Measuring the unknown: Evaluative practices and performance indicators for digital platforms

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Abstract

Purpose: In the current digital era where online content is riddled with fabricated metrics and rankings, this research aims to investigate the underpinning mechanisms of the calculative practices which actors engage with to evaluate online platform content in the absence of well-defined performance measures.

Design/methodology/approach: The paper focuses on the online, photo-sharing platform Instagram which is devoid of common performance measures such as rankings, ratings and reviews. The authors applied netnographic methods to capture users' actions and interactions at the Greek Instagram community. The authors adopt a practice lens as informed by Schatzki's 'site ontology' to capture actors' calculative practices as organized by rules, teleoaffective structures, general and practical understandings.

Findings: Platform actors engage in aesthetic and palpable evaluations of other user profiles and their posted content. They employ permissible (e.g. using third-party apps) and illicit (e.g. lobbying and procuring engagement) tactics to measure and manage online platform performance, fabricate metrics and blur others' evaluations, in pursuit of prestige and material teleologies. Their calculative practices are conditioned by an implicit social etiquette which permeates the platform both horizontally and vertically.

Originality/value: First, the paper captures and theorizes the mechanisms which underpin actors' calculative practices for performance measurement in the absence of robust judgement devices. Second, it demonstrates how ambiguous assemblages of material and prestige teleologies, aesthetic and palpable evaluative regimes, implicit rules and practical expertise, collectively invoke online platform actors' calculative practices and the construction of performance measures. In doing so, it contributes to performance measurement literature via demonstrating how management accounting is implicated in the evaluation of online platform outputs.

Practical implications: The paper provides insight on how platform actors fabricate performance metrics, what they perceive as 'good' online content, what constitutes an 'impactful' user account or a 'successful' social media campaign. Such findings are valuable to management accountants, entrepreneurs and practitioners who seek to evaluate online platform performance.

Keywords: Instagram, performance measurement, performance indicators, practice, social media, digital platforms

Paper type: Research paper

1. Introduction

The proliferation of digital technologies such as mobile and cloud computing, online retail spaces, social media and networking sites has led to a rapid re-shaping of organisations, markets and entire industries (e.g. Kornberger et al., 2017; Jeacle, 2017; Arnaboldi et al., 2017a). In addition, the popularity of social media and the diffusion of online platforms have revolutionized traditional modes of business and generated new professions. For example, 'Influencers' and 'YouTubers', as individuals who use social media and online platforms, affect purchasing behaviour via their digital presence, and 'Social Media Managers' commission them as brand ambassadors in elaborate social media strategies to raise brand awareness and exposure. Within this context, there has been a growing interest in performance measurement as organizations aim to achieve predetermined goals related to their digital business strategy, marketing and social media managers endeavour to evaluate calculative and narrative information and individuals aim to evaluate online platform content, emanate credibility and persuade others by virtue of trustworthiness to generate income. Thereby, what constitutes useful information and how different actors measure reliable and verifiable data (Arnaboldi et al., 2017a) is important but often obscured.

The need to re-conceptualize performance measurement in the digital era is evidenced by an emerging stream of research on the nexus of online platforms, social media technologies and management accounting information. Recent accounting studies have focused on the accountability relationships and calculative practices behind TripAdvisor's rankings (Jeacle & Carter, 2011; Scott & Orlikowski, 2012), the evaluative practices behind eBay (Kornberger et al., 2017), the role of management control practices and accountability in the governance of Airbnb (Leoni & Parker, 2018; McDaid et al., 2019), the performance ratings and reviews behind the Internet Movie Database (IMDB) (Bialecki et al., 2017) and auditability on Amazon.com (Jeacle, 2017). Contrary to such studies, research on performance measurement practices and online platforms is still scarce (e.g. Bonsón & Ratkai, 2013; Agostino & Sidorova, 2017; Arnaboldi et al., 2017b) since the performance evaluation of online platforms' outputs is often criticized as highly subjective, with user preferences and engagement being difficult to measure or even being fabricated. For example, performance measurement becomes convoluted upon suspicions of false reviews and star ratings on online platforms such as Booking.com, TripAdvisor, Amazon and eBay (e.g. Jeacle & Carter, 2011; Scott & Orlikowski, 2012; Jeacle 2017). Similarly, the evaluation of Uber drivers and AirBnB hosts engenders a 'tit-for-tat' culture whereby both user and service provider submit perfect evaluations to each other after the transaction is complete (see also Kornberger et al., 2017; Leoni & Parker, 2018; McDaid et al., 2019).

This overall motivation leads to our core research question: "*What are the underpinning mechanisms of the calculative practices which actors engage with to evaluate online platform content in the absence of well-defined performance measures?".* We explore this question through an in-depth investigation of the online photo-sharing platform Instagram, which, unlike most other online platforms, is devoid of rankings, ratings and reviews. Instagram only has a few 'judgement' devices (Karpik, 2010; Bialecki et al., 2017) available to accommodate performance evaluation, such as users' number of followers, likes and comments per photo. However, Instagram users can easily 'game the system' and fabricate such numbers, e.g. through purchasing 'followers' and 'likes' from third-party sources, affecting the credibility and trustworthiness of the performance measures. Thus, this study is important because it sheds light on how to evaluate online platform content, what

constitutes an 'impactful' user account or a 'successful' social media campaign, and how management accounting is implicated in the evaluation of such online outputs.

In light of our aim, we adopt a practice lens to investigate how accounting frames and shapes our actors' calculative practices for performance measurement. As such, we draw inspiration from studies which adopt a practice perspective (e.g. Hopwood, 1989; Ahrens & Chapman, 2007; Jørgensen & Messner, 2010; Nama & Lowe, 2014). We engage with Schatzki's 'site ontology' (Schatzki, 2002a) to capture actors' calculative practices as 'organized human activities' which are conditioned by rules, teleoaffective structures, general and practical understandings. Thus, Schatzki's practice approach equips us with an analytical framework and a useful vocabulary which enables us to trace actors' means and emotions, their broad conceptualizations of value and detailed tactics of how they evaluate performance.

Through our theoretical approach and in-depth qualitative methodology, the paper offers two significant contributions. First, we contribute to prior performance measurement literature by capturing and theorizing the mechanisms underpinning actors' calculative practices for performance measurement in the absence of well-defined performance measures. In addition, our paper argues that assemblages of material and prestige teleologies, aesthetic and palpable evaluative regimes, implicit rules and practical expertise, collectively organize and ignite platform actors' calculative practices and the construction of their own performance measures. As such, we demonstrate how management accounting is implicated in the evaluation of online platform outputs.

The remainder of the paper is organized as follows: first, we review key literature on the nexus of performance measurement, online platforms and social media technologies. The following section presents our research setting before we proceed to discuss Schatzki's (2002a) site ontology and explain our theoretical framework. Next, we outline our methodological approach which is followed by the presentation of our empirical findings and analysis. Next, we draw on this analysis to answer our research question and build on our findings to offer new insights. Finally, the last section outlines our study's limitations and suggestions for future research.

2. Performance measurement: Related literature and conceptual basis

The study of performance and how it is measured has intrigued accounting researchers for many decades. A textbook view of performance measurement describes it as the systematic process of evaluating the progress and outputs of an employee or a business unit by using explicit and well-defined performance measures. This broad conceptualization has directed scholarly attention towards investigations of the process of evaluation, the design characteristics of performance measures and the organizational implications of the performance measurement and management system (e.g. Ittner et al., 2003; Chenhall, 2005).

Existing research recognises the critical role played by performance measurement systems in managing a plethora of different organizational aspects. Accounting research suggests that well-designed performance measurement systems enhance organizational performance, facilitate strategy implementation, influence behaviour and encourage action (e.g. Davis and Albright, 2004; Franco-Santos et al., 2012; Melnyk et al., 2014). Seminal studies have postulated the significance of both financial and non-financial information in measuring and controlling performance, such as in

the Balanced Scorecard (Kaplan & Norton, 1992; 1996) and Robert Simons' Levers of Control framework (Simons, 1995). In addition, several studies have demonstrated that performance measurement systems can support organizational learning and innovation (Mahama, 2006; Cruz et al., 2011), reduce uncertainty, ambiguity and goal conflict (Burney & Widener, 2007; Cheng et al., 2007), motivate and empower managers (Hall, 2008; 2011). Taken together, these studies support the notion that performance measurement systems and their design characteristics are instrumental for how actors behave, how organizations perform and what they are capable of (Franco-Santos et al., 2012).

Recent developments in the field of performance measurement have led to a renewed interest in accounting devices such as rankings, ratings and other forms of classification. Studies show that well-defined performance measures such as rankings and ratings simplify complex structures, quantify qualitative traits, facilitate the commensuration of often incommensurable things, place them in hierarchical orders and popularize their subject matter (e.g. Espeland & Sauder, 2007; Karpik, 2010; Pollock & D'Adderio, 2012; Kornberger & Carter, 2010). For example, Karpik (2010) uses the term 'judgement devices' to refer to rankings, ratings, guides and critics, among others, to describe devices which facilitate the evaluation of 'singularities' such as music, film, art, wine and literature. He argues that judgement devices not only enable a process of commensuration but also further enable users to reflect on the meaning of the judgement itself. Other studies have also emphasized the constitutive power of rankings in shaping markets (e.g. Pollock & D'Adderio, 2012; Schultz et al., 2001) and igniting economic activity (e.g. Espeland & Sauder, 2007; Karpik, 2010).

Within this context, a well-established body of literature has investigated the, often negative, effects of performance indicators. For example, research on performance measurement in education highlights the various transformative and economic implications that rankings, league tables and journal classification systems have on the evaluation of quality on research outputs, academics and institutions alike (e.g. Gioia & Corley, 2002; Carter, 2008; Guthrie & Parker; 2014; Tourish & Willmott, 2015; Rowlinson et al., 2015). In addition, Espeland and Sauder (2007) comment that rankings facilitate reactivity between market actors. Through investigating law school rankings, the authors argue that actors adjust their behaviour in response to their performance being evaluated and conform to the construction criteria of the rankings themselves. Also, Power (2015, p. 49) commented upon the "classificatory and visual power" of Impact Case Study (ICS) templates for evaluating the vague notion of research impact at UK universities.

