ABSTRACT

ASMR (Autonomous Sensory Meridian Response) has grown to immense popularity on YouTube and drawn HCI designers’ attention to its effects and applications in design. YouTube ASMR creators incorporate visual elements, sounds, motifs of touching and tasting, and other scenarios in multisensory video interactions to deliver enjoyable and relaxing experiences to their viewers. ASMRtists engage viewers by social, physical, and task attractions. Research has identified the benefits of ASMR in mental wellbeing. However, ASMR remains an understudied phenomenon in the HCI community, constraining designers’ ability to incorporate ASMR in video-based designs. This work annotates and analyzes the interaction modalities and parasocial attractions of 2663 videos to identify unique experiences. YouTube comment sections are also analyzed to compare viewers’ responses to different ASMR interactions. We find that ASMR videos are experiences of multimodal social connection, relaxing physical intimacy, and sensory-rich activity observation. Design implications are discussed to foster future ASMR-augmented video interactions.

CCS CONCEPTS
- Human-centered computing → Empirical studies in collaborative and social computing.

KEYWORDS
ASMR; YouTube; video; multimodal; parasocial; experience

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mechanism and experience patterns in YouTube ASMR videos will help technology and service designers explore ways to integrate ASMR and assess its effects on the user experience. Since experience seekers need different triggers to acquire ASMR sensations, a quantitative overview of common ASMR interaction modalities will indicate what ASMR interactions may work for more users.

In this study, we collect a large number of ASMR videos and perform quantitative analysis to obtain an overview of ASMR interactions and experiences. This work analyzes 2663 ASMR videos collected from YouTube to examine the multimodal interactions and the ways ASMR performers para-socially attract the viewers. We focus on intentional ASMR videos – videos with “ASMR” labels in which a variety of triggers are purposefully displayed by the performer – to understand ASMRtists’ common approaches to trigger ASMR experiences. Prior work identified visual, audio, touch, taste, and scenario-based ASMR triggers [8, 30, 33, 41]. By interacting with ASMR videos, viewers are able to experience a simulation of intimacy with the video performer through “parasocial interactions” [40] – a one-sided intimacy experienced by a viewer through with a figure on screen. In parasocial relationships, video performers develop and manage three types of attractiveness – social attraction, physical attraction, and task attraction [51]. We quantify the manners in which the ASMRtists socialize with the viewer (social attraction), the camera proximity of the ASMRtists in the videos (physical attraction), and purposeful activities performed by the ASMRtists (task attraction). This work addresses three main research questions:

- RQ1: What is the distribution of ASMRtists’ interaction modalities across different YouTube ASMR videos?
- RQ2: How do YouTube ASMRtists design parasocial attractiveness through multimodal interactions?
- RQ3: How do different multimodal interactions and parasocial attractions affect the expression of viewers’ feelings in the comments?

![Figure 1: The structure of the research questions](image)

Figure 1 illustrates the structure of the research questions. RQ1 provides an overview of multimodal interactions in YouTube ASMR videos to inform designs with common ASMR performing methods. RQ2 focuses on understanding the patterns of parasocial attractiveness through multimodal interactions. We summarize the experiences delivered by YouTube ASMR videos and identify the associated interaction modalities. RQ3 utilizes viewers’ comments to infer how different multimodal interactions and parasocial attractions affect viewers’ social, perceptual, and relaxation feelings. We first use grounded-theory approaches to identify subcategories of interaction modalities and parasocial attractions. Then the codebook is translated into a questionnaire task. The annotation tasks were completed by participants recruited from Amazon Mechanical Turk (MTurk). We perform statistical analysis to address the research questions.

