (by using groups) so that she can play two different characters, “mature sister” and “cute girl”. The guests who hire “mature sister” and “cute girl” will see different characters built by WeChat Moments.

For most part-time virtual lovers, they tend to choose a character that has a higher degree of overlap with their own personalities, so that virtual lovers can more easily provide customers with a feeling of intimacy, emotional management and emotional expression during the service process.

**4.3.2 Creating a sense of presence to respond to user needs.** For virtual lovers, they need to take the initiative to express their care and affection for customers after they start the service.

This requires choosing the right greeting and nicknames that fit the role they are playing. Respondents mentioned using greetings such as “baby”, “your little cutie has been delivered”, and “why are you sad dear” for different purposes. Virtual lovers said that while these affectionate and insincere words might be embarrassing at first, customers would soon begin to feel ambiguous and happy.

Some virtual lovers believed that sounding good was the first step in making a good impression on consumers and could also help customers to immerse themselves in VRS quickly. These virtual lovers were able to alter their voices based on consumer preferences, imitating a variety of vocal styles and using them during conversations:

*“I believe that (VRS) rely primarily on a good voice; I specifically went to practice several common voices, such as the voice of a young girl or a mature sister. They (customers) think you sound good, which can make the work much easier. And the customers are easily satisfied.” (P10, female, 23, both)*

Chat is then offered in different ways depending on the type of service required. For example, when the experience of virtual love is needed, the virtual lover needs to express the understanding of customers in a listening and submissive manner, compliment the customer’s looks and personality, and boost their sense of self-esteem through emotional conversations. If customers need to relieve negative emotions, like emotional consultation, virtual lovers should demonstrate empathy by sharing similar experiences and providing understanding.

When serving customers, virtual lovers must be readily available and stay close to their mobile phones, especially for short half-hour or one-hour orders that require them to respond promptly within a few seconds. Failure to do so may result in customer complaints and the risk of not being paid. For customers who pay on a weekly or monthly basis, virtual lovers must get to know their routines through communication, understanding when and what they want to chat about, and make every effort to meet their expectations, For example, P17(male, 22, both):

*“I served a customer who paid weekly, and he liked to chat with me before going to bed, but he slept very late. During that time, my schedule was reversed. Actually, I am very tired, but I have to do this.”*

Virtual lovers adopt two distinct strategies for managing emotions in VRS: surface acting and deep acting [28]. Specifically, surface acting involves the virtual lover controlling their speech and expression, utilizing a large number of relationship symbols, as well as adjusting the tone and speed of speech in order to convey to the consumer the emotion they need and expect. For example, P5 (male, 23, virtual lover) said:

*“Most customers were in a bad mood when they first came to me. I needed to show great care and patience towards them, in order that they could feel our care and consideration.”*

Meanwhile in deep acting, virtual lovers need to control their own psychology to adjust their emotional state, trying to evoke certain specific emotions, making it possible to adapt to the external performance required by the scenario. Some virtual lovers said that sometimes, even when they were already tired, they would still actively talk to customers about light-mood topics to guide the conversation for those who did not talk much. For example, P5 (male, 23, virtual lover) said:

*“After a busy day at my full-time job, I was also tired. But I had to talk to my customers about something fun and light, and this was actually very tiring because I’m in a bad mood but have to pretend to be happy [...] Sometimes, my bad mood gets better when I talk with customers about funny or light topics. ‘Pretending’ to be happy turns into genuine happiness!”*

Apart from acting, investing in real feelings is part of virtual lovers’ work, and in fact it can make their work more relaxed. As virtual lover always needs to play the role that the customer wants, which is emotionally exhausting. And expressing real feelings makes virtual lovers easier for work for it is “real self” that does not need to act, as P18 (female, 18, virtual lover) explained:

*“Pretending to be someone else is too tired. More often, when a customer says something, my reaction is what I really feel. I want customers to like the real me, especially those customers who pay a monthly subscription. I basically pretend to be the role customers want and but all feelings and experiences are real from myself.”*

