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Creating, using, and sharing embodied information in the ultrarunning community on Instagram

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Abstract

Introduction. This paper discusses how ultrarunners create, use, and share embodied information on Instagram. The research explores how embodied information is used beyond the run, asking how visual social media digital practices shape how information is created, used, and shared.

Method. Immersive observation of the ultrarunning community on Instagram was used to explore the use of embodied information.

Analysis. Ethnographic data was analysed as an iterative and reflexive process. Data collection, analysis, and writing are intertwined processes in the research design.

Results. The visual affordances of Instagram allow embodied information to be created, used and shared. Six genres of information about ultrarunning, which incorporate embodied information using visual media, are identified. Embodied information relating to the key genres of ultrarunning is shared using on the run video, live broadcasts, photographs of kit and data infographics.

Conclusion. The paper contributes to the body of knowledge about embodied information by providing insight into how visual social media affordances support the creation, use, and sharing of embodied information.

Introduction

This paper presents findings from ongoing doctoral research exploring the information activities of the ultrarunning community on Instagram. It focuses on how ultrarunners create, use, and share embodied information using the multimedia affordances of social media. Ultrarunning is an endurance activity involving running further than a standard 26.2-mile marathon. Participants must have skills and knowledge to cope with psychological and physiological challenges, as ultrarunning demands more than running ability. Ultrarunning is an information-rich activity drawing upon social, recorded, and embodied information (Gorichanaz, 2017b). Embodied is defined as information from and of bodies; bodies are a source of information and a way of knowing (Cox et al., 2017). Embodied information can be experienced in different ways; embodied information is created when bodies are intentionally used to convey information, can be given off unintentionally when others read the body and can be experienced through an individual's awareness of bodily sensations. This research aims to establish how visual social media platforms facilitate the creation, use and sharing of embodied information.

Although running is primarily a physical practice, it is increasingly associated with digital practices. Online fitness communities are increasingly important for many runners (Couture, 2021). Social media is used to seek and share information about running. Runners ask for recommendations about training, kit and nutrition products using Facebook groups (Gorichanaz, 2018), build communities to share running experiences on Instagram (Kurtoglu-Hooton, 2021) and share data on Strava (Couture, 2021). To date, published research about running from an information perspective has focused on runners' experiences using embodied information while running or as part of the training process (Hockey, 2006; Gorichanaz, 2015). However, less is known about how embodied information is used beyond the run and how digital practices shape the ways information is used. Previous research has suggested that embodied information is difficult to document or share digitally (Bonner and Lloyd, 2011; Lloyd and Olsson, 2019a). Digital technology holds the potential for accessing embodied knowledge, but Lloyd and Olsson (2019b) caveat this with a discussion of the difference between watching and doing. The growth of visual social media and new media affordances for sharing information suggests these claims should be re-evaluated. Marcella-Hood and Marcella (2022) highlight the neglect of visual social media in information research, with limited studies focusing specifically on information seeking and sharing using Instagram.

This paper aims to provide insight into the types of information created, used, and shared in the ultrarunning community. The research questions addressed in this paper are:

1. What types of information are created, used, and shared in the ultrarunning community on Instagram?
2. How does Instagram shape how embodied information is created, used, and shared?

The paper discusses how embodied information is created and represented in different forms using visual media. The findings present theoretical implications for embodied information, contributing to knowledge about how embodied information is created and how it can be shared.

Literature review

Embodied information

Embodied information has been recognised as a key source of information in experiential activities (Mansourian, 2020; Gorichanaz, 2018). Lloyd (2010) defines embodied information as information experienced when bodies interact with objects and others in the landscape. Cox et al. describe the body as a '*medium for knowing and a channel for the dissemination of information*' (2017, p. 402). Lloyd (2010) sees the body as possessing visual clues that others can use as information. The ways bodies produce or give off information can be intentional or unintentional (Cox et al., 2017). Embodied information practices are formed through

bodies and social, cultural, and material elements (Lloyd and Olsson, 2019b). Guzik (2018, p. 353) considers how '*physical bodies can act as resources or tools to display information*' through adornment with clothing and other objects. Embodied information is shared through bodily performances, and bodies have been considered performative sites enabling knowledge sharing (Lloyd and Olsson, 2019b).

