Investigating Multimodal Interactions and Parasocial Attractiveness in YouTube ASMR Videos

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ABSTRACT

Autonomous Sensory Meridian Response (ASMR) videos have become a popular video genre on YouTube and attracted millions of views every day. However, there is limited understanding in HCI and CSCW of how the ASMRtist community on YouTube leveraged the multi-sensorial stimuli to design the experiences of calm and relaxation and construct parasocial relationships with the viewers. This work presents a typology to understand the multimodal interactions and parasocial attractiveness in YouTube ASMR videos. The annotation of 88 YouTube ASMR videos reveals that, beyond tingling sensation, ASMR videos are also experiences of social connection, physical intimacy, and activity observation. We describe the future design and research opportunities to utilize ASMR effects in video-based applications.

CCS CONCEPTS

• **Human-centered computing** → **Social Media**; **Social Content Sharing**;

KEYWORDS

ASMR; YouTube; Multimodal interactions; Parasocial relationships; Intimacy; Social connection; Activity observation

1 INTRODUCTION

Autonomous Sensory Meridian Response (ASMR) is a sensory phenomenon generated when listening to soft or tingling sounds [3], and it has recently caught attention in HCI for designing new user experiences [1, 4]. Over recent years, ASMRtists have leveraged the sensory effect of ASMR to create a multitude of videos on YouTube. These videos feature multimodal sensory triggers, ranging from hand movements with soft whispers to immersive, roleplayed scenarios with elaborate visuals and personal attention [2]. In 2016, YouTube had more than 5.2 million ASMR videos, and the searches for ASMR grew over 200% in 2015 and are consistently increasing [6]. ASMR creators and fans form large online communities on YouTube, Facebook, Reddit, Instagram, and effectuate ASMR mobile apps like Tingles[1].

[1]https://techcrunch.com/2018/03/16/tingles-is-an-app-devoted-to-asmr-videos/

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ASMR video creation can be seen as an art of creating sensory experiences that calm or relax viewers. ASMR creators manipulate visual, audio, touch, taste, and scenario triggers [9], crafting videos that depict multimodal interactions and engender *parasocial relationships* – viewers' one-sided intimacy generated towards a video performer [10]. Video creators use social, physical, and task attractions to form parasocial relationships [5]. Our past paper demonstrated that parasocial relationships can alleviate feelings of loneliness during COVID-19 [7]. This one-sided intimacy is compounded with multisensory and multimodal interactions. In treatment roleplay videos, an ASMRtist might sit close to the camera and pretend to examine or treat the viewer. In a *Mukbang* ASMR video, the ASMRtist presents a large meal and chews food to generate ASMR sounds. With the use of multisensory modalities, ASMR videos have the unique capability to induce viewers' sense of copresence with the ASMR performers [13]. Watching ASMR videos has demonstrated to reduce heart rate [8] and promote mindfulness and increase positive emotions [3]. Psychological research shows that ASMR can temporarily relieve symptoms for chronic pain and depression [2]. HCI and CSCW practitioners can utilize the ASMR effects and interactions to design future video-based technologies to promote intimacy, relieve depression and anxiety, augment training experiences, and deliver virtual and spiritual treatment such as massage hypnosis and Reiki sessions. However, ASMR research has only focused on understanding human reactions to different ASMR triggers and their neurological and physiological effects of calming and relaxation [2, 11]. For HCI and CSCW designs, it is necessary to examine the interaction modalities and the parasocial attractions embodied in ASMR videos to design future ASMR-augmented applications [4].

This poster paper presents a preliminary understanding of the multimodal interactions and parasocial attractiveness in YouTube ASMR videos. The framework of multi-sensorial triggers [9, 12] is used to examine visual, audio, touch, taste, and scenario interactions. We also probe how ASMRtists express their social, physical, and task attractiveness in the ASMR-based parasocial interactions. The contributions of this work are two-fold. First, we performed a grounded analysis of 100 videos and identified a typology of multimodal interactions and parasocial attractiveness in ASMR videos. Second, the annotation of another 88 ASMR videos illustrates how ASMR experiences are constructed to foster future applications with ASMR effects. This knowledge is pilot and integral to the following large-scale analysis of YouTube ASMR videos.