**4.3.3 Renewal reminders throughout the service.** Virtual lovers said that the number of renewal orders was often the key to their business rating. It was also the most important assessment indicator of how much money they could get from a single order. Throughout the service process, the notion of renewing the order was always present in virtual lovers’ minds. Especially when the service was about to end, virtual lovers would often subtly invoke the emotional input of customers, thereby stimulating their desire to consume again. For example, P19 (male, 23, virtual lovers) would open a topic that customers are interested in when the service is about to end:

*“I usually start a new topic five minutes before the end of the chat, and then tell her that as long as the order is renewed for half an hour, this method is very effective”*

*“I like being hired by customers who have just lost their love, because it is easy to make consumers rely on me with sweet words at this time, so as to renew the order.” (P8, male, 27, virtual lover)*

Some virtual lovers shared that they have encountered customers during their chats whom they would like to continue talking to. When they first started working as virtual lovers, they would even offer to continue the conversation for free if they liked the customer. However, with more experience, they now rarely do this.

Stores usually earn a high percentage of commission from virtual lovers. Generally, the store draws 50% from the first order of new customers, and even for renewal orders, the store’s commission can reach 30%-40%. In addition, it is difficult for stores to know whether customers want to renew their orders and to monitor private renewals. Therefore, virtual lovers also have their own strategies on whether to renew their orders via the store.

Several virtual lovers said that typically, for short-term orders such as one day or one week, they will let customers put renewal orders through the store because it can help them reach a higher level and thus earn a higher commission. When the amount of orders becomes larger, they usually let customers transfer directly to them without going through the stores.

#### 4.4 Consumers' Perceptions of VRS Especially Perceived Differences from Intimate Relationships.

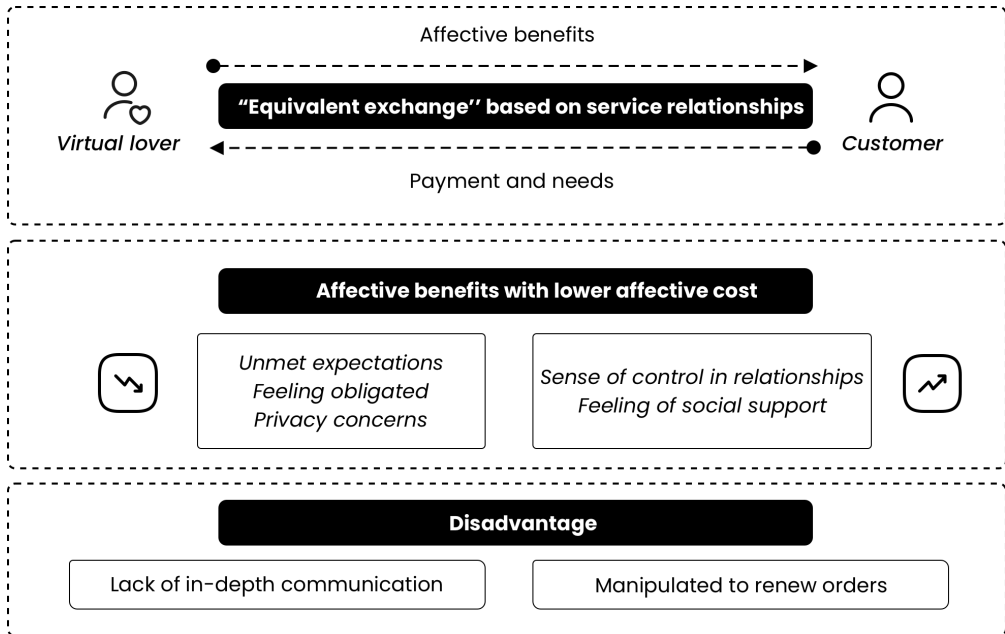


Fig. 4. Customers' perceptions of VRS

**4.4.1 "Equivalent exchange" based on service relationships.** Participants recognized that their relationship with virtual lovers was solely a service-based one and that the connection was virtual and would end upon completion of the transaction. Customers hired virtual lovers to express their needs, whether explicit or implicit, and in doing so, they obtained emotional benefits from their virtual companions. As P22 (male, 25, customer) explained, he felt that he just needed "companionship at the moment":

*"I want to give money, and then she can provide me with the company I need. Although I cherished her company and talked to her a lot of my own personal words, I would be afraid if our relationship went further."*

Many customers attributed that they were very clear about their motivation for hiring a virtual lover, and they were aware of the working responsibilities of virtual lovers. If their motives for hiring virtual lovers were satisfied, they thought their relationships could also end.