Despite the importance of performance measurement systems and performance indicators on organizational and social life, there are relatively few studies which shift their attention to the valuation practices of how value is captured (Helgesson & Muniesa, 2013; Doganova et al., 2014) and "*how performance as an object of knowledge is observed and "learnt""* (Mehrpouya & Samiolo, 2016, p.13; see also Chenhall et al., 2013). This paucity of research also resonates with the need to reconceptualise notions such as *performance*, *employees* and *business units* of traditional performance measurement descriptions in response to the social network and sharing economy business models which permeate today's digital age. To address this need, a practice lens on performance measurement provides a useful vocabulary which helps frame notions of value and valuation.

Research which investigates valuation as a social practice explores both valuation practices (assigning or producing value) and evaluative practices (assessing attained value) as the two notions often co-exist in real life (Lamont, 2012; Helgesson & Muniesa, 2013; see also Vatin, 2013). In such studies, value is perceived as a social construction which is an outcome of a valuation process, depends on the desirability of actors but can attain objective dimensions through processes of objectification (Helgesson & Muniesa, 2013). For example, the subjective value of a research paper can be objectified through valuation devices such as peer reviews and journal rankings (Karpik, 2011, see also Kornberger et al., 2015). In addition, the object and subject of the valuation is often obscured, since valuation practices are characterized by distributed agency where "*experts, critics, but also non-human agents, such as algorithms, are involved in practices of valuation*" (Kornberger, 2017, p.1760) and actors who are valuated may also engage in valuations of their own valuators (Müller, 2018). However, the implicit calculative practices which actors engage with to evaluate online platform content in the absence of well-defined performance measures is a new territory which requires further investigation.

Collectively, these studies outline a critical role of performance measures for the evaluation of economic activities. These views emphasize the role of 'devices' (Callon, 1998) in the performance of economic activities and render them 'performable', 'knowable', and 'calculable' (Callon et al., 2007; Callon & Muniesa, 2005; MacKenzie, 2009; McFall, 2015; Muniesa, 2014). However, the trustworthiness of such devices is often contestable under an online platform context, since platform users may engage in gaming tactics which result in performance measures riddled with fabricated metrics and rankings. Thereby, it is important to re-examine online platform performance measures and how platform actors engage in performance measurement practices, since the traditional measures and practices are eroded. Existing accounts have not yet drawn on systematic research on the use of performance measures in the context of social media technologies and online platforms. In this regard, it makes sense to look closely on performance measures in social media technologies and online platforms to develop an initial conceptual backbone for understanding the reasons why online platform actors often find it challenging to measure the value provided by other platform actors and their posted digital content. In what follows, we offer a review of related literature and a conceptual basis which addresses these limitations of extant studies.

3. Performance measures, social media technologies and online platforms

Over the last decade, the diffusion of digital technologies in everyday life and the increasing prominence of user-generated content in the daily workings of contemporary organizations has given rise to an emerging stream of research which explores the role of accounting in social media technologies and online platforms, such as TripAdvisor (e.g. Jeacle & Carter, 2011; Scott & Orlikowski, 2012); Amazon and eBay (Jeacle, 2017; Kornberger et al., 2017) Airbnb and IMDB (Leoni & Parker, 2018; McDaid et al., 2019; Bialecki et al., 2017), focussing primarily on the effects of ratings, rankings and reviews. Along with studies on music, fashion, sports, film and television (e.g. Andon & Free, 2012; Jeacle, 2014; Carter & McKinlay, 2013; Carlsson-Wall et al., 2017), accounting research on the nexus of social media and online platforms provide insight on how user-generated content and digital technologies have the power to reciprocally shape, as well as be informed by, popular culture (see also Jeacle, 2012; Jeacle & Miller, 2016; Jeacle, 2017). However, research on performance

measurement *of* social media content and online platforms is still scarce. In most cases, scholars aim to investigate and explore the role of pre-constructed performance measures in the context of online platforms.

Online platforms are characterized "*by distributed and often switch-role producers (sellers) and consumers (buyers) interacting with each other, digitally mediated by a third party, the platform owner*" (Kornberger et al., 2017, p.79). This definition highlights that one of the main objectives of online platforms is to facilitate commercial transactions between sellers and buyers. Under this framing of online platforms, Kornberger et al. (2017) explore how evaluative devices such as the ratings, rankings and reviews that permeate online platforms are more than mere referencing artefacts which territorialize objects. They argue that "*platform interfaces consist of an ecology of accounting devices in the form of rankings, lists, classifications, stars and other symbols ('likes, 'links', tags, and other traces left through clicks) which relate buyers, sellers, and objects*" (Kornberger et al., 2017, p.81) . Through an in-depth exploration of the product marketplace eBay, they comment that evaluative devices intertwine actors, preferences, actions and objects, while generating new things to account for, such as trust between anonymous, unbeknownst to each other, users.

In a second example of an e-commerce platform, Jeacle (2017) comments on the omnipresence of auditability in the reviews and ratings of the online retail platform Amazon. She argues that lay users who provide online reviews assume the role of a virtual auditor, thus summoning auditability through the measurability and verifiability of reviews and reviewers of the platform. As such, performance measures can shape a new economic reality through an 'audit society' (Jeacle, 2017; Power, 1997) whose power and influence does not only inform an audience but also shapes the market around it (Jeacle, 2017; Muniesa, 2014). In addition, Leoni and Parker (2018) explored management control of the accommodation sharing economy platform Airbnb. In their netnographic investigation, the authors demonstrate how the platform translates ratings, reviews and communication metrics between users (buyers) and hosts (sellers) into performance measures in the form of ratios and ratings to exert power, govern users' behaviours and align host and platform objectives. Finally, in their investigation of Airbnb users and performance indicators, McDaid et al. (2019) demonstrate that the overwhelmingly positive reciprocal evaluations of performance which pervade the platform limit the credibility and 'crowdbased accountability' that ratings and reviews emanate, thus forcing users to seek assurance in different sources.

Accounting research has also investigated calculative practices at online platforms which primarily function as repositories for reviews and ratings rather than to facilitate commercial transactions. In their study of the travel website TripAdvisor, Jeacle and Carter (2011) explore how calculative practices in the form of hotel popularity rankings elicit trust. The authors argue that such practices rely on the reviews and ratings of lay users which collectively imbue objectivity, impartiality and rationality in such performance measures. Similarly, Scott and Orlikowski (2012) demonstrate how TripAdvisor rankings combine individual users' subjective experiences with the objective calculations of a ranked scale for neighbouring hotels, thus radically changing accountability relations in the travel sector. The authors argue that TripAdvisor rankings have radically changed accountability relations in the travel sector, since hotel owners are no longer accountable only primarily to their guests and few inspecting rating agencies, but also to the anonymous masses and the popularity rankings of the website. Finally, in exploring film performance ratings and reviews of the Internet Movie Database (IMDB), Bialecki et al. (2017) argue that users often assess which film to watch after

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further reviewing reviewers' profiles, in an effort to identify users with similar film tastes like their own when the existing numeric and narrative film evaluations are contradictory.

The aforementioned online platforms (e.g. Amazon, TripAdvisor etc.) are often described as social media technologies or platforms (e.g. Jeacle, 2017) as they primarily rely on user-generated content and incorporate social network characteristics where platform users can follow other users, share content, ask questions and interact within platform forums with other community members. However, other studies distinguish between online platforms and social media, describing social media as the technologies whose main feature is "*the possibility to connect with other users worldwide and to access, post and share information on a regular and continuous basis*" (Arnaboldi et al., 2017a, p.762), such as YouTube, Facebook, Twitter and Instagram.

Research, however, on performance measurement of social media technologies such as Facebook, Twitter and Instagram is still scarce. Although there are some recent studies that showcase the difficulties of measuring performance in the absence of reliable performance information, they provide limited insight into contexts which lack credible and trustworthy indicators. For example, Gallaugher and Ransbotham (2010) highlight the barriers of linking Return on Investment (ROI) to social media engagement since the latter depends on underlying attributes such as customer focus and organizational innovation. This is also explored, to a certain extent, by Agostino and Sidorova (2017) who investigate how customers and companies interact through social media and identify the performance indicators of a telecommunications company, focussing on rankings, engagement scores and Influencer measures. In their study, they argue that "*a variety of measures can be found to quantify the sentiment of conversations, and the debate on the most appropriate metric is still open*" (p. 42). Overall, within this context the emphasis is on the value of a good or service and there is clear distinction between producer and customer. However, such distinctions are blurred on social media platforms where the evaluation is not the result of calculations of existing indicators (such as stars) but the "*outcome of practices and processes of valuation*" (Kornberger et al., 2017, p.85).

Similarly, few extant studies identify the need for capturing and constructing new performance measures and metrics on social media platforms (e.g. Arnaboldi et al., 2017b; Van Alstyne et al., 2016). For example, Bonsón and Ratkai (2013) develop a new set of metrics to capture engagement on corporate Facebook pages, and Sharma and Srivastava (2017) design a metric which attempts to capture electronic Word-of-Mouth on social media, based on user questionnaires. Arnaboldi et al. (2017b) investigate social media governance and highlight how non-accountants, such as marketing managers, engage with performance measurement practices with social media technologies. In addition, Agostino and Sidorova (2016), based on a review of relevant literature, conceptualize a performance measurement framework which aims to quantify the financial and relational social media impact. Such studies highlight the need for the construction of new performance measures based on social media since the digital revolution is still underdeveloped, while calling for a heightened awareness to the benefits and detriments that the current digital movement may bring on management accounting's ability to facilitate rational decision-making and its expectation thereof (Quattrone, 2016).

With this conceptual background, we embark on an intensive case study of Instagram, a social media platform that is devoid of well-defined and trustworthy performance measures, to understand the implicit calculative practices which actors engage with to evaluate other users and their posted

online platform content in the absence of robust performance measures. The following section presents our empirical setting, outlines the platform interface and highlights how users interact within the platform.

4. Context of the study

4.1 Platform interface and user interactions

Instagram, in its core function, is an online photo and video sharing social networking app where users can share and discover digital content. Within the platform, users can capture photos and videos, edit them, add various filters and effects, pinpoint their location, tag other users and eventually publicly post them through their Instagram feed. Figure 1 displays the platform interface of a mock user profile page[1], a posted picture page and an example of the main platform feed which contains the frequently updated posted content of the user's social network.