2 METHOD

To investigate multimodal interaction techniques and parasocial attractiveness in ASMR videos, the authors crawled 85,734 videos

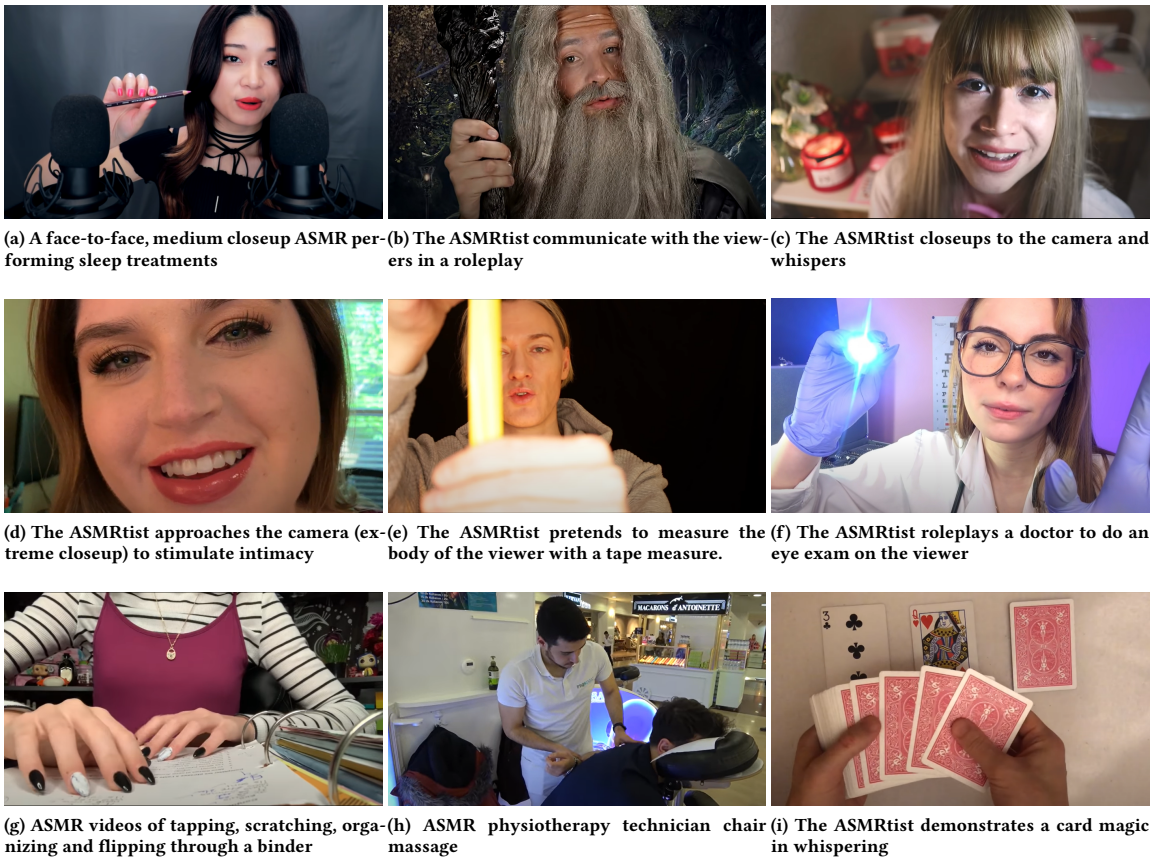
Table 1: Categories and definition of the five multimodal interactions in ASMR videos