*"After all, it's hard to find people who are willing to listen to me when studying in the United States. It's enough for someone to listen to my complaints. However, I don't think virtual lovers can bring a deep connection. I think real connection and intimacy are still based on caring, trust, understanding and other emotional foundations, not money."* (P4, female, 24, customer)

According to P4 and P22, it could be seen that the respondents believed that the VRS that met the emotional needs of customers, which was essentially different from the intimate relationship. The relationship in VRS was not stable and focused more on instant gratification for customers.



4.4.2 *Affective benefits with lower affective cost.* Customer respondents mentioned that the biggest difference in what they perceive in the virtual service from in an intimate relationship is that customers can use lower affective cost to meet their affective needs and get affective benefits. Three affective cost and three affective benefits are summarized and explained in detail below.

**Reduced cost 1: unmet expectations.** People in relationships may have expectations for communication, but their partner may not always be available online. When these expectations go unfulfilled, they may feel negative emotions. Participants felt that virtual lovers largely decrease the likelihood of unmet expectations. A number of respondents indicated that virtual lovers always replied in a timely manner and could be found anytime:

*“I need someone to reply to my messages promptly, especially when I share something that made me unhappy. I’m disappointed that my friend didn’t reply when I needed comfort. Virtual lovers will not. I will always get a response when I need it.” (P7, female, 18, customer)*

*“My routine is very different from other people’s. I often want to chat with people at three or four in the morning, but even if I have a girlfriend, she can’t accompany me so late. At this time, I go to Taobao store to hire a virtual lover.” (P17, male, 22, both)*

In addition to the unmet expectations for the time of communication, the significant reduction in the cost of unmet expectations in the content of communication was also the reason why the participants turned to hire virtual lovers. For example, P10 (female, 23, both) had described her expectations:

*“When I share my feelings with my ex-boyfriend, I hope he can see things from my perspective. But he usually can’t. That’s why I believe having a virtual boyfriend would be a more trustworthy option.”*

**Reduced cost 2: feeling obligated.** Participants felt that the reduced sense of obligation in VRS allowed them to express their feelings more easily and comfortably than in intimate relationships. For example, participants may feel guilty for not maintaining adequate communication in relationships, but customers had nothing to be concerned about regarding obligation in virtual romance services:

*“When I need a virtual lover, there will be a sweet girl chatting with you in a sweet voice, and no one will disturb you when you are busy. I can follow my own life rhythm to do my own thing.” (P22, male, 25, customer)*

The participants also didn’t need to think about virtual lovers’ feelings as much as when expressing their own feelings to others, such as whether this emotion was too negative and intense to express:

*“In the process of getting along with my friends, I will feel that there are some things that I can’t say. Once, I did poorly in an exam and wanted to talk and be comforted, but I was afraid that my grades were better than my friend’s, which would bring her discomfort. So I hired virtual lovers, and when I talked to them, I had absolutely no obligation to take into account their thoughts.” (P21, female, 19, both)*

**Reduced cost 3: privacy concerns.** Participants believed that hiring virtual lovers tended to incur fewer privacy concerns because of the anonymity and the natural isolation from their real life. P6 (male, 24, customer) pointed out that he might disclose his dark thoughts, which could not be disclosed to those around them. He explained:

*“I don’t think I’m concerned about privacy at all. After all, they don’t know me, and they’re dealing with a lot of customers per day. Then even if I talk about some of my dark*

*thoughts, they don't know who I am and the people around me, which is very reassuring and has nothing to worry about.* ”

Customer respondents also consciously avoided disclosing accurate personal information when using the service. For example, P2 (female, 20, both) stated that she would modify the details when sharing her experience with the virtual lover in order to protect her privacy:

*“I used to have a virtual lover who accompanied me for three months. During that time, I broke up, and I told him everything about my heartbreak. But in fact, I'll change some of the details, including what I found out about my boyfriend cheating on me and my personal information before I tell him. It is because I am familiar with this service that they actually have some groups to communicate with each other, and I am afraid that acquaintances will recognize me.”*

According to the answers of the respondents, it can be seen that in VRS, consumer respondents were less worried about privacy and had little concern about the burden of privacy being leaked. However, this was not because virtual lovers were concerned about privacy protection, but rather due to the anonymity and distance from customers' lives.

**Benefit 1: Sense of control in relationships.** Participants generally believed that their sense of control in relationships is based on the perception of interaction outcomes. In VRS, customers can put forward their needs and roles to play when choosing a virtual lover. In the service process, they can also ask virtual lovers to respond in the way they like.

P1 (male, 19, both) thought he lacked a sense of control in his life as life can't always give him the feedback he wanted, but it was available in VRS:

*“Things that don't exist in reality come to the virtual world for me to get. I want to have a girl who is always cute and sweet. I hope that when I want to hear her singing, she will sing to me. This kind of relationship can only be satisfied by a virtual lover.”*

Customers can also decide how long the relationship will last and when to end the relationship. For example, P13 (female, 21, customer) said he really likes the sense of control:

*“My relationship with my parents is not very good. They think many things can be solved by money, which makes me always feel insecure. So I am more inclined to be able to fully control a relationship.”*

**Benefit 2: Feeling of Social Support.** Another obvious affective benefit perceived by the participants is that they could easily obtain social support, P20 (female, 22, customer), pointed out that she could easily receive empathetic expressions and unconditional support from her virtual lovers:

*“I think that only virtual lovers and my sister can stand in my perspective every time. When making decisions, I seek their support to give me the confidence I need.”*

This kind of social support can be easily reflected in life for customers:

*“I was about to take the college entrance examination, and I was very anxious every day. My virtual lover, who acted like a big sister, constantly encouraged me and helped ease my worries”(P7, female, 18, customer)*

P10 (female, 23, both) said that the virtual lover could also obtain more objective third-party perspectives and suggestions. The virtual lover helped her analyze the conflicts and quarrels in her relationship, and gave her care, understanding, and enlightenment:

*“When I encounter conflicts with my ex-boyfriend, I usually hire male virtual lovers to help me analyze the problem. Sometimes I hire several. From the perspective of view of virtual lovers, I feel that I will be understood. At the same time, there is also a third-party*

*point of view to talk about our problems, so that I can communicate calmly with my ex-boyfriend.”*

4.4.3 *“Purchase” brings communication disadvantages.* Some respondents said that there are some drawbacks to the communication obtained through purchase. One is the lack of in-depth communication. The lack of in-depth communication especially happens in customers who hire virtual lovers for short periods, such as one hour or even half an hour:

*“At first, I felt happy when someone said something sweet to me. But after I hired more virtual lovers, I felt that there was no real exchange of deep ideas, so I was bored.” (P6, male, 24 customer)*

*“Although he tried so hard to comfort me, I felt that he didn’t fully understand me and shared my values.”(P14, female, 24 customer)*

Another disadvantages strongly perceived by the participants the other is that they can feel that virtual lovers will manipulate them with various methods to urge them to renew orders:

*“When we were chatting, she always hinted to me that it was time to renew the order. Sometimes, even if we chatted vigorously, she could also include hints in the chat content.” (P16, male, 24 customer)*

*“He did give me a good experience. But when I really felt that we were falling in love, he reminded me that the monthly subscription was about to expire. I had to renewal, otherwise I could not continue chatting with him. He would also tell me that if I didn’t renewal, he would be laughed at by his colleagues and his level would drop. However, after I became a virtual lover myself, I found out that it was not the case. He always pretended to be pitiful.” (P2, female, 20, both)*

It could be seen from the participants’ experience that some virtual lovers would use psychological skills to induce renewal. They would either attempt to evoke sympathy from their customers towards the end of the service or exploit their customers’ inertia by threatening a sudden stop, thereby applying pressure. These tactics could leave customers feeling manipulated, creating barriers to meaningful communication and harming the relationship between the two parties.