Embodied information becomes important when a task or activity is grounded in something physical or object-based (Lloyd and Olsson, 2019a). The ways bodies can be read as a source of information have been theorised in relation to information practices in different contexts. In experiential activities, such as running, embodied knowledge from other people is thought of as valued because it is not easily available in documented form (Lloyd and Olsson, 2019a). Based on findings from their work on car restoration, Lloyd and Olsson argue that embodied information is hard to effectively disseminate in digital or written form. Although online videos provided access to expertise that would have been otherwise inaccessible. Lloyd and Olsson (2019b) argue this indicates the potential of digital technology for sharing embodied knowledge but stress there is a difference between watching and doing when engaging with knowledge in a craft. A study by Huttunen et al. (2019) found YouTube and Instagram are important source of information in the information experiences of transgender people. Further research is needed to fully understand the potential of digital spaces for embodied information.

Information and running

The literature about information in ultrarunning has focused on embodied experiences of information on the run and the use of embodied information to build a knowledge base. Runners develop knowledge about running using information from the body whilst training, racing, or dealing with injury (Hockey, 2006; Gorichanaz, 2015). Embodied information in running is created and used in many ways, including monitoring bodily sensations and the visual and auditory information encountered in the environment (Gorichanaz, 2015, 2018; Cox et al., 2017; Hockey, 2006, 2013). Embodied information has been established as important together with recorded forms of information gained from other runners or published sources such as race reports, photographs, maps, and podcasts (Gorichanaz, 2018). Gorichanaz (2018) does not look specifically at information behaviour on social media but found runners were interested in practical tips, advice, and wisdom from other runners. Kurtoglu-Hooton (2021) also finds runners use social media to seek this information. On Facebook, runners participated in groups to seek and share information, asking for recommendations and seeking options about products or solutions to problems. Kurtoglu-Hooton finds runners use Instagram to communicate stories about their experiences with the community. The role of embodied information in these sharing practices needs to be clarified.

Information sharing, creation, and production

For this paper, the concepts of information use, information sharing and information creation are discussed together. In information research, these concepts are increasingly being viewed as linked. Information creation is connected to seeking, sharing, and using rather than existing as an isolated activity (Gorichanaz, 2018). Similarly, Yang and Zhuang (2020) view information sharing as woven together with seeking and creating. Gorichanaz (2017a) discusses Hektor's information activities, arguing that dressing, instructing, and publishing are all forms of information creation: '*dressing involves putting thought and experience into exosomatic form; instructing involves imparting information to others orally or informally; and publishing involves disseminating information more widely or formally.*' (Gorichanaz, 2017a, p. 467). Information seeking has also been conceptualised as part of the process of creating information; information making and information taking are essential to the information creation process (Huvila, 2021). Information is a process of becoming, an idea that shifts the understanding of information from something that exists to something that is brought into existence. Further research is

required to understand these processes of becoming for embodied information.

Social media and content creation

Social media offers greater possibilities for people to act as information creators or information producers. Savolainen (2019) suggests a duality exists for information seeking and sharing with individuals taking on a double role as information providers and information seekers. Instagram has a dual purpose: people share information through documentation of experiences and gather knowledge (Marcella-Hood and Marcella, 2023). Research has addressed how social media platforms are social, technological, and discursive environments which shape how people create, produce, and share information in everyday life (Gibbs et al., 2015). The literature concerned with the impact of platform affordances often focuses on content creators and influencers. Mansour (2020) considers how the affordances of social media influence information behaviour, looking at how the affordances of Facebook enable information-related activities. Olsson considers how the '*cultural-discursive, material-economic and social-political arrangements*' of YouTube shape the information practices of content creators (2022, Introduction, para 5.) of the platform. Content creation is controlled by human and automated moderation processes and is impacted by other factors such as shadow banning and algorithmic bias (Duffy and Meisner, 2022). These processes might shape information seeking; however, existing models of information behaviour do not fully account for the relationship between platforms, people, and information in the context of visual social media such as Instagram (Marcella-Hood and Marcella, 2023).