	Category	Definition
Visual	Face to face	The ASMRtist is face-to-face in front of the camera.
	Food	The ASMRtist presents and consumes large quantities of food (Mukbang)
	Objects	The ASMRtist interacts with physical objects without showing his/her face
	Serve other	The ASMRtist performs a treatment/service on another person
	Image	Static image(s) or black screen
	Game	Video shows clip(s) of gaming, with or without the ASMRtist in view
	Non-human	The video has animals as the characters
Audio	Object	Sounds made by interacting with a physical or liquid object by tapping, scratching, pouring, spraying, etc.
	Whispering	Whispering or talking in a low volume
	Mouth	Sounds made with mouth by eating, drinking, lip smacking, tongue clicking, kissing, licking, or sucking
	Body/cloth	Sounds made by touching/brushing/scratching themselves, another person, or a fake/silicon body in the video
	Music	Music or background music
	Ambience	Ambient and background sounds made from real or fake environment
	Mic effect	Sounds made by interacting with the microphone
Touch	Viewer	The ASMRtist reaches to the viewer with their hands or tools in front of the camera
	Object	The ASMRtist clicks, taps, scratches, squeezes, or rubs physical objects
	Own body	The ASMRtist touches their own head, body, clothes by rubbing, scratching, combing, applying makeup, etc.
	Real person	The ASMRtist uses their hands or tools to interact with another real person in the video
	Silicon body	The ASMRtist uses a fake/silicon body part or model
	Kiss or lick	The ASMRtist kiss or lick the microphone in front of the camera with their mouth
Taste	With eating	The ASMRtist eats or drinks for more than half of the video
	Without eating	The ASMRtist does not eat or drink for more than half of the video
Scenario	Treatment	The video is a treatment or service roleplay in which the ASMRtist acts as a service provider and the viewer acts as a customer/patient (e.g., massage, haircut, makeup application, clinical exam, interview, customer service).
	Fantasy	The video is a roleplay in which the ASMRtist acts as a character in a fantasy, surreal, or otherwise unrealistic scenario (e.g., historical/anime/comics character)
	Intimacy	The video is a roleplay in which the ASMRtist acts as an intimate partner and directly interacts with the viewer intimately or romantically.

Table 2: Categories and definition of the three parasocial attractiveness in ASMR videos

	Category	Definition
Social	Talk To	The ASMRtist talks to or read to the viewer
	Talk with	The ASMRtist pretends to talk with or chat with the viewer, pretending the viewer responds to the ASMRtist
	Gesture or text	The ASMRtist makes eye contact with the viewer and use body language/closed captions/texts to communicate with the viewer
Physical	Camera shot size	One of the 6 camera shot sizes (Extreme closeup, Closeup, Medium closeup, Medium shot, Medium-full shot, Full shot) describing how close the ASMRtists place themselves in the video
	Image	Static image(s) or black screen
	No face	NO human face in the video
	Half face	Showing half face (upper or lower half face)
Task	Treatment and service	The ASMRtist performs treatment/service on the viewer or another person in the video (e.g., massage, makeup application, interview, office visit, hypnosis, Reiki, etc.)
	Common activity	The ASMRtist engages in common daily activity(s) such as painting, writing, folding clothes, preparing food, or applying make-up to themselves.
	Eating and drinking	The ASMRtist eats and/or drinks in the video

using the search seed "ASMR". The authors randomly sampled 200 videos from 166 ASMRtists ($mean\_length = 22.46min$, $SD = 14.46$) for the open encoding and grounded analysis. To extract meaningful ASMR interaction modalities from the data [12], the authors conducted grounded theory analysis on the 100 videos. Two authors watched 50 videos each and took notes on the visual, audio, touch, taste, and scenario triggers as described in [9]. For parasocial attractiveness, the authors annotated how the ASMRtists simulate



(a) A face-to-face, medium closeup ASMR performing sleep treatments

(b) The ASMRtist communicate with the viewers in a roleplay

(c) The ASMRtist closeups to the camera and whispers

(d) The ASMRtist approaches the camera (extreme closeup) to stimulate intimacy

(e) The ASMRtist pretends to measure the body of the viewer with a tape measure.

(f) The ASMRtist roleplays a doctor to do an eye exam on the viewer

(g) ASMR videos of tapping, scratching, organizing and flipping through a binder

(h) ASMR physiotherapy technician chair massage

(i) The ASMRtist demonstrates a card magic in whispering

Figure 1: Example ASMR videos.

communication (social attractiveness), where the ASMRtist is in relation to the camera (physical attractiveness), and the tasks the ASMRtists perform (task attractiveness). After notes were collected, the two authors used the affinity diagramming approach to summarize the emerging subcategories of the interaction modalities and parasocial attractiveness (see Table 1 and Table 2 for the codebook).