The development of multimodal interactions depends on the natural integration patterns that typify the combined use of different input modes [26]. Understanding diverse interaction modalities through analyzing extensive video data inform different ways to incorporate ASMR in technology design. Our results indicate social attractions are enhanced by combining multiple ASMR interaction modalities. Most ASMRtists use the closeup camera proximity as a means of building physical attractiveness. ASMRtists emulate physical closeness through microphonically-amplified whispering, manipulating objects, virtually “touching” the viewer, and making mouth noises and microphone-jostling sounds near the camera or the microphone. Many ASMR videos do not involve purposeful tasks and are not roleplays. Tasks used in non-roleplay videos include soft and routine activities such as performing medical or cosmetic treatments, eating and drinking, and demonstrating mundane daily activities. The ASMR experiences delivered by YouTube ASMRtists can be described as three experience patterns: multimodal social connection, relaxing physical intimacy, and observation of sensory-rich activities. This work aims to inspire future technologies and services to incorporate ASMR triggers to design ASMR-augmented relaxing or intimate experiences.

2 DISCUSSION

The analysis of multimodal interactions and parasocial attractions describes the common patterns used to create ASMR experiences. Our work depicts common ASMR interactions but does not contrast their effects with other online content. This section summarizes that the ASMRtists deliver ASMR effects through three experience patterns: multimodal social connection, relaxing physical intimacy, and sensory-rich activity observation.

2.1 ASMR as an Experience of Multimodal Social Connection

Prior research primarily examine ASMR triggers’ characteristics, and their different physiological effects on the viewers [5, 29, 30]. Although ASMR videos are considered as a new pathway to connect creators and their viewers [21], there is little knowledge regarding what specific interactions ASMRtists perform to best establish social connections. We find the social experience in YouTube ASMR videos is commonly offered and multi-modeled. Around 65% of videos in our data contain the performer looking at the viewer face-to-face, and 78% of videos involve whispering. 70% of ASMR videos have ASMRtists communicating verbally to the viewer, with 24% of videos pretending that the performer can hear viewers’ reply (talk-with videos). 59.07% of videos used at least one type of touch interaction. The pervasive use of conversational content reveals that sound effects are not the only drivers of ASMR; ASMRtists engage viewers and induce ASMR through experiences of one-sided social connection. These results are consistent with the significance of face-to-face interactions noted in prior research [35]. In a multimodal conversation, the performer faces the viewer, communicates in whispers, touches the viewers through camera reaching, touches and introduces triggers, and emulates imagined scenarios. Since
ASMR needs to be triggered with appropriate stimuli [4], and because not all triggers “work” for all viewers, the diverse modalities allow viewers to try out and encounter triggers that can bring ASMR sensations. The social interactions could also foster the feeling of co-presence with the ASMR performer [41]. Interaction modalities such as whispering with/to the viewers and being spatially close up to the camera lead viewers to write more about the social processes in the comments. Even in audio-only videos without visual presentations, ASMRtists play fantasy and romantic roles and chat with the viewers in stories. The analysis of viewer comments suggests that viewers tend to leave more intimate comments to videos with those ASMR components.

These findings imply new pathways to design parasocial experiences with ASMR effects. ASMR interaction techniques can provide social exposure that increases closeness in asynchronous video communication. Video-based technologies incorporating ASMR effects and multimodal ASMR interactions may augment parasocial connection experiences. Since ASMR is proven to offer positive affect, as well as intimate and relaxing experiences for viewers [2, 28], face-to-face video communications can leverage ASMR interactions to transfer the process of speaking-listening to a richer experience with tingling sensations. The social experience pattern captured from ASMRtists’ videos implies that technologies can incorporate ASMR interactions in multiple modalities such as whispering, camera-reaching, emulated back-and-forth conversation, and trigger manipulation in order to induce viewers’ ASMR sensations. Users need both time and variety in order to see if tingles develop, and the multi-modalities allow for that temporal unfolding and variety. For example, applications such as video conferencing tools, podcasts, and social audio apps can potentially introduce multimodal ASMR to reduce the exhaustion and fatigue from long-time use [24]. Voice-based virtual assistants [27] may also include ASMR effects to reduce the robotic sound.

