Visible Body Anxiety: The Mediatized Management Practices of Quantifying Body Shapes and Physicality

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Abstract

The proliferation of fitness and exercise-related social media, applications, and wearable devices has provided individuals with convenient tools for body management. These technological means have enabled the mediatized management of bodies, permeating various aspects of daily life. However, this process has also raised tensions regarding the relationship between individuals and media control. This study adopts media visibility and digital rationality as theoretical perspectives, employing qualitative interviews and participatory observation to explore the impact of fitness applications and devices on users' body management practices. It investigates how users navigate the visible/invisible dichotomy of "highlighting" and "concealing" within the data relationships of "quantifying body shapes." The findings reveal that when users face motivational deficits, they often utilize visual body tracking tools to monitor and record bodily data, enabling real-time observation of bodily changes. While "self-quantification" facilitates body management, it also generates new challenges and anxieties. The prevalence of flow-dominated quantification aesthetics leads users to excessively focus on body image and overly rely on technological tools, thereby neglecting the natural state of the body and self-perception, which may adversely affect users' physical and mental health.

Keywords: mediatized body management, fitness apps, wearables, platforms, media visibility, digital rationality

1. Introduction

In recent years, the new generation of information and communication technologies, centered around big data, cloud computing, and artificial intelligence, has rapidly penetrated the sports industry, driving its digital transformation and innovation (Shen & Cao, 2024)[1]. Increasing numbers of individuals are utilizing various fitness apps and devices, which employ sensors such as GPS, pedometers, and heart rate monitors, to track their health data and exercise levels(Yu, 2023)[2]. These fitness apps and devices are widely used in daily life to manage health data and track exercise .

Data tracking and quantification involve integrating body, devices, and generated data into a complex system. For instance, through WeChat's step-tracking and sharing of exercise-related comments and likes, individuals gradually link health, exercise levels, and social interactions, realizing a "mediatized" body quantification practice.

Research on the relationship between individuals and media has primarily focused on relational empowerment, accelerated time, flow control, and social connectivity. Chen (2024)[3] examined the obfuscation of time and space by media technologies in modern society and their reconfiguration of temporal and spatial orders, highlighting the issue of "loss of control" over time brought about by media acceleration and emphasizing the unity of temporal and spatial relationships. Liu (2021) [4]analyzed "data-power" to uncover governance and power dynamics in networked societies, highlighting media's significant role in shaping public opinion. Yu (2021)[5] emphasized that media not only forge social bonds but also broaden and enhance these connections, thus affecting the liberty of human social practices.

Current media studies seldom address the link between the body and media, particularly the individual subjectivity in embodied communication. This study aims to explore users' practices of body mediating management when using fitness apps (including various wearable fitness electronic devices) from a mediatization perspective, examining how human-machine interactions are exhibited and their effects on users, thus further understanding the cohabitation relationship between humans and media in the digital media environment.

Based on this, the following research questions are proposed:

How do users engage in mediated management, and what action strategies do they employ?

In the data relationships of users' "quantified bodies," how do platforms navigate the balance between "highlighting" and "obscuring"?

How can we understand users' mediatized body management practices from the perspectives of platformization and "quantified bodies"?

2. Theoretical Framework and Methodological Design

2.1 Media Visibility

Media visibility refers to how certain information, behaviors, or individuals are seen and perceived within a media environment. According to Thompson, "visibility" means "what can be seen and what can be perceived within the field of vision," while invisibility indicates concealment (Thompson, 1995)[6]. This encompasses the dual meaning of being seen by others and capturing others' attention (Jiang & Kai, 2017)[7]. In 2013, Daniel Dayan introduced the concept of visibility in response to the shift in public spaces brought about by new media, particularly virtual networks. Visibility relates to the fundamental rights of citizens, including the right to be seen, the right to be seen in one's own way, and the power to grant visibility to others (Dayan, 2013)[8].

According to Dayan, in the age of mass media, media serve as "managers of collective attention," granting visibility to events, individuals, groups, debates, and disputes through "monstration" (Dayan, 2013)[9]. As mediators, media not only act as carriers of information but also possess the ability to create and construct reality, involving reorganizing and reconstructing real information. Hu and Wang (2020)[10] argue that visibility can only present the aspects that media can show and are permitted to show, inevitably leading to the concealment of other dimensions. This suggests that people tend to focus excessively on the content and effects of media communication, often neglecting how media, as transparent intermediaries, obscure truth and reality.