Figure 1. Examples of a user profile, a posted picture page and a feed page
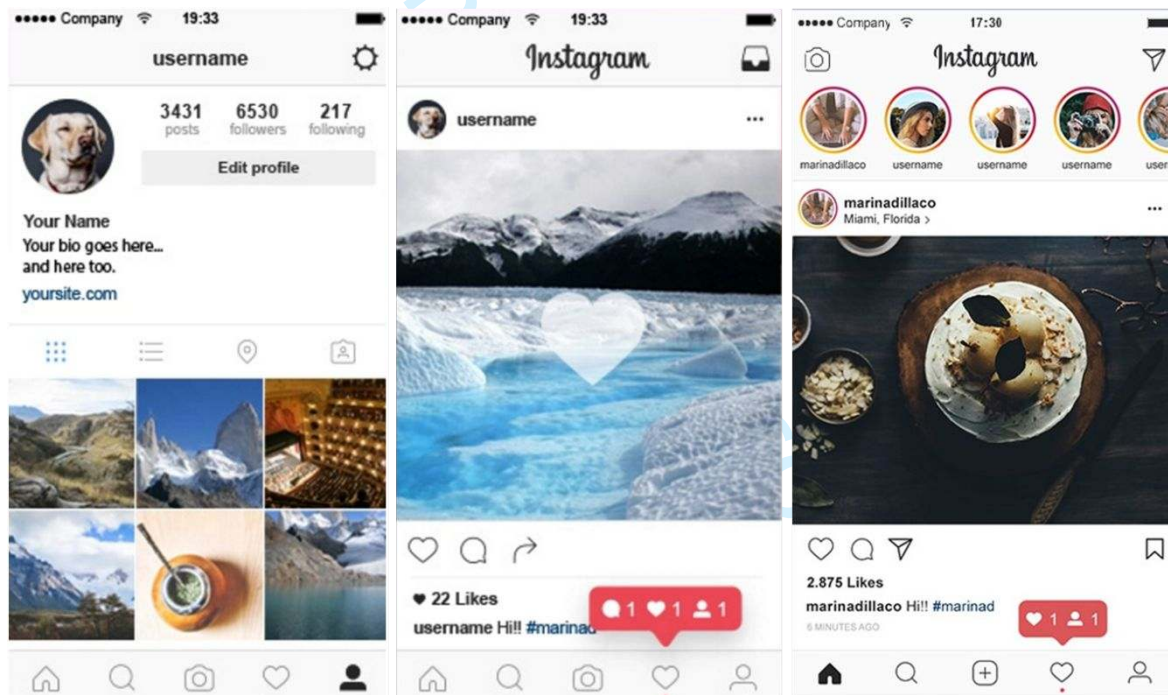
As depicted in figure 1, Instagram users can follow and unfollow other users and the number of followers and those being followed, excluding those of private accounts, are observable by the public. For example, one can observe that the mock user of figure 1 has posted a total of 3431 pictures or videos, is followed by 6530 and follows 217 user accounts respectively. In addition to users' regular posts which hold a permanent position in their user profiles, they are also able to upload ephemeral posts, also known as 'Instagram Stories', containing photos and videos which disappear after twenty-four hours. Users are able to like and unlike photos, write comments on posts, save them, react on stories and browse other users' content by tags and locations. As indicated in the posted picture page and the feed page of figure 1, information such as the number

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[1] Illustrations created by artist Marina Dillaco

of likes and comments that a picture has acquired, the post's tagged location and users' Instagram Stories are visible to all members of the user's social network. In contrast, Instagram Stories attract comments and responses which are visible only to the user who posted the story.

Popular elements on Instagram are also hashtags and hubs. Hashtags can be placed in Instagram Stories, in a caption or the comment section of a post. Each hashtag has a corresponding page which aggregates users' content incorporating the hashtag. Users employ hashtags to describe very specific characteristics of their posts and include them in thematic aggregations. For example, users can incorporate the hashtag #sunrise in their posted content, so that users who search for digital content with this hashtag are able to discover the specific post and its creator without the prerequisite of following them. Finally, hubs (also known as feature accounts) are thematic groups which reproduce photos of users who have previously included the hub's branded hashtag in their digital content – a practice also known as 'reposting'. Hubs are very powerful Instagram profiles with thousands of followers and users incorporate their branded hashtags to leverage hubs' large audience and thus raise their profiles' awareness and increase their followers.

4.2 Empirical context

Instagram was founded by Kevin Systrom and Mike Krieger in 2010 and acquired by Facebook in April 2012 for $1 billion. As of June 2018, it has more than 1 billion active users worldwide and keeps steadily adding 200 million users a year. In the same year, Instagram generated $9 billion in revenue out of which 6.84$ billion were advertising revenue[2]. Instagram is profoundly reshaping the world of work since many business processes are currently taking place beyond organizational boundaries. As a result, Instagram has created new job opportunities such as 'social media managers', 'content creators' and professions such as 'Influencers', thus generating possibilities for individuals to produce income through alternative forms of employment. Influencers promote their niche line of work for commercial purposes and companies commission them to act as their brand ambassadors. As a result, companies condition their marketing strategies to adapt to this new social media milieu. As evident from the preceding discussion, this new industry of influencers, as of late 2018, is estimated to be worth $6.5bn[3]. In addition, small business ventures such 'Influencer agencies' and third-party mobile phone apps aim to piggyback off the platform's momentum. For example, thousands of digital apps exist which take advantage of Instagram's application program interface (also known as API), offering customized photo editing tools and additional metrics such as 'Recent Unfollowers' measures.

In addition to the creation of this vast online ecosystem, Instagram has entered multiple facets of life. For example, in education, universities and smaller communities therein (e.g. student unions) use the platform to inform, engage and interact with students, as well as serve their marketing strategies via creating exposure, promoting and advertising their services. Also, Instagram is a particularly good example of a social media platform for the aims of the study. It is devoid of well-

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[2] eMarketer. n.d. Worldwide mobile internet advertising revenue of Instagram from 2015 to 2018 (in billion U.S. dollars). Statista. Available from https://www.statista.com/statistics/448157/instagram-worldwide-mobile-internet-advertising-revenue/. Accessed 16th August 2019

[3] https://influencermarketinghub.com/influencer-marketing-2019-benchmark-report/. Accessed 16th August 2019

defined performance measures, there is an absence of negative voting (e.g. a 'dislike button'), and the vast majority of the comments are positive (see also, McDaid et al., 2019). The aforementioned reasons question even further potential performance indicators which are ill-defined and paved with dubious trustworthiness and credibility of their metrics.

Within this contextual background, the following section outlines the theoretical framework we utilize to capture platform actors' calculative practices.

5. A practice perspective on performance measurement

This study adopts a practice lens to investigate actors' calculative practices in online platforms devoid of rankings, ratings and reviews. The practice turn in accounting research traces its origins in Hopwood (1987; 1989) who investigated the social embeddedness of accounting practices, '*the meanings and significances that are attributed to them and the other organisational practices and processes in which they are embedded'* (Hopwood, 1989, p. 37). Significantly inspired by Hopwood, and drawing from the works of several social theorists (e.g. Schatzki, 2002a; Reckwitz, 2002), the contemporary practice turn of accounting research seeks to focus less on how accounting merely informs specific organizational processes, such as performance measurement, and concentrates more on how accounting forms and shapes the organizational processes themselves, thus delving into '*what people do, why they do what they do, and what consequences their doings have that social theorists always tried to explain'* (Jørgensen & Messner, 2010, p. 186).

This study's theoretical lens is informed by Schatzki's practice approach (2002a; 2005; 2012), which has been characterized as "*one of the strongest and far-reaching versions of practice theories available to date"* (Nicolini, 2013, p. 15). Schatzki defines practices as "o*rganized human activities"* and *"organized, open-ended spatial-temporal manifold of actions" s*uch as *"political practices, cooking practices, educational practices, management practices, shop floor practices, and design practices"* (Schatzki, 2005, p. 471).

Similar to previous notions of practice as a routinized behaviour or an array of activity (Reckwitz, 2002), Schatzki places practices as being part of a social site (Schatzki, 2002a). He suggests that practices are organized human activities which are interlinked by four elements, namely *rules, practical understandings, general understandings* and *teleoaffective structures*. We describe below each dimension and trace them within recent accounting studies.

5.1 Practical understandings

Practical understandings entail actors' knowledge and abilities to perform activities. Schatzki (2002a, p. 77) describes practical understandings as the *'… knowing how to X, knowing how to identify X-ings, and knowing how to prompt as well respond to X-ings'*. In addition, Schatzki also discerns practical intelligibility which is "what makes sense to a person to do" (Schatzki, 2002b, p. 75) and argues that it is individual actors' practical intelligibility and their teleoaffective structures which determine specific courses of action that later inform collective practical understandings.

Practical understandings have been explored by accounting studies which adopt a practice approach. For example, Ahrens and Chapman (2007) investigated the practice of designing a menu and argue

that restaurant managers did not fully grasp the concept of a target food margin but drew on their practical understandings of how their restaurants operate on a daily basis as a resource that enabled them to work towards achieving their strategic objectives. Similarly, Jørgensen and Messner (2010) highlight how managers involved in new product development processes shared similar (general) understandings of what their division's strategic objectives entail, but their different levels of experience with local practices led to actors' different practical understandings. Nama and Lowe (2014) pinpoint a range of practical understandings of private equity firm practices, such as the need to understand market conditions, clients' intentions, how to present investment suggestions to potential clients and how to behave in meetings as indicative of the practical knowledge that actors need to have for practices to be successfully performed. In the context of this study, practical understandings may refer to the specific actions in which actors engage with to increase their following and their audience's engagement.

5.2 General understandings

The notion of general understandings, unlike Schatzki's other practice dimensions, has been weakly described (Caldwell, 2012; Nama & Lowe, 2014). Schatzki defines general understandings as '*abstract senses, for instance, of the beauty of an artisanal product or of the nobility of educating students'* (Schatzki, 2012, p. 16). General understandings, unlike practical understandings, do not require extensive knowledge on how activities are performed, but a level of knowledge that enables a person to generally understand, or make sense, of the performed practices. General understandings are parts of many practices and are bound to the organizational setting in which such practices reside (Jørgensen & Messner, 2010). Manifestations of general understandings are found in the way people perform their day-to-day job activities (Schatzki, 2002a) and can also be located in what they say (Nama & Lowe, 2014). For example, accounting information may act as a general understanding that reminds actors of notions such as profitability and the functionality of numbers (Jørgensen & Messner, 2010), instil a 'general awareness' of strategic messages at local contexts (Ahrens & Chapman, 2007) or foster actors' 'insular thinking' and 'open judgement' (Bui et al., 2019). In the context of our study, users' general understandings of online platform engagement may relate to simple notions such as that a platform users' large volume of followers and 'likes' is a measure of a 'good' account.