## 5 DISCUSSION

We presented the motivations and perceptions of both virtual lovers and customers and virtual lovers’ strategies to meet customers’ emotional needs. By connecting our findings with prior literature, we provide suggestions and design implications to improve future practice. We start by discussing the distinct characteristics of computer-mediated paid companionship, followed by a discussion of emotional and affective labor of virtual lovers. We conclude by providing design implications for computer-mediated paid companionship.

### 5.1 Computer-Mediated Paid Companionship: Why and How

5.1.1 *Tangible Benefits Instead of Relationships.* Our findings suggest that customers in VRS are paying for the tangible benefits of an idealized romantic partner instead of long-term commitment and emotional investment. Affection is typically regarded as one of the most fundamental human needs [60]. According to the affection exchange theory [20], people partially satisfy our emotional needs through the exchange of affectionate behavior. People who show and receive more affection enjoy better mental and relational well-being [27]. However, because young people are confronted with social pressure and the fast-paced reality of line in contemporary Chinese culture, they have little time and energy to build deep relationships [50]. Meanwhile, some traditional values, such as family responsibilities, are still influential to the younger generation [70, 89], which sometimes

seem to be more important than emotional attachment in an intimate relationship [17]. Young people may receive less affection than they desire, leading to feelings of loneliness, confusion, and depression. Some studies have proposed strategies to cope with such affection deprivation [19], such as simulating contact [57] and increasing one’s sense of control in their life [76]. The proposed coping strategies deal with very clear emotional needs, i.e. tangible benefits, which can be easily obtained in a commercialized way. A typical example is the *cat cafes* [52], where people can connect and gain emotional comfort from spending time with cats as it generates contact.

According to our findings, VRS may be a coping strategy due to its potential to simulate intimacy and the sense of control of relationships. Many of our participants are able to alleviate their affection deprivation by using VRS: they connect with virtual lovers, discuss stressful events that occurred in their lives, and search for the security that was missing in their childhood, as well as the love and feedback that their real boyfriend does not provide. In other words, people are not getting romantic relationships in the typical sense. Instead, they are effectively seeking the tangible benefits from romantic relationships that they otherwise lack in their life.

**5.1.2 VRS Reduces Relationships to Several Desired Characteristics.** We think that the VRS model effectively reduces relationships to several desired characteristics. Table 2 presents the primary characteristics induced from our findings. VRS reduces relationships mainly into five characteristics: Intimate atmosphere, Intimate expression, Responsiveness, Reassurance & Emotional support, and Openness & Self-disclosure, We further categorize these characteristics into two sets: embodied intimacy and emotional intimacy.

Table 2. Characteristics that reduced from relationships

Sets of characteristics	Reduced characteristics in VRS	Examples in VRS
Embodied intimacy	Intimate atmosphere	Sound
	Intimate expression	Intimate nicknames
Emotional intimacy	Partner responsiveness	Quickly reply
	Reassurance & Emotional support	Think from customers’ perspective
	Openness & Self-disclosure	Relive negative emotions

**Embodied intimacy** When providing services to customers, virtual lovers use avatars, WeChat Moments, specially-practiced words, and emoticons/popular stickers (to add emotional expressions) to create a comfortable and intimate atmosphere. When serving in the form of voice chat and voice messaging, sound is always essential for establishing an atmosphere and evoking emotions [58, 75]. With the aid of the intimate atmosphere, customers easier to immerse in a virtual intimate experience. Intimate expression, like intimate nicknames to shape friendships or virtual romantic relationships, and comforting intimate words such as hugs and pats to complete the expression of emotions, is a typical concrete manifestation of embodied intimacy.