Existing research on media visibility primarily focuses on two directions: (1) Media studies extend from the quantification of various visibility indicators. For instance, Scholar He and Dong (2019) [11]explore the alignment between the self-recording of short video users and their need for visibility. (2) Research spanning from Michel Foucault's idea that visibility enhances surveillance power (Foucault, 1977)[12] to the notion of "liquid surveillance" (Bauman, 2002)[13] explores how modern surveillance permeates society's every facet with increasing complexity and variety.

Current studies on visibility mainly concentrate on theoretical discussions and critiques, exploring quantifiable indicators and the applications of social surveillance power. They lack in-depth research on the dialectical relationship between individuals' self-presentation and privacy management within the realms of "visibility" and "invisibility." This paper will examine how users navigate the balance between body presentation and concealment in the context of quantified body data relationships from the perspective of visibility theory.

2.2 Quantification and Digital Rationality

The rise of digital technology has given birth to a form of digital rationality grounded in quantification. The concept of "Quantified Self" was first introduced by Kevin Kelly and Gary Wolf, editors of Wired magazine. It is also referred to as "self-tracking," "body data," or "life hacking," indicating the use of data collection, visualization, cross-analysis, and data correlation techniques to capture various physiological and psychological data from personal lives. In short, quantified self refers to using digital devices to quantify, track, and manage oneself.

With the rapid development of the Internet, big data, cloud computing, and wearable devices, quantifying the body to visualize and concretize bodily functions has become increasingly common. Every individual is a digital entity, with heart rate, sleep, exercise, and study time data being trackable, storable, analyzable, and shareable through smart devices. People can intuitively understand body changes through data, facilitating self-exploration and self-improvement (Long & Yan, 2017)[14]. Thus, quantifying the self is not merely an information-tracking behavior driven by curiosity; it has become a conscious and goal-oriented practice of collection and statistics aimed at reflecting on and enhancing oneself through data-driven rationality.

Current research on quantifying the self and digital rationality mainly focuses on analyzing quantification methods of self-quantification technologies and users' experiences with these devices. Still, there is a lack of in-depth studies on the specific practical processes of self-quantification in body mediating management. This paper will discuss how to view users' mediated body management practices from the perspectives of platformization and quantification of self, with particular attention to how people rationalize their self-quantification behaviors.

3. Research Methods and Design

A combination of participatory observation and qualitative interviews was employed to address the research questions of this study, focusing on user practices of several mainstream fitness and health management

applications (including WeChat Sports, Keep, Xunji, Ledongli, and Lemon Light Fasting) smart wearable devices (such as Huawei Bracelets and Xiaomi Watches). Through multi-dimensional data collection and analysis, the study aimed to quantify the mediated behaviors in self-management.

In terms of participant selection, a combination of purposive sampling and snowball sampling strategies was utilized. Recruitment announcements were posted on campus BBS from May to June 2024, initially screening five eligible university student users. Subsequently, through referrals from these respondents, the sample was expanded to include six working professionals. The final sample consisted of 11 participants, including six university students (aged 18-23), three young professionals (aged 23-39), and two middle-aged users (aged 40-46). All participants met the following criteria: (1) continuous use of fitness apps or smart wearable devices for at least two months; (2) regular body management practices (at least three exercise records per week); and (3) the ability to clearly articulate their usage experiences and feelings.

The in-depth interviews were conducted in a semi-structured format and were carried out in three different ways. For the six young users, face-to-face interviews were conducted around campus fitness centers and other exercise venues, with the entire process recorded and non-verbal behaviors noted, averaging about 37 minutes each. For the three working professionals and two middle-aged users, WeChat voice calls supplemented by WeChat text messages were used, averaging about 45 minutes each.

All interviews revolved around three core dimensions: The first part covered demographic information, including the participant's name, age, occupation, and duration of body management practices (such as fitness, dieting, weight loss, and fat reduction). The second part explored the participants' motivations, frequency, and methods of using smart fitness devices (including but not limited to sports watches, fitness bracelets, WeChat mini-programs, fitness apps, heart rate monitors, smart treadmills, smart spinning bikes), with a focus on specific data metrics. The third part delved into the participants' experiences and feelings using these apps, their perspectives on and interpretations of quantified self-behaviors, and the physical and psychological changes they observed before and after using smart fitness devices.