5.3 Rules

Rules are the clear guidelines that determine how arrays of activities are performed. They are the *'explicit formulations that prescribe, require, or instruct that such and such be done, said, or the case'* (Schatzki, 2005, p. 471). Rules are usually imposed hierarchically by actors who possess the authority to enforce such principles, aiming to regulate action or to create new activities (Nama & Lowe, 2014). Studies suggest that rules help actors navigate through complicated and uncertain situations (Jørgensen & Messner, 2010) and often need to embrace imposed rules to succeed in operational activities (Nama & Lowe, 2014). Schatzki (2002a, p. 80) suggests that rules exist in social life and aim to navigate and identify the course of activity, and are not '*explicitizations of previously unarticulated understandings' or 'tacit or implicit formulas or contents'*. Thus, Schatzki makes a clear differentiation between rules and understandings.

5.4 Teleoaffective structures

In conclusion, a teleoaffective structure is '*a range of normativized and hierarchically ordered ends, projects, and tasks, to varying degrees allied with normativized emotions and even moods'* (Schatzki, 2002a, p.80). Teleology is an account of a purpose and refers to the goals and ends of an array of activity, while affectivity describes the '*accepted or prescribed emotions and even moods'* (Schatzki, 2010, p. 51). Thus, a teleoaffective structure broadly refers to the goals and emotions of a practice (Schatzki, 2002a; Caldwell, 2012; Bui et al., 2019). Schatzki (2002a) suggests that there is no definitive way that a practice is performed, since organizational actors can have different and multiple teleologies. Although accounting studies which employ Schatzki's site ontology have emphasized on the teleological part of the term, teleoaffectivity has been associated with actors' actions towards obtaining a sense of community and pursuing "*profit, success, and self-esteem*" (Schatzki, 2002a, p. 163), achieving profitability and strategic objectives (Ahrens & Chapman, 2007; Jørgensen & Messner, 2010), servicing clients (Nama & Lowe, 2014) and adhering to legislative and public demands (Bui et al., 2019).

The use of Schatzki's practice approach in analysing practices as bundles of understandings, rules and teleoaffectivities provides a useful vocabulary which allows the close examination of the calculative practices in which actors engage with and helps us to understand how they navigate and interact through online platforms. The following table summarizes the key dimensions of Schatzki's practice framework and outlines examples of the respective practice dimensions in recent empirical studies.

Table 1. Dimensions of Schatzki's practice framework (2002a; 2012)

Dimension	*Definition*	*Examples in empirical studies*
Practical understandings	'*…knowing how to X, knowing how to identify X-ings, and knowing how to prompt as well respond to X-ings'* (Schatzki, 2002a, p. 77) "*the ability to perform, identify and respond to an action*" (Caldwell, 2012, p. 289)	Managers' knowledge of daily operations to work towards achieving strategic objectives (Ahrens & Chapman, 2007) Practical knowledge of market conditions, clients' intentions, how to present investment suggestions and how to behave in meetings (Nama & Lowe, 2014)
General understandings	'*abstract senses, for instance, of the beauty of an artisanal product or of the nobility of educating students'* (Schatzki, 2012, p. 16) "*General understandings combine with teleology in the determination of human activity, they specify ends and purposes, stipulate forms of activity and inform how objects and events can be used in the pursuit of particular ends and purposes*" (Schatzki 2010, p. 152)	General understandings are intrinsically linked with teleoaffective structures and actors' "*shared beliefs, goals or values within a social or religious community*" (Caldwell, 2012, p.291; see also Nama & Lowe, 2014; Bui et al., 2019) The 'general awareness' of strategic messages at local contexts (Ahrens & Chapman, 2007) A reminder to actors' understanding of notions such as profitability and the functionality of numbers (Jørgensen & Messner, 2010) Actors' 'insular thinking' and 'open judgement' (Bui et al., 2019)

Rules	*'explicit formulations that prescribe, require, or instruct that such and such be done, said, or the case'* (Schatzki, 2005, p. 471)	Imposed hierarchically, create new activities, enforce or regulate action. Actors often need to embrace imposed rules to succeed in operational activities (Nama & Lowe, 2014)
		Rules help actors navigate through complicated and uncertain situations (Jørgensen & Messner, 2010)
Teleoaffective Structures	*'a range of normativized and hierarchically ordered ends, projects, and tasks, to varying degrees allied with normativized emotions and even moods'* (Schatzki, 2002a, p.80)	Achieving profitability and strategic objectives (Ahrens & Chapman, 2007; Jørgensen & Messner, 2010)
		Servicing clients (Nama & Lowe, 2014)
		Adhering to legislative and public demands (Bui et al., 2019)

With this conceptual background, we embarked on an empirical study of Instagram to address our considerations. In what follows, we present our methodological approach.

6. Methodology

Internet and the emergence of digital platforms set the underpinnings not only for new entrepreneurial opportunities, but also for new research avenues and methods. Enormous amounts of data can be collected very quickly through online interviews (Salmons, 2014), web surveys (Dillman, 2011) or even online focus groups (Stewart & Williams, 2005). According to Jeacle (2017), blogs, online forums and user review sites can be explored through adopting virtual ethnography. There are some seminal studies in accounting which have relied on online observations to investigate their empirical settings, such as TripAdvisor, eBay, Airbnb and IMDB (e.g Jeacle, 2017; Jeacle & Carter, 2011; Leoni & Parker, 2018; Bialecki, 2017; Kornberger et al., 2017). Within this context, a subset of virtual ethnography (Hine, 2000) is netnography which is an approach to explore and understand social interaction in digital infrastructures such as online platforms and social media. In fact, 'netnography', or ethnography on the Internet, is a new qualitative research methodology that adopts ethnographic research techniques to study the cultures and communities which are emerging through computer-mediated communications (Kozinets, 2002, p. 62). We use netnography to explore actions and interactions on Instagram.

6.1 Data collection

Data collection was conducted over an eight-month period between April and November 2018. We applied netnography to the case of the Greek Instagram community. First, we started broadly observing how individuals use the platform and familiarising ourselves with all functions of Instagram. We employed theoretical sampling (Glaser & Strauss, 2017) to decide which data to collect and started documenting users' interactions through field notes. We then zoomed in to the Greek Instagram community to capture key contextual information.

At this point, we used purposeful sampling (Suri, 2011) to select experienced user accounts owned and managed by single individuals. Thus, we avoided observing hubs (i.e. feature accounts) and user accounts of businesses, associations and other commercial groups. In addition, we avoided observing user accounts of public figures such as celebrities and politicians, since such accounts usually attract large numbers of followers and likes due to their social status instead of their platform activity. As a result, we 'followed' a large number of platform users but we emphasized on 42 users with 4k-40k followers as we considered them as 'mature users' who are familiar with most of the functionalities of the platform. Our observed users were often 'micro-influencers'; smaller local fashion, food, travel and lifestyle bloggers who behaved as niche experts and often engaged with local audiences. Such professional users strived for high levels of engagement, likes and followers to attract and sustain sponsorships from local companies and businesses.

We proceeded to investigate the online actions and interactions of the users in our sample. We captured information with regard to users' posted content, such as new posts' number of likes, hashtags, comments and tagged locations (see figure 1). We further emphasized on the few metrics that are displayed on each user's profile, such as the user's volume of posts, the number of accounts that they follow and are followed by. In addition, we observed users' Instagram Stories and paid particular attention to Stories which demonstrated how users interact with each other, for example through paying tribute to other user accounts who reproduced their posted content, a practice commonly referred to as 'shout-outs'. Although Instagram Stories do not include visible metrics such as like and comment counts, we decided to include them in our sample because they foster possibilities and invite action for performance evaluations which cross over to the aesthetic realm.

Such close examination of users' actions and interactions led us to discover other tools that users might utilize to improve their platform performance, such as Facebook and Telegram[4] groups, live video broadcasts (also known as live chats), hubs and other smartphone applications. As a result, we observed users' live chats where they often discussed engagement strategies; we participated at numerous online forums such as the 'Greek Instagram Pod' and 'Insta Engagement Pod'; Facebook groups where thousands of members share engagement advice, ask for account feedback and reciprocate 'likes' and 'follows' to mutually increase their engagement metrics. Overall, our sampling approach aimed to capture the ways in which users evaluated their own and others' content, and the activities in which they engaged to increase their profile's followers and likes.

The Greek Instagram community provided a fertile ground for the purposes of the study. This case was selected primarily due to the authors' long-term presence and contextual exposure to the Greek Instagram community which facilitated access to community online forums and members. In addition, the Greek Instagram community constitutes a typical (Yin, 2003) or 'exemplifying' case (Bryman, 2016) since the platform displays a penetration to the Greek market that is comparable to many leading countries with regard to the volume of Instagram users[5]. We primarily observed

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[4] Telegram is a messaging app which facilitates group chats of many users of a community.

[5] At the time of the study, the Greek Instagram community displayed a market penetration of 28.7%, calculated as the ratio of active monthly users over the country's population. For comparison, USA displays a market penetration of 33.6%, the UK 34.8%, Italy 31.3%, Indonesia 22.34% and Germany 22.94%. It should be noted that the aforementioned 5 countries are amongst the countries with the most Instagram users. Sources: Statista.com https://www.statista.com/statistics/578364/countries-with-most-instagram-users/ and DataReportal - https://datareportal.com/reports/digital-2019-greece?rq=greece. Accessed 23rd August 2019

members of the Greek Instagram community; however most of the online forums of our sample had members from across the globe. Finally, we do not claim that our study's findings are empirically generalizable (Danermark et al., 2002) since we do not argue that our results are typical of the entire population of the Greek Instagram community, nor do we seek statistical inferences (Tsang & Williams, 2012). Instead, we consider our findings to be characterized by a high degree of transferability (Lincoln & Guba, 1985) to other countries' Instagram communities, due to the exemplifying nature of our sample. In addition, we consider our study to achieve a certain degree of theoretical generalization (Eisenhardt & Graebner, 2007), as our theoretical findings on the underpinning mechanisms of users' calculative practices, as framed by our use of Schatzki (2002a)'s practice framework, are broadly applicable to actors' evaluation practices in settings that are devoid of robust judgement devices, thus transcending the specificity of Instagram's empirical context.