Gibbs et al. (2015) use the concept of platform vernaculars to discuss the cultural environment of social media. A platform vernacular is a specific genre of communication associated with each social media platform; these emerge from the ways affordances are appropriated and shaped by the communication practices of users (Gibbs et al., 2015). Understanding the platform vernacular is important as it shapes both the type of content shared and how it is shared. The visual genres and forms of communication used on Instagram have changed over time as the platform developed (Leaver et al., 2020). The visuals, language, and aesthetics of Instagram have not only evolved over time but are also different across various subcultures (Leaver et al., 2020). Platform vernaculars on Instagram unfold in relation to the specific practices of a group or context (Gibbs et al., 2015). The use of hashtags is one way that subcultures form on Instagram (Camacho-Miñano et al., 2019). Within running communities, hashtags enable runners to increase their visibility, connect with other runners and participate in conversations (Kurtoglu-Hooton, 2021). Another way subcultures form is through the circulation of images of fit sporting bodies (Toffoletti and Thorpe, 2021). Bodies are increasingly prevalent as the focus of images shared on social media (Boll, 2020). Sharing images of running bodies is another possible visual vernacular created by the running community on Instagram.

Research method

Data collection and analysis took place over ten months between January 2023 and November 2023 as part of ongoing doctoral research. Underpinned by ethnographic methodologies, data was collected through immersive observation and participation on Instagram. This immersive method involved the researcher regularly using Instagram to engage with content shared on ultrarunning hashtags: searching, scrolling, liking, and commenting, to develop an understanding of the experience of using Instagram as an ultrarunner. Various hashtags were regularly observed, including general hashtags (e.g., #UltraRunning #UltraTraining) and race-specific hashtags (#SpineRace; #UTMB). Table 1 provides an overview of the number of posts associated with a sample of hashtags used for this research. Kozinets netnography (2020) and Spradley's (1980) participant observation were used to guide data collection using observation notes and a reflective research diary. Spradley's (1980) dimensions of social situations for participant observation were key in supporting the production of observation notes, following the recommendation to pay attention to spaces,

actors, objects, activities, events, time, goals, and feelings, to capture the experiences and culture of a social situation. Descriptive observations, structured using Spradley's dimensions, were recorded in a research diary. Documenting broad observations using an immersive approach allows for an impressionistic view of the culture to be generated (Glatt, 2023; Kurtoglu-Hooton, 2021). The observational research diary captured insights about the experience of using Instagram and the different forms of information encountered. Thousands of posts were encountered during the observation process; however, only selected examples were recorded. Selected posts were captured in a spreadsheet, by documenting the URL for each Instagram post, allowing the researcher to revisit content for further analysis. In total 711 examples were identified as potential key posts, which were revisited and reexperienced. The research design prioritised being immersed in the experience of using Instagram, using ethnographic approaches to writing as a way of generating a sense of the culture.

Instagram hashtag	**Number of posts**
#UltraRunning	2,500,000
#UltraMarathon	1,100,000
#UTMB	259,000
#GBUltras	19,000
#RaceToTheStones	18,900
#SpineRace	10,500

Table 1. Number of posts for Instagram hashtags (data from March 2024)

Data collection, analysis, and writing were intertwined processes in the research design. An iterative-inductive approach was adopted in which '*data collection, analysis and writing up are not discrete phases, but inextricably linked*' (O'Reilly, 2012, p. 180). The relationship between description, analysis, and interpretation is fluid rather than linear, with analysis happening at various stages of the research process, including coding observation notes, developing analytic themes, creating analytic memos, and writing ethnographic records. A reflexive and interpretive approach to thematic analysis was used to analyse observation notes and selected data sites. Researcher positionality must also be considered as it shapes the collection and analysis of data. The researcher's personal experience of ultramarathon running establishes a sense of insider knowledge; however, insider and outsider positions shift throughout the research (McCurdy and Uldam, 2014). On-going reflexive practice has been used to maintain awareness of the researchers position and establish critical distance (Woodward, 2008). Another limitation of this method is experiences of platforms are highly individual and contextual; it is important to acknowledge how the research data represents my experience of encountering information on the platform, shaped by algorithms and personalisation of content recommendations. As Table 1 highlights, the volume of content about ultrarunning on Instagram is vast, and the researcher only observed a small sample of these posts. Although this method provides insights into information in the ultrarunning community, it does not necessarily reflect the experience of others in the community. This limitation will be addressed by collecting further data using interviews in the next research stage.