Prior to each interview, informed consent was obtained, clearly outlining the scope of data usage and privacy protection terms, resulting in a total of about 87,000 words of transcribed text. Upon completion of data collection, the researcher meticulously read and analyzed the transcribed texts, extracting core topics and key concepts discussed by users. These were then subjected to phenomenological analysis, conceptual refinement, and theoretical induction. Through rigorous analysis and discussion, the study's central argument was formulated.

Table 1. Basic Information of Interviewees

Number	Name	Age	Body Management Duration	Health & Fitness Application	Interview Duration	Interview Method
S1	Willow	46	18 months	Joyrun	34 min	Wechat voice call
S2	WJ	45	6 months	Keep	56 min	Wechat voice call
S3	ZSQ	19	18 months	Ezon Sport & Apple Health	45 min	face-to-face
S4	DAN	35	3 months	Train Journal 3Dbody	37 min	Wechat voice call
S5	cuicui	39	2 months	Keep	56 min	Wechat voice call
S6	Tony	20	3 months	Huawei Health	28 min	face-to-face
S7	LZH	20	24 months	Ledongli	53 min	face-to-face
S8	Qin	23	12 months	WeRun	43 min	Wechat voice call
S9	ZQJ	21	11 months	Keep	26 min	face-to-face
S10	Liu	19	24 months	Xiaomi Smart Band	30 min	face-to-face
S11	Bird	20	2 months	Lemon Light Fasting APP	41min	face-to-face

4. Mediated Body Management: Body Regulation Under Data Standardization and Self-Monitoring

Digital technologies and smart devices are driving body management into a highly mediated space, enabling users to externalize internal bodily data through devices and apps. By visualizing and tracking metrics via charts and data interfaces, users can better monitor bodily changes and align long-term goals with body ideals.

4.1 Body Visibility: Digitalization of Bodily Information and Dependence on Media Technology

The visibility of bodily and movement information is one of the key reasons users choose to utilize smart devices and applications. It allows users to intuitively and simply understand bodily changes. Movement information

primarily includes data, images, videos, text, and tests. Fitness apps carefully design visual elements to present movement data in a visually representative form, thereby enhancing the speed and readability of information transmission. Smart devices and fitness apps transform internal, invisible bodily changes into external, visible forms. This presentation means that users outsource their bodily intuitions to "unbodied" data media (Xu & Deng, 2021)[15].

However, with the rapid advancement of media technology, the boundary between the body and technology has become blurred. Technology is not just an extension of human senses and powers; technology also shapes and defines the human body. Katherine Hayles introduces the significant concept of the "posthuman", suggesting that smart machines act as "prostheses" that gradually expand and replace the human body, arranging and shaping connections that tightly integrate smart devices with human bodies (Hayles, 1999)[16]. Digital devices and bodies will coalesce into a new system entity through interactive practices with humans, achieving a symbiosis between body and technology. From Hayles' perspective（1999）[17], smart devices and fitness apps exist not merely as external tools for bodily information but, through the enhancement of digital technology, elevate users' bodily perceptions from a physiological level to a data level, with various bodily indicators recoded as data. This digitalized form of bodily existence also becomes part of users' self-cognition.

"I can't live without a weighing scale. I even want to take it with me when traveling. When I don't weigh myself, I have no intuitive concept of my body. After eating midnight snacks for some time, I gained nearly 15 catties in a short time. Because I avoided weighing myself, I didn't realize that my weight was soaring. It wasn't until my knee started to hurt that I realized it was time to lose weight..." (S11)

The most primitive understanding of the body by humans remains at the perceptual level. However, this perception lacks timeliness; its triggering requires certain conditions to be met. For instance, bodily diseases can only be perceived when symptoms are manifest. In the latent phase, there are no noticeable abnormalities from a perceptual standpoint, so relying solely on human perception inevitably leads to delays. Smart devices thus become a necessary extension of human sensory organs.