### 2.2 ASMR as an Experience of Relaxing Physical Intimacy

Leveraging attraction and interaction techniques to demonstrate intimacy is also a typical pattern in ASMRtists’ videos. Prior research has explored ASMR as an experience of digital intimacy [2, 16] as well as the ways ASMRtists create roleplay videos to foster intimate feelings with the viewers [41]. This paper overviews ASMRtists’ techniques to design intimate experiences and how these techniques relax viewers and help with sleeping. We find that the most common camera shot scales in ASMR videos are closeups – framing the performer’s face at a near distance while excluding most of their body. Around 30% of videos have the ASMRtists pretending to touch the viewers through camera reaching. About 30% of videos also make close-mic mouth sounds, and 12% manipulate the microphone itself to simulate physical intimacy through sound interactions. These interactions are commonly performed in service-oriented videos such as those involving massage, haircuts, makeup applications, etc. However, our comment analysis suggests that viewers do not express more intimacy to videos with intimate interactions than other videos. On the other hand, videos with close interactions have more comments regarding relaxation and sleepiness-related words. Our results imply that although ASMRtists virtually approach the viewers, viewers expressed relaxing and calming experiences more than intimacy to such videos.

Our findings suggest new opportunities to design ASMR-based applications to present intimacy and deliver soothing experiences. For example, ASMR interactions allow service providers such as masseurs and Reiki masters to offer virtual treatments through ASMR videos. This virtual therapy could provide a possible solution when face-to-face service is unavailable, or for users who cannot afford in-person treatment. People separated from loving relationships [11] or patients living in stressful hospital settings [38] need intimate interactions. ASMR effects with close-mic whispers and near-camera touching could potentially engender a feeling of intimacy to induce relaxing experiences. Virtual social encounters with ASMR performers could also provide alternatives for people with social difficulties (e.g., due to autism or social anxiety) to enjoy safe, calm, regularized social experiences on demand [14]. To augment such experiences, designers can create new ASMR video interactions. For example, ASMRtists use the talk-with and camera-reaching techniques to mimic physical proximity. Novel interaction techniques such as VR, AR, and other telepresence technologies can be integrated to augment the social and virtual presence during ASMR videos. However, we want to remind the HCI community that some ASMR videos were found to connect to sexuality and sexual arousal [4, 35, 37]. The design for intimacy needs to be cautious with this potential side effect, especially when children use ASMR videos.

### 2.3 ASMR as an Experience of Sensory-rich Activity Observation

Prior research have studied roleplay ASMRs as a primary type [17, 22, 35, 39, 41]. However, our findings suggest that more than 70% of videos in our dataset do not have roleplay scenarios. Also, in contrast to the wide use of social and physical attractions, most ASMRtists’ videos do not use task attractions to forge ASMR experiences. Only around 40% of videos in our dataset have identifiable tasks and goals. These numbers indicate that intentional ASMR videos are not limited to roleplays; future work should include the diverse non-roleplays and taskless videos when examining ASMR performance and effects. Videos with tasks include the performance of various physical treatments, eating a large quantities of food, and displaying mundane activities such as playing cards or putting on makeup. Taskless videos can involve casual chatting or object or mic manipulation without showing the performer. The infrequent appearance in videos of purposeful tasks implies that ASMR effects do not require attention or real acts of care to take place. Therefore, many ASMRtists choose not to demonstrate abilities by completing tasks or making clear storylines, but instead remain focused exclusively on the production of triggering effects. The analysis of viewer comments further reveals that eating/drinking videos and videos without tasks or roleplays are associated with viewers’ comments about the body and perceptual processes, indicating that these videos are prone to trigger bodily and perceptual experiences.