Throughout our observations, we acted as covert, unobtrusive, minimally-participating observers and the Instagram users were unaware of our data collection process. As we only observed Instagram profiles whose content is online, publicly available and accessible by all, traditional considerations on research ethics guidelines around privacy and informed consent are limited in such an online setting (Langer & Beckman, 2005; see also Diener & Crandall, 1978). In our empirical account, we anonymized all user accounts, redacted sensitive information from all figures and provide pseudonyms for the purposes of the research. Last, to obtain a data-informed interpretation we adopted an iterative data analysis process. In what follows we present this process.

6.2 Data Analysis and interpretation

The analysis of our empirical material centered on the selected platform users' organized activities and understanding what users do to evaluate online content, why they do what they do, and what consequences their doings have (cf. Jørgensen & Messner, 2010). Throughout our data collection process, we spent considerable time iterating between concepts from the literature and our empirical material (Dougherty, 2002) before determining to draw on Schatzki's theoretical lens as a sensitizing concept (Nicolini, 2009; Walsham, 1995). Drawing on Schatzki (2002a)'s site ontology, we engaged in inductive open coding (Glaser & Strauss, 2017) to identify the emerging themes related to actors' general and practical understandings, rules and teleoaffective structures. We 'recursively cycled' between our empirical observations, emergent themes and extant literature (Eisenhardt & Graebner, 2007, p. 25), refining our analytical framing and "*trailing, the connections between practices*" (Nicolini, 2009, p. 1392). We further 'zoomed in' and interrelated our emergent themes to better explicate the mechanisms involved in our actors' performance evaluation practices.

As such, our analysis identifies assemblages of aesthetic and palpable evaluative regimes, permissible and illicit tactics, material and prestige teleologies as the mechanisms that condition platform users' calculative practices. We proceeded to corroborate our findings through 'member checks' (Kozinets, 2002). A member check is described as "*a procedure whereby some or all of a final research report's findings are presented to the people who have been studied in order to solicit their comments*" (Kozinets, 2002, p. 66). Thus, after our initial netnographic analysis had concluded, we proceeded to cross-check our findings with platform users of our sample and the various online engagement forums we observed, such as the 'Instagram Engagement and Promotion' Facebook group, where platform users exchanged opinions, reciprocated engagement and discussed engagement tactics. We invited members of our sample in group chats and posed open-ended

questions with regard to users' teleologies and the various calculative practices they engage with to evaluate content and identify permissible and illicit tactics. In addition, we posed similar open-ended and multiple choice questions to online forums where we collected further responses from international platform users. Finally, we present the findings of our member checks at the end of each practice dimension of our framework.

7. Findings

This section outlines our findings via employing Schatzki's conceptualization of practices as part of the 'site of the social' (Schatzki, 2002a). In our case, we sought to explore the underlying mechanisms of the calculative practices which actors engage with to evaluate online platform content in the social media platform Instagram which is devoid of well-defined performance measures. Through our findings, we aim to describe actors' calculative practices as an "organized human activity", constituted by four individual dimensions: rules, general understandings, practical understandings and teleoaffective structures.

7.1 Rules: an implicit social etiquette

As mentioned above, rules are the "*explicit formulations that prescribe, require, or instruct that such and such be done, said, or the case*" (Schatzki, 2005, p. 471). In the case of Instagram, a specific set of rules organizes and regulates online activity.

The platform itself screens content for inappropriate material, not only in users' audio-visual content but also tracing unsolicited language in users' exchange of comments. In specific, Instagram's Terms of Use (effective since November 1, 2017) state "*You must not defame, stalk, bully, abuse, harass, threaten, impersonate or intimidate people*" and "*You must not create or submit unwanted email, comments, likes or other forms of commercial or harassing communications (a/k/a "spam") to any Instagram users*". The platform often briefly suspends user accounts when they abuse such terms, what is also known as an 'action block'. For example, when a user engages in an extensive spree of consecutive 'likes', the platform suspends the user's 'liking' ability for 24 hours. A permanent ban from the platform is only inflicted when the user has received multiple action blocks or is in violation of the platform's Terms of Service. In our eight-month observation though, we noticed many users receiving an action block but no users had been permanently banned.

In addition to these rules, there are implicit restrictions about the volume of likes, comments and the number of users a person can follow and unfollow in an hour or day. Instagram imposes these rules via hourly and daily limits, however users are not aware of the exact threshold and often complain through Instagram Stories, live chats and discussion forums that these restrictions constantly change in Instagram's algorithm. We observed that users often speculate amongst them on what these limitations are. It was commonly accepted that a user can only follow and unfollow a maximum of 50-100 users per day, but users also hypothesized that this number fluctuates on how active or old a user's account is. Similar rules applied for likes and comments between users. It was common knowledge amongst experienced users that, if the user engaged in continuous likes or copied and pasted the same comments in a rapid succession, their commenting or liking ability

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would be temporarily suspended. Contrary to follow/unfollow limitations, however, users never identified a specific threshold for likes and comments.

Such rules and limitations were implied in Instagram's Terms of Service but the exact numerical thresholds were never stated in official documentation; users simply knew such rules by approximation, through trial-and-error and targeted discussions at online forums. We observed only two instances of concrete rules which permeated the platform. First, users are not allowed to follow more than 7,500 people. This is deemed as an attempt from the platform itself to reduce spamming. Second, users are not allowed to incorporate more than 30 hashtags in a post. If a user posts a picture with 30 hashtags and subsequently edits the picture to add more hashtags or change them, then this action does not bring any more engagement. Even though these concrete rules were not stated in Instagram's policy, they were the only numerical thresholds that were common knowledge amongst experienced users, were often discussed at online forums and such limitations were broadly accepted. The above rules were implicitly imposed by the platform itself. The platform does not contain any kind of ranking or rating of users or their content and the platform's algorithm served regulatory and auditing purposes (see also Jeacle, 2017).

Last, we identified a set of commonly accepted rules amongst the Instagram Community around content ownership. We observed that users abided to an implicit reposting etiquette which aimed to preserve users' proprietary rights. Users' posts consistently included branded hashtags to signal to the administrators and moderators of feature accounts (also known as 'hubs') that these accounts have the right to repost users' content. Feature accounts rarely publish original material but repost, almost exclusively, the branded content of their followers. On the rare occasions when the proprietary rights of the reposted content were not acknowledged by feature accounts, the community would publicly complain and discredit the account. We observed this plagiarizing practice mostly with inexperienced user accounts which reposted professional photos of popular user accounts without properly crediting them.

Finally, our findings on the implicit rules which permeated the platform were corroborated via member checks. Experienced users of our observed sample shared their speculations on the exact numerical thresholds of engagement activities, such as the permissible number of daily 'follows' and 'unfollows'. Upon further probing, users acknowledged that such calculative speculations primarily derive from discussions amongst experienced users and online discussion forums.

7.2 General understandings: aesthetic and palpable evaluative regimes

Our users' calculative practices were also organized by their general understandings. This practice dimension, as defined in our theoretical framework, describes the "*abstract senses, for instance, of the beauty of an artisanal product*" (Schatzki, 2012, p. 16). In his subsequent works, Schatzki further clarifies the term: "*General understandings combine with teleology in the determination of human activity, they specify ends and purposes, stipulate forms of activity and inform how objects and events can be used in the pursuit of particular ends and purposes*" (Schatzki 2010, p. 152). Empirical studies on general understandings have further linked general understandings with teleoaffective structures and actors' "*shared beliefs, goals or values within a social or religious community*" (Caldwell, 2012, p.291; see also Nama & Lowe, 2014; Bui et al., 2019).

In applying the analytical framing of general understandings in our case, we observed two 'evaluative regimes' (Moeran & Christensen, 2013), namely aesthetic and palpable, through which Instagram users broadly conceptualized how (relating to rules) and why (related to teleology) to use the platform, thus framing their perceptions of performance.

7.2.1 Aesthetic evaluations

First, we identified aesthetic evaluative regimes (Moeran & Christensen, 2013) in actors' general understandings. Users generally perceived that posting content which holds a certain aesthetic value will lead to more engagement. Although it is not the intention of this paper to drift into economic sociology territory, we perceive aesthetic value as "*an experience derived from perceiving, evaluating, and judging the design of the architecture and decor of the servicescape*" (Swartz & Iacobucci, 2000, p. 71). We observed that it was common sense amongst users that posts of beautiful photos are related to more 'likes', comments and subsequent 'follows'. For example, during the summer season, most users tended to post pictures of sandy beaches and Greek islands, instead of indoor settings, food and self-potraits (commonly known as 'selfies'). Users paid attention to the symmetry and lighting of their posts and they often posted pictures which were shot with professional cameras instead of their mobile phones. For example, 8 of the 10 most successful reposted pictures (measured in number of likes) of the most followed Greek feature account @wu_greece for 2018 featured Greek islands.

In addition, users also often posed binary, leading or loaded questions to their community, asking their followers what they think of their latest post. The below figure demonstrates an example of a 'slider' question, where user @thanos (pseudonym) asks his followers to aesthetically evaluate the user's content through dragging a slider along a continuous range. In contrast to regular posts where every deposited 'like' and comment is visible to all, in such ephemeral evaluations each follower's individual aesthetic judgement is visible only to the user. The followers that provide aesthetic evaluations, as in the example of figure 2, only have access to the outcome of the overall evaluation. We observed that users' followers almost always praised the aesthetic value of the posted content in both regular posts and Instagram Stories, since the vast majority of comments to posted pictures and the outcome of Instagram Story evaluations were always highly positive, however the bias which pervades performance evaluations between social media acquaintances distorts the outcome of such performance measurements.