"Getting used to weighing myself every day enables me to control my weight consciously. I bought a body fat scale. It can transmit various body indicators to my mobile phone. I can see the changes compared to before every day, and I also feel more supervised..." (S13)

Visualizing data and immediate feedback enhance users' awareness of bodily changes, eliminating the risks of misjudgment associated with subjective perception. This also serves a short-term supervisory role, bolstering users' self-management awareness and motivation. Users gradually build trust and reliance on data in such quantified body management practices. Intelligent tools, akin to "weight scales" have created a cognitive and practical system that integrates with the human body. Under the overwhelming trust in data, media continuously permeates every aspect of human life, controlling perceptions of the "body."

4.2 Visible Goals: Dataism-Driven Satisfaction of Body Ideals

With the advent of the new media era, people's "digital" existence has gradually deepened into a "data-driven" existence, where data has become the medium through which individuals interact with the digital space (Lu, 2011)[18]. In sports, the various metrics and data generated by athletes quantify physical activity into calculable and analyzable objects. These can be recorded and shared through fitness apps or smart sensor devices, allowing for detailed feedback and personalized recommendations.

"I go for morning runs in the Olympic Forest Park every day. In the beginning, I would be out of breath after running two or three kilometers. Now, I can keep running continuously for an hour. My weight is also slowly dropping. The mileage is increasing little by little. Those data put together will give me a lot of internal drive." (S1)

When users engage in physical challenges that match their skills or present slight difficulties, their brains release endorphins. This post-exercise endogenous endorphin is linked to a form of "reward mechanism" that enhances users' self-efficacy, encouraging them to pursue their next workout and fostering an "addiction" to voluntary exercise that is sustainable over time (Bandura, 1997)[19]. By establishing weight loss and fitness plans focused on outcomes, users can break down large objectives into smaller, more manageable milestones. Through data feedback, they gain insights into their shortcomings and make strategic adjustments based on their goal expectations, gradually moving closer to their desired state. "Outcome expectations" can alleviate the distance between users and their ideal bodies, satisfying their body fantasies and continuously motivating them to persist in autonomous exercise and body management.

At the same time, continuous data feedback and self-monitoring may induce psychological pressure. The digitization of bodies has fostered performative behaviors in social platforms (Bandura, 1991)[20], where individuals showcase their exercise achievements and physical conditions in pursuit of self-identity and a sense of superiority as athletes. This behavior can exacerbate social comparisons and competition centered on data, driven by the platform's algorithms.

"My roommate often sees all kinds of handsome guys and beautiful women with good figures on RED (Xiaohongshu, a social platform in China similar to Instagram). There are amazing waist-hip ratios. A certain beautiful woman said that she would lose ten catties and she did. She is very anxious and dislikes that she always can't control her mouth. " (S11)

The overwhelming visual impact of singular aesthetic body images recommended by social platforms can create a significant shock to the viewer, leading many users to develop the impression that "human bodies should be like this." This perception can result in excessive concern over their own physical imperfections, causing anxiety. During the process of self-quantification, individuals gradually accept and internalize data norms, developing a psychological dependency; data originally intended to enhance the self can become a burden that restricts the body (Long, 2016)[21].

4.3 Process Visibility: The Dynamism and Unpredictability of Body Management Plans

Fitness is a dynamic process, with outcomes that are not fixed but often fluctuate. While quantifying body management provides individuals with visible goals, this dynamism and unpredictability frequently make achieving those goals challenging. Many users experience varying levels of motivation when facing fitness objectives—sometimes feeling energized and driven, while at other times, the pressures of daily life can diminish their motivation, leading to setbacks in bodily data. Although monitoring data and target figures may appear clear, they often fail to capture individuals' true states throughout their fitness journeys. Plans frequently struggle to keep pace with changes, resulting in deeper anxiety and inner conflict.

Time management presents a common challenge, as unavoidable daily obligations—such as overtime work, social engagements, family responsibilities, and impromptu meetings—can disrupt regular body management plans. *"Sometimes I am suddenly called to a meeting or have to meet a deadline. The originally planned exercise time is occupied. Running alone at night to achieve the mileage goal is really quite frustrating." (S7)* In real life, some users find that despite setting clear fitness goals, various unexpected events disrupt their plans, making it challenging to continue meeting their data targets. The experience of "giving up halfway" has become a significant obstacle in body management. The accelerated sense of time leads to fluctuations in motivation for implementing fitness plans, making their trajectories unpredictable and causing psychological uncertainty.