Ethnographic observation on social media requires ongoing consideration of complex ethical issues. All content observed for this research was publicly available and located using hashtags. Gaining informed consent is not always feasible when conducting immersive observation of an online space. A cloaking approach has been adopted to protect identities (Kozinets, 2020, p. 400). Cloaking involves changing names and other details without altering meaning. Markham's (2012)

strategy of fabrication suggests constructing composite narratives from the data in place of verbatim quotes to establish anonymity where identities are potentially recognisable. This helps protect high-profile identities in the ultrarunning community, such as race winners or elite athletes. Ethnographic vignettes have been constructed through analysis of observation notes to illustrate key findings with a cloaking strategy used to protect identities. Visual data presents unique ethical challenges concerning anonymity. Informed consent has been gained to use posts from Instagram as illustrative examples for this paper. Where informed consent could not be gained to illustrate the findings, the researcher has created examples whilst in the fieldsite or taken from the researchers own running Instagram account.

Instagram as a field site

Kozinets (2020) recommends considering relevance, activity, interactivity, diversity, and richness when selecting a data site. Instagram was identified as meeting all of these criteria however YouTube, TikTok were also investigated initially. Instagram has a regularly active community with high volumes of daily posts on hashtags associated with ultrarunning. The platform features high levels of interactivity with runners liking, commenting, and sharing. Instagram has three main content types: *Posts*, *Reels*, and *Stories* as shown in Figure 1.

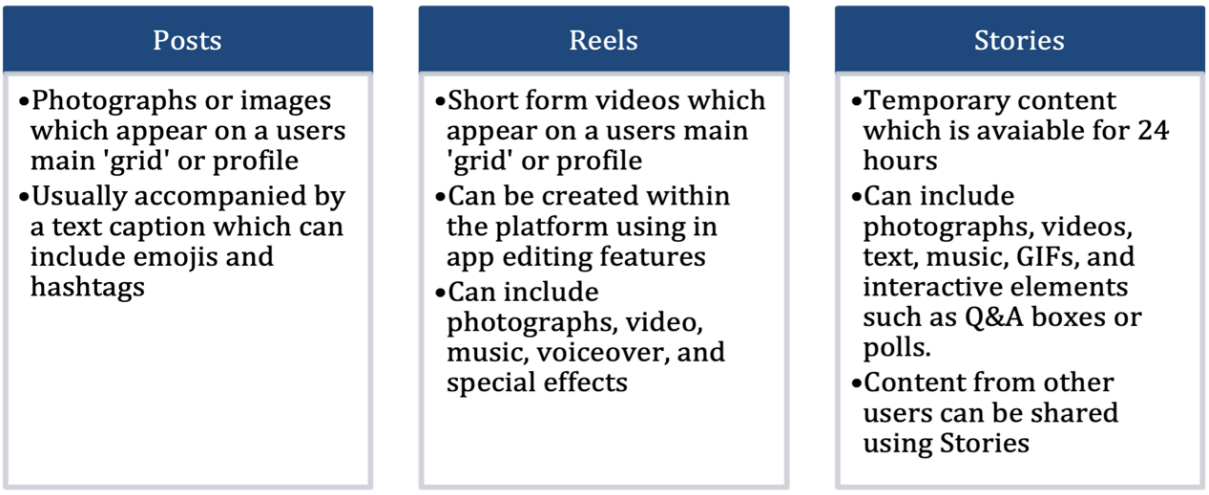

Figure 1. Overview of the different content types on Instagram

Findings

The findings section of this paper is presented in three parts. First, the paper presents six thematic genres of ultrarunning information that incorporate or draw upon embodied information. This is followed by an overview of the use of visual media as ultrarunning information within these different genres. Next, the paper focuses in more detail on two key visual content types identified: on the run videos and self-tracking data infographics. These examples have been selected as they provide insight into different forms and uses of embodied information.

Information activities of ultrarunning

Ultrarunners create, use, and share information about running-related activities, including training, racing and injury management. Six overarching themes were identified which all made use of visual content to convey embodied information. Table 2 presents these themes as a series of ethnographic vignettes that illustrate types of information sharing across these themes. Each genre is associated with different information events and activities. These genres overlap, and often, content can be categorised into multiple genres. However, overall these genres represent the six broad themes generated from the thematic analysis of the

data. Documenting individual practices of running includes sharing training diaries, creating race reports and sharing self-tracking data. Giving advice involved demonstrating exercises, sharing top tips and explaining how to learn specific skills. Promoting products and events involves engagement with brands to review or promote running products often as part of a sponsorship deal or influencer marketing work. Finally advocacy and campaigning includes posts which highlight problems in ultrarunning culture such as diversity and inclusion.