Activities of “tasklessness” in ASMR videos don’t particularly care about addressing viewers, adopting a stance of calculated indifference, and this disinvested attitude may be more likely to cause
ASMR feelings [2]. Therefore, any form of videos that does not require close attention except for observing peaceful and repetitive activities – videos such as crafting process demonstrations, instructions for applying makeups or skincare, and tutorials on organizing everyday objects – may consider employing ASMR effects. Prior research suggested that ASMR is an ambient sensory effect in YouTube study-with-me videos [18]. Videos like these may reduce the human presence and intentionally make tingling sounds in the background to trigger ASMR feelings. However, videos that include slow and dull tasks may cause ASMR feelings by accident and could make viewers lose focus and feel sleepy. In those cases, ASMR may need to be avoided if the video is geared toward learning and requires attention. Designers may also consider conveying sensory-rich experiences through Mukbang ASMR or sound-focused ASMR. Watching food-eating videos has shown benefits to mitigate homesickness [15]. People watch Mukbang videos to gain multi-sensory immersion and “commensalism” [3] ASMR can be a sensory experience incorporated in human-food interaction [7, 39]. Interaction designers can generate ASMR experiences by mouth and mic sounds to augment sensory pleasure. Technologies for sensory reality and relaxation (e.g., virtual reality for anxiety-related problems [25]) can incorporate ASMR techniques such as eating/drinking sounds or sound-focused scenes to induce sense of presence and relaxing experiences.

3 CONCLUSION AND FUTURE WORK

This work analyzed the multimodal interactions and parasocial experiences in 2663 YouTube ASMR videos. We annotated how ASMRtists use visual, sound, touch, taste, and roleplay triggers to deliver social, physical, and task attractiveness. We obtained the distribution of ASMR interaction modalities and parasocial attractions. The associations between interaction modalities and parasocial attractions reveal patterns of ASMR experiences. Feeling-oriented words were recognized from viewer comments in order to probe whether different ASMR interactions lead to different viewer feelings. Face-to-face orientation, whispering sounds, and touching objects are the most interaction modalities. Social interactions are common and multi-modeled. ASMRtists implement social and physical attractions, but most ASMR videos do not involve roleplays or contain purposeful tasks. Our results summarize that YouTube ASMR videos provide three experiences: multimodal social connection, relaxing physical intimacy, and sensory-rich activity observation. These experiential descriptions seek to foster future media productions on a wide array of platforms that include ASMR interactions and effects.

Moving forward, we hope this work serves as a seminal study to inspire more ASMR-augmented designs. There are also many open-ended questions to be addressed by HCI researchers and practitioners. First, one limitation of this work is that we only consider intentional ASMR created and shared by YouTube ASMRtists to induce ASMR experiences specifically. Prior studies noticed viewers also experience ASMR with videos such as Bob Ross’ The Joy of Painting and a recording of Lectures on Quantum Field Theory [10, 22], which are not made for ASMR but contains ASMR properties. We did not include unintentional videos without “ASMR” labels due to difficulties recognizing and collecting them from YouTube.

We also consider intentional ASMR interactions to be purposefully designed and performed; therefore, easier to be adopted in design. Future research may compare and contrast the effects of the two ASMR video types. Second, this work does not interview actual viewers to obtain their in-situ feelings of ASMR interactions; viewers’ reactions to different ASMR interactions were obtained from video comments. It is possible that viewers do not externalize all of their feelings of intimacy or relaxation in comments. However, we believe this work provides an overview of ASMR interaction techniques that can guide future studies to examine ASMR-based intimacy and well-being in various use cases [20]. Future research needs to assess the actual effects of ASMR interactions of different people and in different contexts, especially when ASMR interactions are designed for people with social anxiety or disabilities. Third, YouTube creators contribute vernacular creativity [6] to build parasocial relationships. HCI researchers should consider interviewing ASMRtists or involving them in participatory design to understand their preferences and difficulties in managing parasocial interactions. Last, the growing ASMR communities across different cultures [3, 18] encourages HCI studies to examine how ASMR videos affect the creator-viewer communications and relationships. It is valuable to expand ASMR research to non-English videos to have a cross-cultural understanding of ASMR.

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