Dietary control is another common difficulty, as data monitoring does not guarantee self-discipline. *"I always want to eat snacks at night, especially when physically exhausted after the team's training. It is very difficult to resist the temptation to go out for midnight snacks with my teammates." (S8)* The act of "eating" carries social attributes and emotional connections, with individuals seeking opportunities to connect with others while being concerned about their social relationships and personal image. Breaking established social habits to meet personal health data goals involves a difficult psychological struggle. In social contexts, individuals face not only the challenge of their own willpower but also significant external influences, making the unpredictable oscillation between dietary control and loss of control not entirely resolvable through data alone.

However, there is a segment of users who adopt a more relaxed mindset and do not view quantitative goals as burdensome. They believe that merely achieving a breakthrough from "zero" to "one" is satisfying. Interviews reveal that these users often have normal bodily metrics and a high sense of body acceptance. They primarily engage in quantified body management to maintain the status quo and pursue their interest in exercise. *"I'm hardly ever anxious. More often, I feel physically and mentally pleasant after exercise. I get up early and run every day, and then go to work in a refreshed state." (S1)*

These users view fitness as a form of self-care and a means of mental and physical regulation. For them, quantified body management is merely a tool for improving their lifestyle, and their commitment to exercise is driven more by personal interest than by the need to fulfill a certain quota or pressure.

5. Dynamic Aesthetics or "Cultural Industry" Standards: The Evolution of Body Management Metrics

As body metrics become more precise and self-monitoring more rigorous, body management takes on high datafication and industrial traits. Individuals use technology to reduce body management to complex data, increasing the frequency and intensity of self-monitoring. This trend leads to self-alienation and performance-

focused social interactions. Digital media transform the body into an object of aesthetic consumption, scrutinized in social settings and competitive environments driven by platforms and algorithms.

5.1 The Evolution of Quantification Standards: Data Industry Manufacturing and the Alienation of Body Aesthetics

In traditional societies prior to the advent of capitalism, the body was primarily seen as a "tool" for achieving practical purposes such as combat, production, and reproduction, rather than as an end in itself. Traditional ideals often regarded the body as a medium through which other utilitarian goals could be attained (Tao, 2007)[22]. However, with the development of capitalist economies, the technological advancements in modern warfare have diminished the traditional reverence for physical strength, while large-scale industrial production has reduced the demand for manual labor. Improvements in living standards have led to a decrease in reproductive desires among younger generations, and the concepts of consumption and pleasure have gradually become legitimized. In this context, the utilitarian functions of the body have been weakened, with greater attention directed towards its appearance, aesthetic value, and consumption attributes, marking a shift from "utilitarian" to "aesthetic" orientations.

Brian Turner refers to this phenomenon as the "social dislocation" of the body (Turner, 1996)[23]. Unlike in traditional societies, where the body was perceived as an innate gift from parents and immutable, modern individuals tend to view the body as malleable. With the help of technology and data, they believe that through effort, they can achieve their ideal body and appearance. The "beauty industry" has emerged, focusing on the body as a raw material for production, prioritizing external appearance over inner qualities. People pursue more appealing bodies and justify these pursuits with reasons such as health and longevity, even though these goals often contradict genuine health needs.

The media agenda in this era tends to homogenize, constrained by government, platforms, and other entities, creating a simulated environment that aligns with mainstream values. This environment presents similar dominant ideologies, and authorities and platforms often suppress dissenting views, which can also lead to social pressure. Consequently, individuals rarely express opinions that diverge from popular consensus. Over time, this hinders the maintenance of critical thinking about reality and the development of independent thought systems, particularly evident in the realm of beauty and body aesthetics.

"The popular aesthetic nowadays is that men should be taller and women should be thinner. But height is a very helpless thing. It is challenging to approach one's ideal height." (S7)

Under the influence of mainstream online discourse, people lose their capacity to evaluate the singular standards of societal beauty critically. This external pressure compels individuals to accept a unified standard of "beauty." Although the "beauty industry" greatly enhances the malleability of body image, the decisive role of genetics in determining physical attributes is difficult to alter. When individuals are conditioned by platform rhetoric, dissatisfaction with their innate genetic features can lead to excessive concern over perceived bodily flaws, resulting in anxiety and confusion.