Genres of information	Information events and activities	Ethnographic vignettes
Documenting individual running practices	• Race reports • Training diaries • Sharing self-tracking data	● Race report post using on the run video clips. Includes clips from different points in the race, for example at aid stations eating different foods. Post includes long text caption telling the story of the race experience.
Sharing opinions and critiquing information	• Critiquing information • Sharing peer-review research articles to support advice or information	● Video from a coach discussing the lack of information about training as a female athlete. Research is based on a male body, so a lot of the advice encountered online won't apply to female bodies in the same way. Encourages runners to pay attention to signs and signals from the body.
Talking about problems and challenges	• Sharing stories about overcoming problems • Asking for advice about problems	● Post reflecting on the experience of injury. Shares how they knew something was wrong but consulted with a physiotherapist to seek expert knowledge. Advised to modify training and monitor pain and to stop running if the pain continues.
Giving advice	• Workout demonstrations • How to's e.g., run with poles • Nutrition and fuelling advice • Injury management tips	● Reel from a runner giving advice about training for a race with clips of training. Advice drawn from based on their knowledge and lived experience of training. Tips include focusing on perceived effort, stopping checking your watch, and building up time on feet. Includes demonstration of running technique, stretches and strength exercises.
Promoting products and events	• Tagging brands • Working as an ambassador • Reviewing kit or products • Offering discount codes	● Reel using #AD and paid partnership feature to promote an upcoming race. Personal trainer and content creator turned beginner ultrarunner. Documents training with clips from running and gym sessions with a voiceover narrating their training plan, and nutrition.
Advocacy and campaigning	• Advocacy • Campaigning for equality and inclusion	● Post advocating for better provision for athletes with a menstrual cycle. Sharing experience of managing periods whilst racing; adjusting plan to deal with pain, and impact of hormonal cycles. Also, gives practical advice about managing bleeding and coping with limited access to toilets.

Table 2. Ethnographic vignettes illustrating six genres of information sharing

Embodied information was observed in content relating to all six genres of ultrarunning information. Whilst embodied information was observed in posts from all of these themes; embodied information was used in different ways, sometimes having more prominence or presence in the content. For example, information in the giving advice genre often uses video to show the body performing stretches or strength exercises, producing an explicit form of embodied information in which the body is used to communicate information. In the documenting individual running practices genre, runners often share self-tracking data as infographics, meaning embodied information is represented in visualisations of recorded data about pace, heart rate and cadence. Other examples of embodied information are more indirect. Posts in the critiquing information theme often challenged information from published sources with stories from lived embodied experiences. The ethnographic vignettes in Table 2 provide example stories from the data to illustrate how embodied information is incorporated into different genres of ultrarunning information.

Use of visual media on Instagram

Information takes a wide variety of visual types and forms within these six themes. The full range of Instagram content types and features were used, with *Posts*, *Reels* and *Stories* encountered. The main types of visuals used to share information were photographs, videos, and mixed multimedia posts. Mixed multimedia posts incorporated photographs, video, and other graphic or audio elements together. These types of posts also included posts using infographics. Visuals were often accompanied by descriptive or reflective text which varied, often including emojis and hashtags. Text captions provide more detail about the training session, race, product or experience they share.

Photographs are a key visual on Instagram. Photographs were used to share selfies taken before, during or after a run, as well as in the gym or doing strength work at home. Objects were often the focus of photographs shared on Instagram, objects such as shoes, bags or running watches. Runners share photographs of running kit before a race or event. A flatlay is a style of photography where objects are arranged on a flat surface and a photograph is taken from above as illustrated in Figure 2.