Figure 2. Example of an aesthetic evaluation
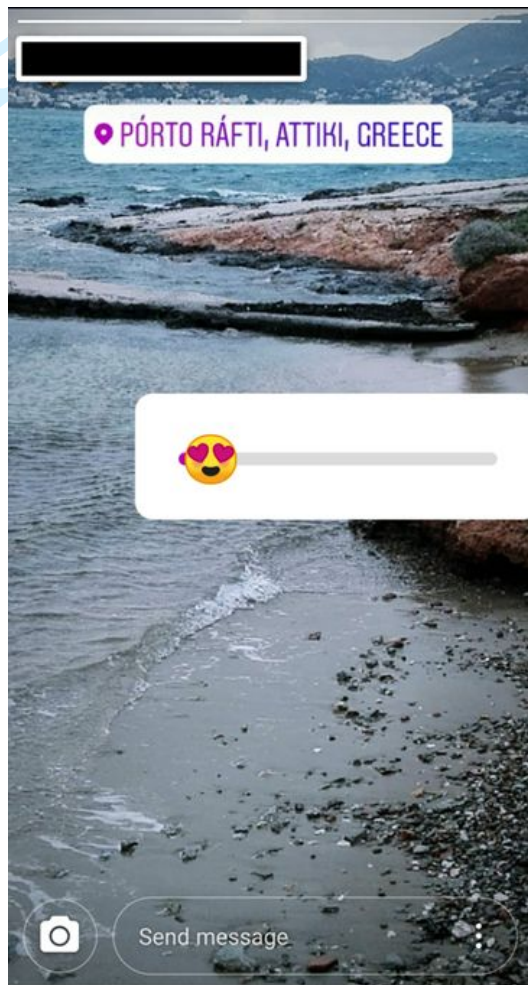
Source: Instagram Stories of @thanos

However, such general understandings on the aesthetic value of online content were not "*universally shared*" by all actors, even though they were "*available to and encountered*" by all (Schatzki, 2010, p. 151; see also Caldwell, 2012). For example, user @bruce, towards the end of the summer season proclaimed "*Enough with the bougainvilleas and small island alleys in your pictures!*", in one of his stories. This sentiment was shared by many experienced users.

7.2.2 Palpable evaluations

Second, we identified palpable evaluative regimes in our actors' understandings. Users broadly perceived that large volumes of 'likes', comments, but mostly followers, are indications of a 'successful' account. In addition, users often perceived that a higher volume of posted pictures and the inclusion of many branded hashtags in their posts would lead to more engagement and interactions with their user profile. Such common perceptions also invited action manifested in what we term '*tit-for-tat*' tactics. Users would often like and comment on a large volume of another user's content, in expectation that the receiver would return the favour. Users would also incorporate the hashtags '#follow4follow', '#f4f', '#like4like' and other similar hashtags which facilitated the reciprocal exchange of likes, comments and follows between unconnected users. The inclusion of such hashtags was very common amongst users of the entire Instagram community. For example, the three aforementioned hashtags have been included in 991 million posts as of August 2019 and

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many users would include multiple variations of such hashtags in their post. As a consequence, tit-for-tat tactics would often result in user profiles which followed, and were followed back, by thousands of other accounts.

An example of a user who engaged in such tactics is provided in figure 3. The figure displays the main page of the Instagram user @gamora. The metrics on @gamora's profile are indications of a very active user who posts very frequently, has thousands of followers and hundreds of likes in her every post. Since lay users' general understandings of performance measurement suggest that high numbers of likes and followers signal a successful account, @gamora's profile would be considered a good account to follow for users who engaged in such palpable evaluations. However, experienced users with a practical understanding of the platform would often engage in additional calculative practices, such as identifying the user's 'follower/following' ratio, in response to the platform's lack of well-defined performance measures. As is evidenced by figure 3, @gamora's profile has a follower/following ratio that is close to 1. This ratio demonstrates that the user follows approximately the same amount of users who follow her and suggests that the user's like and follower counts might have been achieved via a prolonged reciprocal exchange of likes and follows. Thus, the ratio further implies that @gamora's like and follower counts may not have been achieved due to the aesthetic value of her account or users' aesthetic evaluations of her posted content.

Figure 3. Example of a palpable evaluation

Source: Instagram page of @gamora

Our member checks confirmed our observations on platform users' aesthetic and palpable evaluations in measuring performance. Members of our sample confirmed that they frequently engaged and invited aesthetic evaluations to reflect on the merit of posted content and user profiles. They also reported that aesthetically pleasing content constitutes both a driver and an indicator of a successful user profile. In addition, most responses from lay users emphasized that they regard metrics on engagement rates (e.g. number of likes) as proxies for good or bad performance. Experienced users confirmed that they often use implicit performance measures and combine aesthetic and palpable evaluations to identify if others have engaged in illicit activities. For example, experienced users confirmed that they employ the follower/following ratio to evaluate if a platform user has engaged in reciprocal exchanges of engagement. Finally, they shared that they often investigated for signals of procured engagement via comparing users' engagement metrics with the corresponding aesthetic value of their posted content.

As we have already discussed users' broader aesthetic and palpable evaluative mechanisms and the rules which permeate their interactions, we proceed to identify users' teleoaffectivities.

7.3 Teleoaffective Structures

This section emphasizes the teleoaffective properties which are associated with actors' calculative practices. As described in our theoretical framing, Schatzki defines teleoaffective structures as "*a range of normativized and hierarchically ordered ends, projects, and tasks, to varying degrees allied with normativized emotions and even moods*" (Schatzki, 2002a, p.80). The term refers to the goals and affectivities that are collectively communicated through the bodily sayings and doings that constitute the practice, and are inscribed in different degrees in the minds and actions of actors that engage in the practice (Schatzki, 2002a, p. 103). In our analysis, we proceed to pinpoint the teleologies and affectivities of our actors. First, we identify two broad teleologies encompassed in online platform users' actions; we classify them as prestige and material teleologies.

7.3.1 Material teleologies

Experienced users often engaged in systematic online activities to seek professional aspirations for material gain. They sought to become 'Influencers' to leverage their social media presence for commercial purposes. Platform users with thousands of followers were often approached by companies and small businesses to promote sponsored content and become their brand ambassadors. They would advertise their sponsors via product placements in posts and Instagram Stories; they would film product unboxing videos, organize competitions known as 'giveaways' and offer discounts to their followers who purchased the sponsor's products while receiving commission. In addition, experienced users would mobilise the platform's affordances to attract customers, such as user accounts of professional photographers and restaurant owners.

An illustrative example of a 'micro-influencer' is @natasha (see figure 4). Her profile displays a very active user who acts as a brand ambassador for multiple local cosmetics and fashion companies. As shown in the figure below, @natasha engages in most of the aforementioned activities. Her profile includes inscriptions which largely reflect users' palpable general understandings of what a 'successful' profile looks like. She has thousands of followers and hundreds of posts, occupies administrator and moderator roles in multiple feature accounts and hosts unboxing and giveaway sessions, amongst others. In addition, @natasha's follower/following ratio is close to 2, a

performance indicator which demonstrates that the account is followed by at least twice as many followers as the account holder follows herself. This performance measure further implies that @natasha's account has been evaluated as a worthy account to follow by thousands of users.

However, a closer examination of @natasha's profile demonstrates that the aesthetic value of her posts does not conform with users' aesthetic general understandings of what is commonly deemed 'beautiful'; her posted content is always shot with amateur equipment, is badly lit, is not thematically consistent and rarely features beautiful landscapes, beaches or Greek islands. In addition, each of her two daily posts achieve an average of 350 likes[6], which is less than 5% of the number of user accounts which follow her. The comparison of likes against the number of followers represents an additional performance measure which experienced users regularly calculated to evaluate the legitimacy of the account's metrics, in response to the platform's absence of transparent and robust performance measures. Clearly, @natasha has successfully moulded her user account's visible metrics into facades of what is perceived as a successful profile, taking advantage of users' general understandings.

**Figure 4.** An assemblage of material teleologies
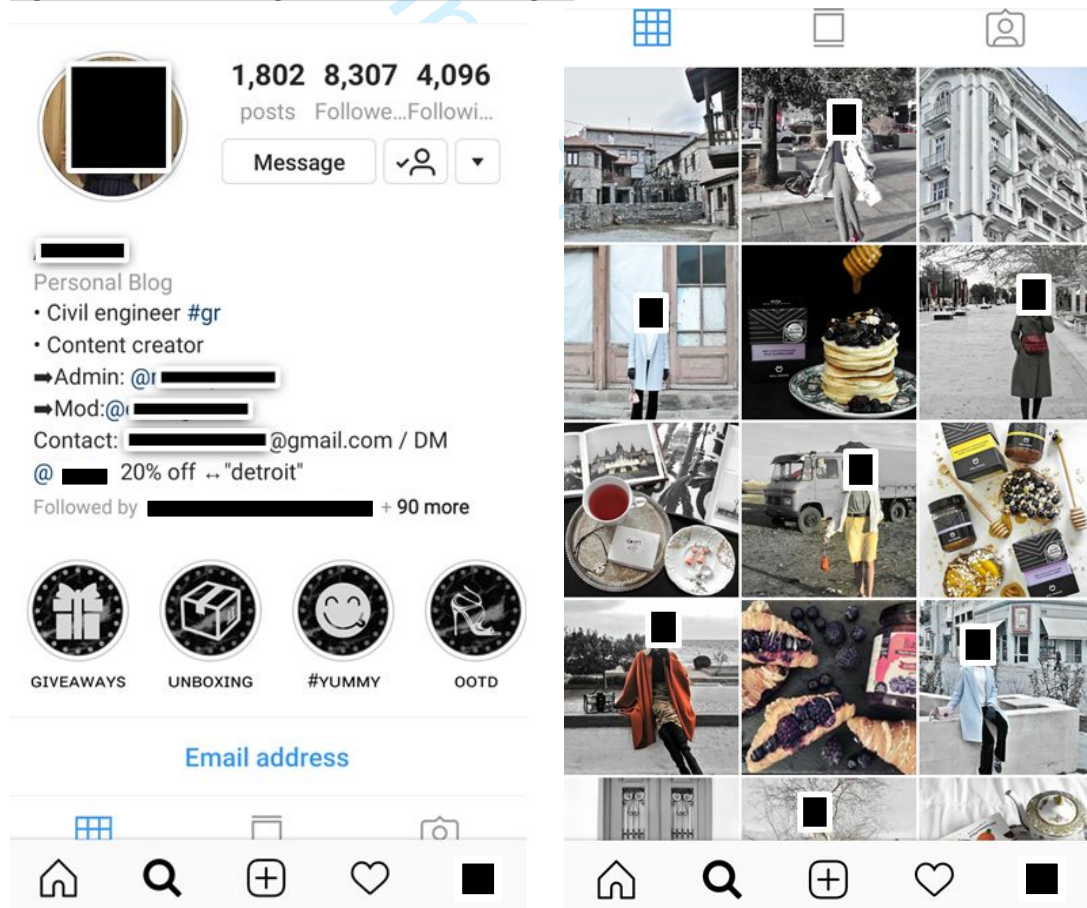
Source: Instagram page of @natasha

7.3.2 Prestige teleologies

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[6] This user frequently hosted giveaway sessions and competitions. The posts which organized these commercial activities always achieved better user engagement than her regular posts.