As societal expectations of body image continue to evolve, the standards of aesthetic evaluation and body management metrics are also subject to change. Aesthetic standards have shifted from an emphasis on slenderness to a focus on balance, and from celebrating femininity to valuing strength. To achieve these elevated aesthetic goals, individuals are required to invest more effort and time.

5.2 Continuous Involution of Metrics: Accelerated Body Competition and Self-Alienation

In the processes of fitness and body management, body self-monitoring is an effective strategy to enhance individuals' awareness of target behaviors and their surrounding environment. Higher frequency, greater detail, and more comprehensive self-monitoring and self-optimization behaviors can assist users in better managing their bodies and establishing a progressively deeper internal self-requirement (Burke, Wang & Sevick, 2011)[24].

With advancements in monitoring technology, body management has gradually been refined into a data-driven process. Digital media capable of accurately expressing human bodily information inevitably exacerbates the detailing of monitoring metrics. Initially, users typically reference simple and intuitive bodily indicators, such as weight and body fat percentage. However, as users deepen their understanding of fitness knowledge and enhance their body management goals, these primary indicators are increasingly supplanted by more complex and specialized data, such as heart rate, pace, stride length, and step frequency. This relentless pursuit of data achievements further intensifies users' focus on detailed metrics.

"Heart rate is very important and it is also the main reason why I use a smart bracelet. Judging whether it is aerobic, anaerobic, or mixed oxygen through the heart rate value." (S7)

Users' challenges and explorations of their bodies during exercise are staged and layered, and the types of metrics they pay attention to are also continually refined. Technological tools serve not only as passive data collection devices but also as active body management instruments. Through interaction with users, these tools prompt more meticulous planning and adjustments to their exercise regimens.

" Generally, aerobic exercise is the main one. The heart rate should be kept below 167. Occasionally, when guided by sports results, the intensity will be increased and a higher pace will be pursued."(S7)

In this context, data acts as an invisible overseer, constantly urging individuals to achieve higher goals in shorter timeframes. According to the theory of "social acceleration" proposed by Frankfurt School scholar Hartmut Rosa, the three driving forces behind social acceleration are technological acceleration, rapid social change, and increased pace of life (Rosa, 2018)[25]. Consequently, individuals find themselves perpetually striving to keep up with a fast-paced society. In this scenario, media technology acts as a catalyst; as reliance on digital technologies heightens and individuals become controlled by them, personal time becomes fragmented and disrupted by digital monitoring and optimization behaviors, hindering the formation of lasting memories and life significance (Lian & Deng, 2020)[26]. This sense of acceleration exacerbates data anxiety in body management, trapping individuals in a cycle of pursuing improved data metrics within a limited time, transforming body management from a means of enhancing health into a form of data-driven self-oppression.

"In recent years, the popular carbon plate running shoes have carbon plates installed in the soles, which have better rebound and are suitable for people who pursue speed and performance data. However, carbon plate running shoes are actually very harmful to the body. The arch and knees will be damaged. I don't like wearing carbon plate running shoes, but sometimes I still have to wear them for the sake of performance." (S7)

In the quest for efficiency and greater achievement, users often fall into a cycle of data anxiety, progressively neglecting their bodies' actual capacities, and even contemplating enduring long-term health risks to achieve short-term goals.

6. From Passive Pull to Active Adjustment: Agency and Behavioral Transformation

Under the influence of algorithmic recommendations from digital platforms and aesthetic standards from social media, individuals often find themselves in a passive position, governed by external forces. However, as users accumulate experience with digital technologies and deepen their understanding of body data, they begin to actively utilize these technologies to assist in their body management according to their personalized needs, rather than merely relying on singular external standards.

6.1 Return to Digital Rationality: Focusing on Self-Improvement

American scholar Cass Sunstein introduced the concept of "Information Cocoons" in the context of the growing prevalence of personalized information services in the digital age (Sunstein, 2008)[27]. In the early days of the Internet, cocoons served as echo chambers for information, where users passively received content and exercised subjective agency solely through self-selection of information. With the rapid advancement of online media, information cocoons have shifted from passive reception to active output. These personalized cocoons have become reprocessing factories for homogeneous information, continuously amplifying the spread of similar content, which severely impacts the quality of information in the public domain. Consequently, behaviors and ethics that were once reasonable in traditional media contexts have been pushed out of people's normative knowledge systems (Hu, 2020)[28].