To validate the codebook and generate an initial understanding of how ASMRTists design multimodal interactions and express parasocial attractiveness in ASMR videos, two authors annotated the remaining 100 videos using the codebook. Based on the definition and ASMR video content, audio and touch were annotated as multi-categorical values. Visual, taste, scenario, social, physical, and task were annotated as single-categorical values. A third author annotated videos with disagreement independently and used the majority role to determine the final category. After annotation, 12 of 100 videos were removed due to unavailability (e.g., deleted, private, or age-restricted), leaving 88 videos for the results.

3 INITIAL FINDINGS & DISCUSSION

Our preliminary annotation results found that the 88 videos used a combination of multimodal and parasocial interaction techniques to cultivate ASMR experiences (see Figure 2 and Figure 3 for results). This section discusses our findings of YouTube ASMR videos as experiences of *social connection*, *physical intimacy*, and *activity observation*.

3.1 ASMR as an Experience of Social Connection

From the analysis, we noticed ASMRtists sought to create experiences of social connection through visual and audio interactions and social and physical attractiveness. The most common visual presentation was face-to-face, where ASMRtists position themselves in front of the camera and look at the audience (64.77%). In 80.68% videos, ASMR videos created social experiences through whispering or soft speaking. For social attraction, 36.36% of the videos depicted the ASMRtist speaking directly to the viewer, and 31.82% of the videos show the ASMRtist simulating a back-and-forth conversation. For physical attractiveness, ASMRtists also placed themselves in front of the camera using medium closeup (51.14%, Figure 1 (a) and (b)) or closeup shots (9.09%, Figure 1 (c)) to simulate close conversational settings with the audience. These results demonstrate that ASMR is beyond just tingling sensations; ASMRtists used a combination of visual and audio triggers, in addition to the physical and social attraction, to deliver an experience of social connection. The social connection experience is created through face-to-face, closeup visual presentation, and gentle whispering and talking

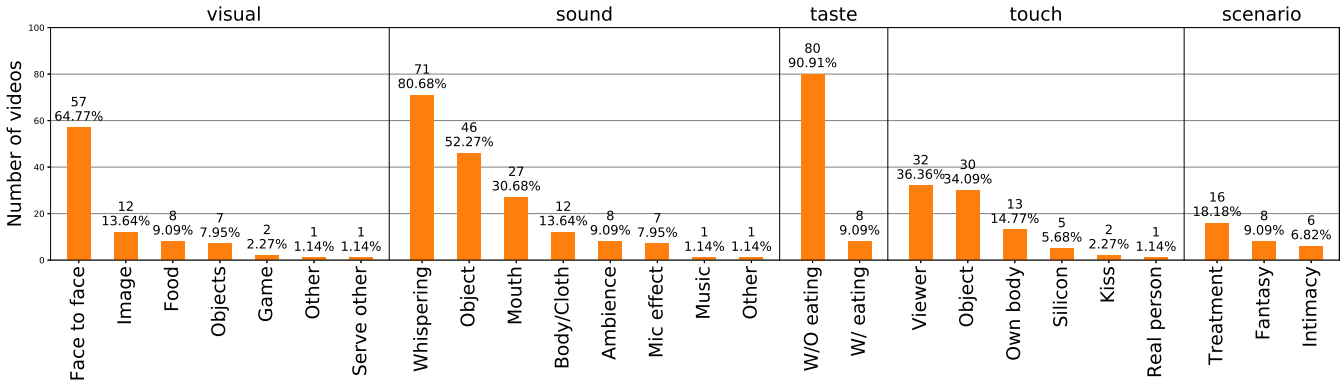


Figure 2: The number and percentages of videos in subcategories of multimodal interactions.

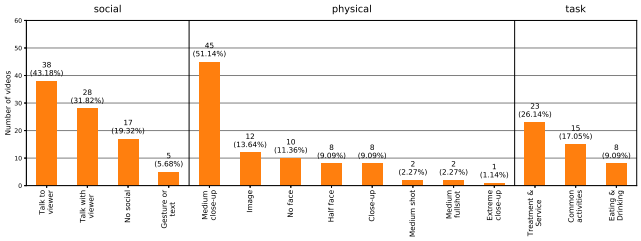


Figure 3: The number and percentages of videos in subcategories of parasocial attractions.

to/with the viewers. Future studies should examine and evaluate how video-based technologies can integrate ASMR experiences to promote intimacy for people who lack social connections. For example, in asynchronous video communication, ASMR techniques such as closing up the camera, whispering during the conversations, and manipulating tingling objects can provide social exposure and augment social intimacy.