**Emotional intimacy** Many customers use VRS to relieve negative emotions and receive comfort. It’s not because they perceive the interaction to be intimate that they expose their vulnerability but it’s the other way around – they perceive these interactions to be intimate because they expose more personal, vulnerable aspects of themselves through self-disclosure. Some customers point out that virtual lovers allow them to have fewer privacy concerns, thus performing more self-disclosure. The virtual lovers try to dig deep into the affective needs of different customers to provide services. They serve through “real self” and role-play together, as well as quickly replying to customers, from which customers might have a sense of understanding, acceptance, validation,

and caring. Such interaction is an indication of responsiveness. VRS also provides reassurance and emotional support. Customers feel that virtual partners always consider their perspective and comfort them, allowing them to feel safe in the relationship.

## 5.2 The Emotional and Affective Labor of Virtual Lovers

Our findings suggest that two distinct but related practices, i.e., emotional and affective labor, coexist in the practice of virtual lovers in VRS. In VRS, affection (closely linked to the “sense of companionship”, and “intimate experience”) becomes the only exchange-valued commodity, not depending on any other services. Virtual lovers engage in affective labor because their work requires the creation of an intimate atmosphere, the satisfaction of the customer’s various emotional needs, and the manipulation of the customer’s emotions. Simultaneously, virtual lovers also engage in emotional labor because during work, they must express or conceal their own emotions in order to generate empathy and unconditional social support with customers. Our research indicates that virtual lovers are both surface-acting and deep-acting due to the nature of their work—communication and companionship.

Virtual lovers engage in both affective labor and emotional labor, requiring manipulating the emotions of both the self and the other. While it may seem that the enhanced labor would place a disproportionate burden on virtual lovers, the workers’ experiences show that this is not necessarily true: Being able to—or, incentivized to—express genuine emotions makes virtual lovers feel more at ease *and* is good for their business, as P18 pointed out. The distinct characteristics of VRS work suggest unique venues for designing for computer-mediated paid companionship.

## 5.3 Design implications for Computer-Mediated Paid Companionship

The “lite” versions of intimate relationships in VRS lend themselves well to their pay-per-use nature. As virtual lovers are inherently anonymous based on role-playing, such a feature can promote the disclosure of feelings much more readily than face-to-face interactions [34, 45]. Prior work suggests online intimacy may lead to excessive self-disclosure [22] and unrealistic expectations [79]. However, these concerns that would have otherwise damaged healthy intimate relationships have instead become the reason virtual lovers can better serve customers: virtual lovers can respond more accurately to customers’ self-disclosures and provide emotional support. Therefore, the design of VRS platform should be improved to allow customers to better experience embodied intimacy and emotional intimacy we purposed.

For example, in addition to the virtual lovers’ efforts, platforms can think of other ways to create an intimate atmosphere, making it easier for users to engage in an intimate experience. Some policies and technology can also be designed to better protect customers’ privacy so that users can more safely disclose themselves. According to the findings in section 4.2.1, it is worth noting that there are a certain number of customers aiming to relieve negative emotions, and even some have mental issues, potentially posing challenges beyond the virtual lover’s ability. Risk hence exists that people with mental issues cannot get timely help, and the virtual lover’s own psychological well-being may not be well protected either. One direct implication is platforms should be responsible for designing training materials to prepare virtual lovers for the challenges and the need for self-care in the wake of those challenges. According to the findings in section 4.3.3 and 4.4.3, the existing evaluation mechanism has brought a certain amount of trouble to the customers. The evaluation of the virtual lover’s level according to the number of renewal orders jeopardizes the consumers’ experience. The platform should design a better mechanism to evaluate the virtual lover’s level, such as randomly distributed evaluation questionnaires to customers.

## 6 CONCLUSION

This paper focused on virtual romance service, an emerging form of computer-mediated paid companionship in China. Through a survey of 178 providers and customers of such service, as well as follow-up semi-structured interviews with 22 selected survey participants, thorough analysis is provided on: (1) motivations for both parts; (2) perceptions& strategies of virtual lovers; (3) differences between VRS and intimate relationships. These findings thereby led to detailed discussions on: (1) root causes for computer-mediated paid companionship; (2) the labor of virtual lovers; (3) design implications for computer-mediated paid companionship.

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