"There are a large number of handsome men and beautiful women with great figures on social platforms. Everyone is posting beautiful photos, creating the illusion that most people have such high - level appearance and perfect bodies. Few people are willing to show their fat bodies or unrefined faces because people don't like to see that as much." (S3)

Within the environment of information cocoons, individuals' information acquisition tends to become singular and closed off. While it is essential to optimize platform and algorithm models to address this issue, the root cause lies in individuals' psychological inertia and behaviors that lead them deeper into a vicious cycle of reliance on algorithms and reinforced preferences. Influenced by "selective attention," individuals are more inclined to focus on aspects of information that align with their preexisting attitudes, avoiding exposure to information that contradicts their beliefs and behavioral habits (Peng, 2020)[29]. Diversifying information acquisition platforms and comparing information across multiple channels can alleviate the impact of information cocoons on personal rationality.

"I post about running on WeChat Moments because there are special moments that I particularly want to record, such as completing a half-marathon for the first time, running in Singapore for the first time, or running with old

friends. When I see the running - related data and accompanying pictures that I have posted before, I will recall the state at that time. This is the purpose of my sharing these data." (S1)

In the pursuit of gaining favor from platforms, users tend to share body data content that aligns with platform preferences, resulting in a tendency toward homogeneity. This calls for a reevaluation of the motivations behind the mediated sharing of body data. In the media environment characterized by "information cocoons," focusing on documenting personal growth in body management can effectively maintain rationality, using media to encourage action and witness personal progress.

6.2 Resisting the Data Industry: Breaking Free from Body Stereotypes

The aesthetic standards imposed by platforms and the influence of the data industry profoundly permeate individuals' daily lives and interpersonal relationships. With the rise of social media, individuals are subtly burdened with specific body images and aesthetic expectations, leading many to adopt a passive acceptance mindset. This often results in frequent comparisons between their real bodies and idealized versions, causing heightened concern over personal appearance and physical details (Pan, Zhou & Tang, 2024)[30]. An interesting phenomenon emerged during interviews: while some respondents firmly denied the assertion that "fat represents ugliness and thinness represents beauty," their preferences regarding body image and partner selection still leaned toward the thinner side, revealing a disconnect between their beliefs and actions. This suggests that although individuals intellectually recognize that beauty is not solely determined by body size, they are inevitably influenced by social media and mainstream aesthetics in practice. Such stereotypes are deeply ingrained, making it challenging for individuals to completely escape the pursuit of thinness, even when they endorse a more diverse notion of beauty.

"People always equate being thin with self - discipline, health and normalcy, mainly due to the influence of the images of fitness stars on the Internet. I have a normal weight but look chubby, and I'm also worried about being classified as not self - disciplined." (S4)

This confusion is widespread, as the aesthetic standards perpetuated by platforms, through constant reinforcement, shape individuals' perceptions of themselves and others.

However, in the current social environment, an increasing number of people are beginning to recognize the diversity of bodies and are attempting to resist the singular aesthetic standards generated by the data industry.

"There are always some people who are special enough. They can break the stereotype with their own charm and expose the narrowness of those worldly views." (S3)

"I seldom use body data to flaunt or belittle a person. Nowadays, it's normal for people to work from 9 to 5 and work overtime. People are already short of time and energy in fitness and sports. " (S11)

There is a growing acknowledgment that individuals measured against a standardized benchmark are labeled and flattened, whereas humans themselves are complex and multifaceted. The binary aesthetic standards of "fat versus thin" and "beautiful versus ugly" are gradually being dismantled in modern society. Yet, under the increasingly powerful influence of the data industry, breaking free from quantitative benchmarks and embracing diverse forms of beauty remains a progressive and complex endeavor, closely tied to the rhythms of social life.

6.3 Active Media Disconnection: "lying flat" under Introspective Reflection

The terms *"lying flat"* and *"slacking off"*, as new variants of subculture on social media, are viewed by youth as a philosophy of life that embodies the notion of "shameful but useful avoidance" (Wang & Chen, 2022)[31]. Scholars argue that the phrase *"lying flat"* expresses a sense of "lack of ambition," highlighting a confrontational relationship between youth subculture and mainstream culture. When faced with insurmountable structural challenges, young people may opt for a strategy of *"lying flat"* (Han & Lu, 2023)[32]. As *"lying flat"* has become a popular term on the internet, more young individuals self-identify with it, using it as an emotional outlet to relieve stress and express negative feelings through its inherent negative connotations.