3.2 ASMR as an Experience of Physical Intimacy

ASMRtists forged experiences of physical intimacy for viewers through touch and scenario triggers and physical attraction. This phenomenon can be seen in the prevalent use of the face-to-face modality and the closeup and extreme closeup camera shots (Figure 1 (d)). Besides the physical closeness, touch interactions also triggered physical intimacy. 36.36% videos included the ASMRtist reaching towards the camera lens to simulate touching the viewer (Figure 1 (e)). In another 14.77% of videos, ASMRtists touched parts of their own body to generate body sounds. This physical intimacy was often present in treatment scenarios, in which the ASMRtist performed a treatment or service on the viewer (26.14%, Figure 1 (f)), or intimate scenarios, where the ASMRtist pretended to be the viewer's romantic partner (17.05%). The results indicate that ASMRtists used ASMR interaction modalities and parasocial attractions to create intimate physical experiences. Through face-to-face closeness and camera-reaching, ASMRtists made the viewer feel as if the ASMRtist is physically close to them, establishing the feeling of co-presence with the ASMRtist for the viewer [13]. These ASMR techniques reveal potential interaction designs for delivering video-based virtual treatment experiences. ASMR-based treatment scenarios, such as massages, hypnosis, and Reiki sessions, can consider utilizing ASMR video techniques to provide service for more people, especially when in-person treatment is not available or accessible. Video-based applications can also use ASMR modalities to support asynchronous intimacy and companionship between long-distance familial, platonic or romantic relationships.

3.3 ASMR as an Experience of Observing Activities

Although tingling sounds lead to ASMR sense, our results demonstrate that ASMR videos can also be an experience of activity observation. 86.36% of videos contained visual performance rather than static images accompanied by audio. 34.09% of videos include at least the ASMRtist's hands as they manipulate objects as a form of ASMR trigger for their viewers (Figure 1 (g)). 7.95% of videos contain only trigger objects without the ASMRtist themselves. For task attractiveness, ASMRtists present treatment or service activities such as a massage or makeup application (26.14% Figure 1 (h)), everyday activities such as playing cards (17.05% Figure 1 (i)), or Mukbangs such as eating and drinking. These results indicate that ASMR can be an experience of observing activities, supported by object manipulation, visual story-telling, and scenario building. The former generally includes meaningless repetitive actions to generate trigger sounds. The latter involves mundane or everyday activities through which ASMRtists can cultivate personal and intimate feelings. Prior work has suggested that technology designs may leverage ASMR as a new pathway for *slow experiences* [4]. Observing activities with ASMR effects can be an element of training videos (e.g., massage training) and how-to videos (e.g., makeup tutorial and crafting demonstration) so that the learning can be more relaxing and enjoyable. To better integrate ASMR in the design of video-based training, HCI research must understand viewers' reactions to different ASMR modalities and the effects on learning experiences.

4 CONCLUSION & FUTURE WORK

This work presents a typology of multimodal interactions and parasocial relationships in YouTube ASMR videos. Our preliminary analysis argues that, besides being an auditory-based physiological sensation, YouTube creators have transformed ASMR into a hybrid experience of social connection, physical intimacy, and activity observation. ASMRtists sought to communicate with the viewer, sit closer to the camera, and perform repetitive or everyday activities that relax the viewers. This typology sheds light on new possibilities to design new ASMR-driven solutions and applications. ASMR effects can be leveraged to develop technologies to emulate copresence in social communication, augment intimate experiences, and deliver relaxing and engaging activity observations. Follow-up research will examine the relationship between interaction modalities and parasocial attractions to gain a deeper understanding of ASMR video creation. We will also use natural language processing to analyze viewers' comments to evaluate the social and emotional reactions to ASMR videos.

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