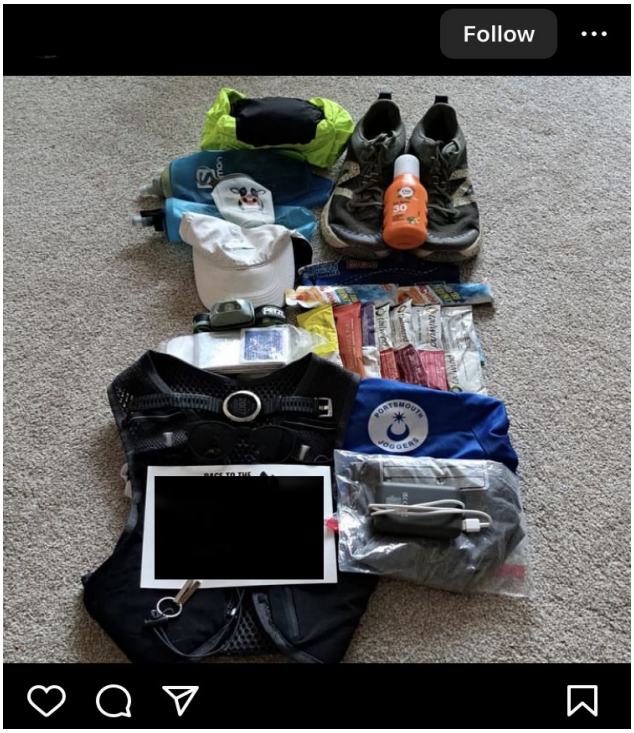

Figure 2. A kit flat lay photograph from Instagram posted before an ultramarathon race.

Kit flat lay photographs were observed to be a popular genre of content, highlighting the importance of clothing and footwear and emphasising the materiality of the sport. Videos were also frequently used to demonstrate exercises or techniques as a form of giving advice. *Reels* were often used to document transitions in the running career, for example, stitching together images and videos to show a transformation or progression, and accompanied by the #TransformationTuesday hashtag. Usually, this shows a transformation towards gaining a fitter body, using before and now photographs. Kit flat lay photographs provide insight into decision-making relating to kit choices. Text captions accompanying the images suggest the use of embodied information when choosing kit or nutrition products. The choice of shoes after a process of testing different pairs to find the best for a specific race. This suggests the body is used to gather information about material objects such as running kit. This information is part of an evaluation process where the value of objects is judged through bodies.

Two key visual content types for embodied information

On the run videos

Race reports are one type of activity where on the run images and videos are often shared. Instagram's Reel format is popular for creating a race report made up of video clips recorded on the run. On the run footage is either shared after the event as a form of race report or can be shared live using Instagram Stories. Ultrarunners were observed sharing video and photograph updates on Instagram Stories during a race. Figure 3 illustrates use of Instagram Stories by ultramarathon runners to share live updates during a race.

Figure 3. Screenshot from Instagram Stories to illustrate use of social media to provide live updates during a race.

This example shows how Instagram Stories is used to document the race as it happens, with updates provided as the race is progressing. Videos were often shared after the event, as a multimedia race report, with video recorded on the run edited together with text or commentary.

Runners combined video filmed on the run, which included *Reels* using a stream-of-consciousness narrative, filmed during the event but shared later. These recorded pieces to the camera involved the runner describing bodily information, and sensory observations about weather and terrain. Reflective commentary added after the event creates a story of the race. One runner discussed nutrition choices throughout the race, filming themselves eating and drinking. They reflected on sensory cues from the body, such as stomach pain and changing taste preferences, which needed to be monitored during the run. By watching runners engage with this information in these videos, it is possible that viewers can learn how to use embodied information during a race.

When video is used to capture moments in a race, viewers are able to experience embodied information in a more directly observable way compared to a textual report. This allows us to gain more immediate insight into the physical and emotional challenges of the race compared to reading a written report produced after the event. We are able to gain information from observing the runners' body about the physical impact of running an ultramarathon. Embodied information is conveyed through observing the body; over the course of a race the runner starts to look tired, with red faces or sweaty skin, or clothing looking more dishevelled. Viewers can also experience embodied information from listening to the sounds of breathing or other noises. Embodied information is also shared

through the movements of the body, with video capturing details of running form, painful movements indicating discomfort or injury, and actions such as checking a watch. Embodied information can also be gained through observing the choice of clothing.

A popular convention for on the run videos is to record video with the camera angled down towards the feet, generating footage which captures the legs and feet in motion. Video captured on the run was often shaky or wobbly, as the runner was filming with a smartphone or action camera whilst running. The viewer is able to experience the run in a similar way to seeing it through the eyes of the runner. This type of content gives insight into the sensations of being a body in action. Video filmed on an action camera or phone whilst running is a way to represent the sensations experienced by the runner's body. The shaky or wobbly quality of on the run video also provides a sense of authenticity or rawness to the embodied information shared. However, choosing to reproduce the shaky movements of running in a video is a strategy to create authenticity, which could imply the content is not authentic.