Second, we identify prestige teleologies in users' platform activities. Users post online content and interact with other users with the purpose of being liked, commented and subscribed to. They seek esteem and recognition through achieving large numbers of followers and their account being reposted by other successful accounts. Regardless of the magnitude of their following, users would post content which tagged many feature accounts and incorporated their branded hashtags. This activity aimed to signal to the moderators of the feature account that the content is eligible to be reposted. Users would 'brag' about the amount of reposts and pay tribute to these feature accounts on their Instagram Stories. For example, many feature accounts often reposted the professionally edited photographs of user @bruce. We observed that @bruce always mentioned such features on his Instagram Stories as 'tribute' to the feature account and to display his content's success to his followers (see figure 5). Such practices were common amongst experienced Instagram users.

Figure 5. Examples of prestige teleologies
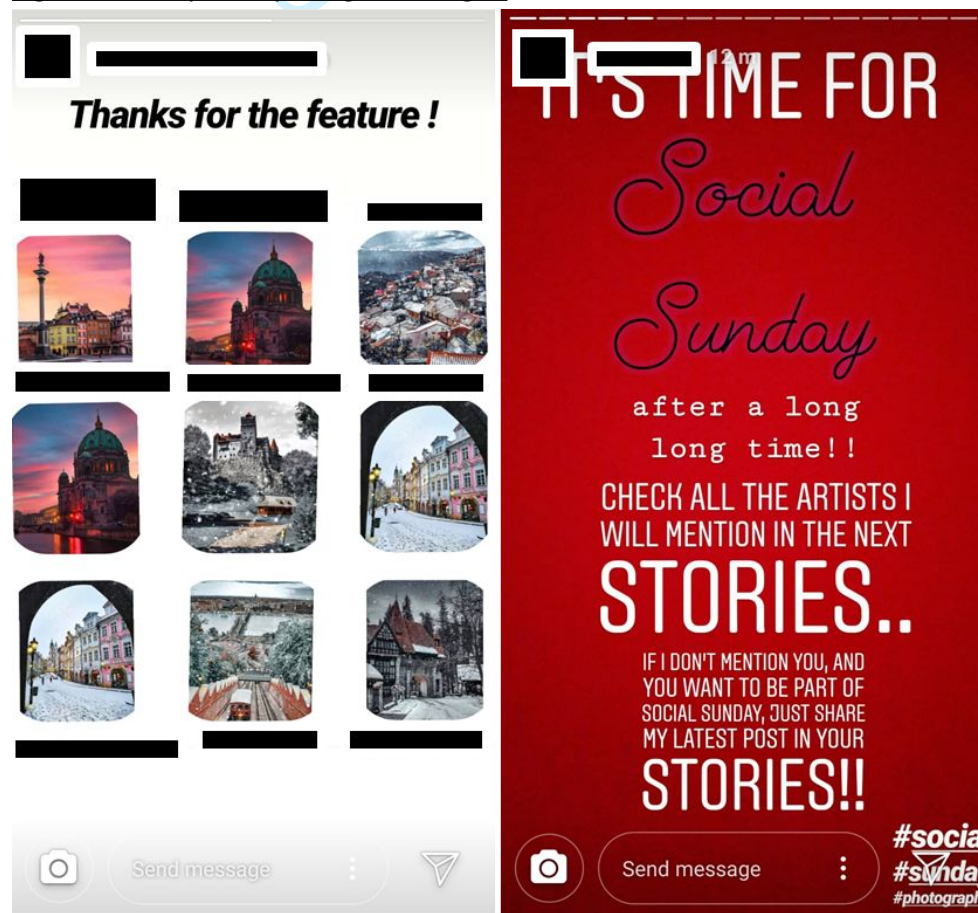
Source: Instagram Stories of @bruce and @peter

Others would engage in what was commonly referred to as a 'Social Sunday', where users reciprocated praiseful Instagram Stories for a select number of users of their community. In the second example of figure 5, user @peter announces that he will soon repost selected content from his favourite Instagram users on his Instagram Stories. However, the teleology of his actions is evident in his added comment which reads "*If I don't mention you, and you want to be part of Social Sunday, just share my latest post in your Stories*". Such activity resembles Schatzki's own identified teleology in his empirical setting, the 'sense of community', which permeated the actors of the Shaker herb business (Schatzki, 2002a, p.86).

7.3.3 User affectivities

Finally, we identify users' affectivities in their actions. Inevitably, actors' means were intertwined with emotions. Users would often celebrate achievements such as reposted content from feature accounts. They would also complain if their engagement metrics were on a downwards trajectory. For example, user @tony, a professional photographer with a strong presence in the Greek Instagram community, often expressed his frustration when his summer posts were not receiving their usual attention. He encouraged his followers to send him their justifications for this phenomenon and posted some of these replies on his Instagram Stories. Most of his replies explained the drop in numbers due to users potentially being on vacation and thus engaging less on social media during the month of August. In a second example, user @hank sarcastically expressed his enthusiasm for reaching the milestone of 1,000 user accounts following him and then unfollowing him shortly after[7], a tactic also known as 'follow-unfollow'. Users @thanos and @clint engaged in a public feud where the first user blamed the latter for unfollowing him, while engaging in various profanities. This feud was shared on @clint's Instagram Stories who publicised @thanos comments via printscreens of the message exchanges, resulting in many user accounts blocking the disgruntled user.

Finally, member checks confirm our observations on users' teleoaffective structures. Users of our sample shared aspirations and professional achievements which emerged through their efficient platform use. Experienced users outlined their material and prestige teleologies, such as professionals attracting customers and having their work featured in official city guides, presenting at non-profit conferences, being invited to interviews and to write a thematic book based on their niche Instagram content. In addition, member checks revealed user affectivities which are in line with our netnographic findings. For example, most users expressed their frustration on 'follow-unfollow' tactics and fabricated metrics which permeate the social network.

7.4 Practical Understandings

In this section we focus on platform users' practical understandings which habituate their calculative practices. As outlined in our theoretical framework, Schatzki defines practical understandings as the "…*knowing how to X, knowing how to identify X-ings, and knowing how to prompt as well respond to X-ings"* (2002a, p. 77). Caldwell (2012, p.289) further explains that practical understandings describe "*the ability to perform, identify and respond to an action*" which help actors navigate through difficult situations and react to everyday occurrences. In addition, Schatzki also discerns practical intelligibility which is "*what makes sense to a person to do*" (Schatzki, 2002b, p. 75) and argues that it is individual actors' practical intelligibility and their teleoaffective structures which determine specific courses of action that later inform practical understandings.

We delineate two broad categorizations of users' practical understandings, namely licit and illicit understandings, which together capture users' detailed knowing of how to achieve their prestige and material teleologies.

7.4.1 Licit practical understandings

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[7] He was able to trace the number of unfollowers via the app 'FollowCop' which provides additional performance measurement and management metrics such as 'Recent Unfollowers' and 'Non Followers'.

First, our analysis identified users' detailed activities which were largely acceptable in the Greek Instagram community. We term these as licit practical understandings due to their sanctioned and socially acceptable nature. For example, we observed that very experienced users often utilized third-party apps which offered additional metrics to help users increase their following. A popular choice, for instance, was the app 'Followers Insight' which provided additional performance measures such as 'likes per post', 'comments per post', 'most liked media' and 'top posting hours for likes', among others. Other popular apps provided information on 'recent unfollowers' and users who are not following back. Such apps exploited Instagram's API and breached Instagram's Terms of Service which clearly state that "*You must not access Instagram's private API by means other than those permitted by Instagram*". Nevertheless, the use of such apps was permissible amongst the Greek Instagram community and the apps' performance measures were extensively used.

In addition, our analysis also highlighted other warranted activities. For example, users often replied to each comment they received separately to increase engagement and the corresponding metrics. Others sought to aesthetically adjust their profile's content and only posted photos of a distinct colour palette or theme (e.g. aerial photography), to conform with their aesthetic evaluations of what is commonly perceived as 'beautiful'. Finally, users often incorporated carefully selected branded hashtags with a moderate amount of uses. For example, as of August 2019, #Greece was incorporated in user posts a total of 32.3 million times, whereas #Greece_travel only 204 thousand times. Experienced users would prefer using the latter hashtag in their posts, in order for their content to remain visible in the corresponding hashtag page for a longer period of time, thus attracting more exposure.

7.4.2 Illicit practical understandings

Second, we identify illicit practical understandings which were often frowned upon from community users. Users would often engage in 'follow-unfollow' tactics, through which a user would follow a large number of accounts daily with the sole purpose of being followed back and increase their 'follower' indicator. After a few hours or days, the perpetrator would unfollow all the users he originally befriended, hoping that the 'victims' who followed them would not take notice. However, experienced Instagram users who regularly utilized third-party apps were able to identify such tactics and often expressed their frustration on their Instagram Stories. In addition, experienced users would often evaluate other user accounts and their posted content in search for illicit tactics by calculating the 'follower/following' ratio. A 'follower/following' ratio that is close to 1 or lower would imply to the experienced user that the account under investigation has potentially engaged in illicit activities, such as prolonged 'follow-unfollow' tactics which resulted in the account holder following only the users who follow them back.

In addition, users would often engage in lobbying tactics where they tried to befriend moderators and administrators of popular feature accounts. In a quest for having their photos reposted by feature accounts, users would often follow the profiles of the accounts' administrators and moderators, like and comment a large amount of their digital content. For example, we observed that user @nick, as the founder and administrator of the most successful Greek feature account, is followed by 56,000 users and enjoys thousands of likes and comments in each of his posts, regardless of their aesthetic value. We also observed that it was common practice for few popular feature accounts to consistently repost content from a small network of followers. Experienced

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users who were not part of such lobbies often complained through their Instagram Stories of such elitism phenomena.

Another example of illegitimate activities included users' procurement of followers, likes and comments. User @tony, in one of his regular Monday live streams, encouraged his viewers to "*visit eBay and search for Instagram followers*", as he explained how easy it is to procure 10,000 followers for €15. Indeed, we observed that purchasing likes, comments and followers is an easy and relatively inexpensive process which was not only commonly known but also common practice within the Greek Instagram community, even though the platform's Terms of Service state that "*You must not create accounts with the Service through unauthorized means, including but not limited to, by using an automated device, script, bot, spider, crawler or scraper*".

Users with procured engagement enjoyed fabricated metrics which reflected a seemingly successful account, however one could never be sure of which community member was gaming the system. Thus, experienced users, in their evaluations of other users' content, often searched for 'cheating' signs, such as comparing a user's number of followers with the number of likes in their latest posts. The following figure displays an example of how users' calculative practices may detect illicit tactics.