Experiencing fatigue and difficulty during the self-quantification process of body management is common. Inadequate execution of plans or challenges in other aspects of life can lead to temporary motivational depletion. Humans are not machines; it is unrealistic to continuously operate solely for a quantitative goal. When reaching a certain threshold of exhaustion and facing a lack of motivation, resting and restarting become intermittent strategies for maintaining body management. Just as the college runner S7 said:

"I often give up and start over again... I ran more than 500 kilometers last year, but I've been "slacking off"since April this year. Because some troubles in my studies and relationships have exhausted me. " (S7)

This notion of *"lying flat"* is not a passive abandonment of body management but a conscious choice to isolate oneself from external pressures under profound self-awareness. It involves returning to everyday offline life and focusing on one's true inner needs, actively withdrawing from the endless competition driven by externally set data and goals.

"When I don't want to get up early to work out, I will choose some alternative exercises, such as volleyball. It's more interesting and suits me very well." (S9)

When it becomes challenging to adhere to original plans, choosing to relax and *"lying flat"* represents an approach centered on personal experience and joy. By selectively disconnecting from external influences through data-sharing mechanisms, individuals can temporarily shift their focus to other activities, seeking pursuits that resonate with them. Although *"lying flat"* may not yield substantial data progress in the practice of self-quantified body management, as a strategy, it aids individuals in freeing themselves from pressure, regaining a sense of control over their authentic offline lives, and maintaining a clear mind and sustained motivation in their body management endeavors.

7. Conclusion and Discussion

This study employs qualitative interviews and participatory observation to explore the impact of fitness applications and wearable devices on users' body management practices. The findings indicate that these applications and devices facilitate users in intuitively perceiving and understanding their bodily changes through convenient tracking and real-time monitoring features. However, as users pursue detailed metrics, there is a risk of excessive reliance on technological tools and a blind quest for data superiority, potentially neglecting the body's natural state and self-perception.

However, when facing the structural dilemmas of self-quantification, individuals do not merely become passive subjects of media; those subjected to bodily discipline exercise agency by either adopting a passive *"lying flat"* resistance or actively embracing their imperfect bodies, opposing pathological aesthetic standards while advocating for healthy body images and positive life attitudes.

The phenomenon of public sharing and comparison of body data has intensified, giving rise to body anxiety. Platforms gradually change creators' production methods and motivations through algorithmic recommendations and traffic allocation. With the involvement of platform capital, traffic has become the primary pursuit for creators, and content production is increasingly dominated by platforms and capital (Hu & Nian, 2022)[33]. Platforms prioritize aesthetically pleasing content and body images through algorithms and traffic distribution, creating a form of "aesthetic discipline," while body features that do not conform to mainstream aesthetics yet present natural human states are obscured or neglected. This mechanism of "highlighting" and "concealing" leads to biases in users' bodily perceptions, resulting in extreme adulation for the aforementioned ideal bodies and strong disapproval of more ordinary physiques. Individuals influenced by such discourse can easily develop an endless "body anxiety" in pursuit of these ideal forms, often unaware that most of these aesthetic ideals are distorted.

To some extent, the public display and comparison of body data intensify competitive dynamics among individuals, forming a hidden competition for social capital. When the body becomes central to personal social interactions, a body that aligns with popular aesthetics possesses a significant advantage in discursive power, serving as quantifiable leverage for garnering likes and attention. This competition is especially evident in dating and workplace contexts, where individuals in vulnerable positions may experience feelings of inferiority due to self-disapproval, while society tends to evaluate themselves and others solely through the quantifiable metric of "physical appearance."

As society increasingly prioritizes efficiency and speed, digital technologies provide convenient tracking and monitoring of bodily data while rationalizing various aspects of individual lives. Blind worship of efficiency may trap people in an endless cycle of optimization, ultimately sacrificing the richness and authenticity of life. Moving forward, we should challenge the pathological aesthetic standards dominated by platform capital, advocate for diverse body management criteria based on scientific principles and centered around health, support groups that focus on learning, and work to enhance life satisfaction through appropriate medialized body management.

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