Although video is usually live or captured in the moment of practice, it can sometimes be staged or curated. A small number of runners were observed sharing insights into the behind the scenes of information sharing. For example, placing a camera on the ground and running past it repeatedly to achieve the perfect shot. The convention for filming from a viewpoint of looking down at feet whilst running can also be manipulated. One runner discussed using a wide-angle camera option when filming 'legs in motion' to make legs look leaner and longer. Staging or curating moments for the camera could be considered less of an issue when viewing on the run content from a race due to the live nature of events. However, when encountering on the run videos documenting the everyday training practices of running it can be more difficult to determine if a photograph has been staged or curated. Furthermore, during a race situation, runners will still be exercising a certain level of curation by choosing which moments to share and how they perform in front of the camera. Figure 3 shows an ultrarunner who is smiling and appears pleased to be eating an ice cream. This could be interpreted as a pleasurable experience during the ultramarathon. However, this could be a performance for the camera, and the viewer might not be given full insight into everything happening at that point in the race. Race reports produced after an event have been through an editing process which produces a different encounter with embodied information compared to being with someone in the moment of practice.

Self-tracking data infographics

Ultrarunners were observed sharing infographics and self-tracking data produced by running watches and fitness apps throughout the observation period. These took various visual forms including posts of maps created from the GPS data recorded on a run, photographs with graphics or data overlaid on the image, and screenshots of fitness tracking apps showing statistics or data from a run. Other types of data from beyond the run were also shared using visualisations or data graphics, for example images of daily step counts, heart rate data and photographs of running watches. Figure 4 is an example of self-tracking data infographics generated by fitness social media platforms, in this case Suunto, which is an app linked to a running watch. In this example, the record of a run has been shared to Instagram as a post with a photograph selected by the runner to depict the run. A text caption and emoji have been added to the image to add further context to the story of the run. Self-tracking data was observed in posts documenting training runs as well as information relating to races.

In these types of posts embodied information takes on a different represented form to videos of the body in action. Bodies are represented as data through the visualisation of data generated by and recorded from the body. Figure 4 includes representation of heart race and pace as a graph, whilst statistics such as the duration of the run, distance and average pace are also included. Use of infographics and data visualisations was frequently observed on Instagram suggesting this is a popular convention for information sharing. Although

these posts do not always feature images of the body, embodied information is an integral part of the content. However, it takes a different form. The information has been created by the body and gone through a process of representation to create a new form of information. This type of content allows runners to share a record of embodied experiences of running.

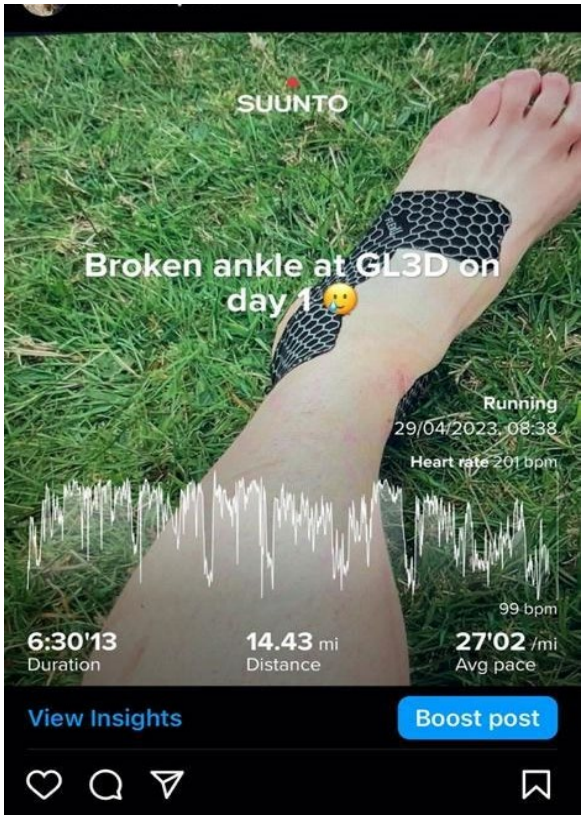

Figure 4. Instagram post with fitness tracker data overlaid on a photograph

Discussion

Embodied information was used in different ways within each genre of information sharing on Instagram, supporting the notion of embodied information as an important source of information for runners (Gorichanaz, 2017b). Ultrarunners were observed documenting the practices of running using visual media. Video, photographs, and infographics combined with audio and textual elements allow embodied information to be observed directly or encountered in represented forms. Ultrarunners use the body as a source of information for information creation. Reflections from runners in text captions and voice-over on videos indicated a process of noticing embodied information. For example, describing bodily sensations such as pain, fatigue or hunger or paying attention to levels of exertion. This embodied information was often used to give advice to others. Demonstrations of technique using video or images allow a viewer to directly observe and gain knowledge. Embodied information was also used to create infographics from data generated from the body. The affordances of the platform influence information behaviour, as in the work of Mansour (2021) where Facebook enables specific ways of sharing information. Communities establish unique and contextual platform vernaculars (Gibbs et al., 2015). The genres of information and repeated use of visual imagery, for example a kit flat lay,

are a platform vernacular which enables the sharing of embodied information.

We are able to see how the body is a means of disseminating information (Guzik, 2018; Cox et al., 2017). Bodies were observed being intentionally and unintentionally used as information across the ultrarunning community. In videos shared on Instagram, embodied information is given off intentionally through curated performances to the camera. We are unable to claim to understand the motivations and intentions of the runners creating the information due to the use of observational methods. However, the immersive approach to spending time in the fieldsite means the findings offer understanding from the perspective of a viewer encountering embodied information. Embodied information is also communicated through objects such as the choices of running kit. This supports the findings of Guzik (2018) in which bodily adornment through clothing can be an important source of information for an observer who wants to develop knowledge. Explanations about the choice of shoe or recommendations for a nutrition product often draw upon embodied information and are framed around reflection on the interaction between the object and the body. Although the body is usually missing from these photographs of objects, there is an underlying thread of embodied information, which has been drawn upon by the runner to generate new information. The physical experience of running cannot be directly shared through visual media on social media. Bodily sensations and sensory experiences are difficult to convey, yet visual information on social media offer ways to share an essence of the experience.

This work builds on findings from Lloyd and Olsson (2019b) about the use of digital technology for sharing embodied knowledge. It has previously been argued that embodied information is not easily shared in beyond the moment of practice due to the tacit nature of the information (Lloyd and Olsson, 2019a). The affordances of Instagram allow embodied information to be accessible without being physically present with a person in the moment of practice. Lloyd (2010) conceptualises bodies as performing information. The multimedia affordances of Instagram facilitate the sharing of these performances to wide audiences beyond the moment of practice. Instagram has been developed since its launch to include features that enable live video broadcasting and smartphone technology, giving runners the ability to create content whilst participating in the sport. Furthermore, on the run video grants access to embodied information through cues like heavy breathing, being able to see the runner struggling, and experiencing the challenging terrain. Instagram allows embodied information to be documented, providing a way for embodied information to continue to exist beyond the moment of practice. Even where an obvious body is missing, it is possible to consider the presence of a body behind the camera or the body that has generated the data. A photograph of a landscape taken on the run provides an opportunity to allow others to see the world through the eyes of the runner.

Conclusion

This research builds upon prior work within information science about embodied information, providing insight into how embodied information is created, used, and shared. The paper concludes that the affordances of Instagram provide new ways to create, use and share information. Building on previous work suggesting embodied information is challenging to convey online, this research contributes new ideas about the potential of multimedia formats. Embodied information can be observed, disseminated, and experienced in new ways through the use video and photograph formats and live on the run content. Findings from this research further develop Lloyd's (2010) suggestion that bodies perform information. The affordances of Instagram allow performances to be captured and shared in ways that might not have previously been possible. Embodied information becomes accessible beyond the moment of practice. However, questions around representation, authenticity and the mediated experience will require further exploration.

The findings presented in this paper also introduce new ways of thinking about the

different forms embodied information can take. We have identified embodied information being performed by bodies and observed the body used as a source of information to inform practice. This research highlights ways that embodied information is used to create new forms of information to share information about ultrarunning. This happens through awareness of bodily sensations, which are documented in textual forms. This research has yet to fully examine these processes of documentation, and further investigation is required. A limitation of this research is a lack of insight into the motivations and intentions of ultrarunners when creating or sharing information on Instagram. Questions emerge around the production processes which enable embodied information to be shared on Instagram, as well as questions about the authenticity of information. Future research is planned using interview methods to better understand the motivations of ultrarunners who create, use, and share information on visual social media platforms.

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