For example, figure 6 displays the profile of @hela. Even though @hela is followed by 22.4 thousand users, her latest posts achieve between 800-1,000 likes. In addition, she does not hold an administrator or moderator role at a feature account and follows close to the maximum amount of accounts that Instagram allows users to follow. Such signs were common indicators that the user has engaged in illicit activities. Experienced users often engaged in such calculative practices to discern what is deemed a legitimately successful profile.

Figure 6. An example of illicit user activities
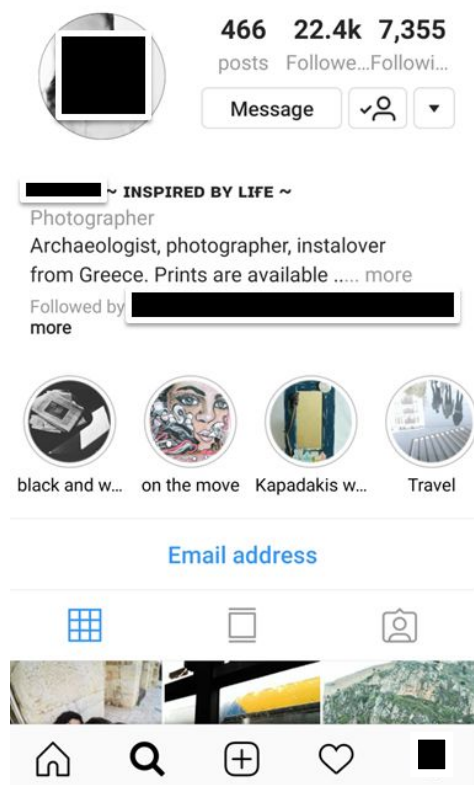
Source: Instagram page of @hela

The findings on users' licit and illicit practical understandings are corroborated through our member checks. Users of our sample legitimized various tactics for engagement, such as employing branded hashtags and third-party apps, and contested activities such as procuring engagement, lobbying and follow-unfollow tactics. Some responders also highlighted that experienced users often participate in online forums which facilitate the exchange of engagement, however, opinions on the legitimacy of such tactics were divided. Finally, one user indicated that *"[the platform] is a useful sewer to promote your line of work"*, arguing that what practices are permissible can only be judged by one's own audience.

Before we proceed with the discussion and implications of our results, we outline a brief summary of our analytical findings in table 2.

Table 2. Summary of empirical findings

Practice dimension	*Indicative findings*
Rules	Implicit restrictions with regard to permissible volume of likes, comments and follows/unfollows permeated the platform. Platform users speculated on the exact numerical thresholds of such limitations and usage abusers were often briefly suspended. An implicit reposting etiquette aimed to preserve users' proprietary rights. Explicit platform rules ordained upper limits for permissible number of hashtags per post or users an account may follow.
General understandings	**Aesthetic evaluations** Users broadly perceived that content which holds a certain aesthetic value leads to more engagement. Users often posed binary, leading or loaded questions to their community, asking their followers to aesthetically evaluate the user's content. **Palpable evaluations** Users broadly perceived that large volumes of 'likes', comments, but mostly followers, were tangible indications of 'successful' user accounts. Such understandings led to 'tit-for-tat' tactics through which users would seek the reciprocal exchange of likes, comments and follows between unconnected users.
Teleoaffective Structures	**Material teleologies** Experienced users often engaged in systematic online activities (e.g. 'giveaways') to seek professional aspirations for material gain, e.g. to become 'Influencers' and brand ambassadors. Users would mould their profiles' visible metrics into facades of what is perceived as a successful profile, taking advantage of users' general understandings. **Prestige teleologies** Users engaged in platform activities with the purpose of being liked, commented and subscribed to. They sought esteem, recognition and a sense of community through achieving large numbers of followers and their account being reposted by other successful accounts. Users would reciprocate praiseful messages, 'brag' about the amount of reposts and pay tribute on their Instagram Stories. **Affectivities** Users often celebrated achievements such as reposted content from feature accounts, and

complained if their engagement metrics were on a downwards trajectory.

	Licit understandings Experienced users often engaged in permissible activities to increase engagement, such as incorporating carefully selected branded hashtags, aesthetically adjusting their content or utilizing third-party apps which provided additional engagement metrics.
Practical understandings	**Illicit understandings** Users engaged in activities which were often frowned upon from the community, such as engaging in 'follow-unfollow' and lobbying tactics. Users often procured engagement to fabricate their visible metrics, reflect a seemingly successful account and blur others' evaluations of their performance. The absence of well-defined performance measures encouraged experienced users to engage in calculative practices in search for 'cheating' signs and to discern legitimately successful profiles, such as the 'follower/following ratio' and follower-like comparisons.

8. Discussion and implications

This paper set out to examine the underpinning mechanisms of actors' calculative practices through which they evaluate performance in the absence of well-defined performance measures. We employ Schatzki's site ontology (Schatzki, 2002a) to capture our actors' calculative practices as organized by rules, general understandings, teleoaffective structures and practical understandings. Our empirical setting is unique; Instagram as a social media platform is devoid of rankings, ratings and reviews; performance is subjective and riddled with uncertainty and fabricated metrics. Our contribution is twofold. First, we capture and theorize the mechanisms which underpin actors' calculative practices for performance measurement in the absence of robust judgement devices. Second, we demonstrate how ambiguous assemblages of material and prestige teleologies, aesthetic and palpable evaluative regimes, implicit rules and practical expertise, collectively invoke online platform actors' calculative practices and the construction of new performance measures. In doing so, this paper demonstrates how management accounting is implicated in the evaluation of online platform outputs.

8.1 Assemblages of rules, aesthetic evaluations and prestige teleologies

First, our findings delineate the rules which permeate the online platform, condition users' interactions and their calculative practices. In our case, rules were often implicit, they were imposed vertically and horizontally and were often overlooked. Users would conform to a well-defined social etiquette in an opportunistic manner which aimed to serve their material and prestige teleologies. Our findings extend Nama and Lowe (2014)'s argument that rules are usually imposed hierarchically and users need to embrace such rules to succeed in operational activities. In the case of Instagram's reposting etiquette; rules were not only implied and diffused in a horizontal fashion, but were equally important for users to retain their credibility and succeed in increasing their engagement.

Our paper also argues that actors' broad conceptualizations of performance are framed by aesthetic and palpable evaluative regimes. Overall, our users' general understandings did not include any well-defined performance measures but instead relied on their 'personal networks' to act as judgement devices (Karpik, 2010) and thus instil a 'general awareness' (see also Ahrens & Chapman, 2007) of

the value of a user account and its content. Karpik (2010) argues that personal networks, similar to online communities, consist of interpersonal relationships which facilitate useful, personalized and credible information to reach interested users (see also Bialecki et al., 2017). In addition, our findings extend Arnaboldi et al. (2017a, p. 768) who argue that accounting facilitates the "*shared understandings of the value and potential usability of social media*". Our findings demonstrate that actors' general understanding of the aesthetic value of social media is often contested by experienced users.

Our paper also highlights the bond between actors' material and prestige teleologies and their related affectivities which collectively organize their actions. Our findings on teleoaffective structures accentuate the tacit and often immaterial nature of our actors' motivation. First, extant accounting studies identify teleological properties in actors' activities in generating revenue (Nama & Lowe, 2014), achieving strategic and profitability objectives (Jørgensen & Messner, 2010; Ahrens & Chapman, 2007) and meeting various socio-political stakeholder demands (Bui et al., 2019). We extend such studies by highlighting the importance of prestige teleologies in actors' actions. Actors engage in calculative practices in pursuit of affection and reassurance to satisfy their narcissistic needs (Lasch, 1991) and achieve a sense of community (Schatzki, 2002a). Second, we emphasize the role of affectivities in users' calculative practices. When actors genuinely or sarcastically celebrated their numerical milestones, accounting intertwined their teleologies and affectivities. We argue that online platforms and social media technologies pose a promising empirical setting for investigating the yet underexplored topic of accounting as an affective technology (see also, Boedker & Chua, 2013). In addition, we concur with prior research which highlights that teleoaffective structures and general understandings are mutually constituted (e.g. Nama & Lowe, 2014; Bui et al., 2019). Teleoaffective structures were conditioned by users' general understandings. For example, users' material and prestige teleologies, combined with affectivities such as a sense of achievement, aspiration, bitterness or despair, significantly affect users' general understandings of what is deemed 'successful' content or engagement. Conversely, users' broad understandings of what content is aesthetically pleasing or what numerical milestones are deemed successful significantly affect users' means and emotions.

8.2 Performance measurement, licit and illicit understandings

Furthermore, our analysis unearthed the practical understandings which frame users' calculative practices. We identified users' licit and illicit practical understandings which collectively capture users' detailed knowing of how to measure and manage online platform performance. Although recent accounting studies have explored to a certain extent the significance of actors' practical understanding of their practice environment in facilitating the successful performance of practices (e.g. Ahrens & Chapman, 2007; Nama & Lowe, 2014; Bui et al., 2017), accounting research has not yet emphasized how practical understandings intertwine with teleoaffective structures and rules. Furthermore, Espeland and Sauder (2007) argue that rankings enact reactivity amongst users who eventually adapt to the construction criteria of the performance measures. We extend their findings by arguing that calculative practices do not necessitate the existence of concrete performance indicators such as rankings. In our study, users embraced the lack of concrete performance measures and employed permissible tactics to discern obscured performance metrics and increase engagement. Hence, the lack of explicit performance measures invoked calculation and reactivity.

Our findings also highlight actors' illicit tactics which aim to fabricate metrics and blur others' evaluations of their performance. However, users' practical understandings of such illicit tactics further invoked calculative practices of evaluating other users' performance and the legitimacy of their performance indicators. Such findings complement Karpik (2010) who argues that judgement devices facilitate commensuration and actors' reflection on the meaning of judgements. We extend Karpik's arguments by demonstrating that a process of commensuration can also be facilitated by the lack of judgement devices. Although the trustworthiness and credibility of ill-defined metrics is shaken by users' illicit practical understandings, the shortage of reliable metrics also invokes further calculative actions. Experienced actors' understandings of illicit tactics initiated protracted debates and reflections of what constitutes a credible metric and a successful user account.

8.3 Calculative practices in the absence of robust performance measures

In conclusion, our paper argues that the lack of rankings, ratings and reviews welcomes calculative practices which aim to evaluate performance and assess the credibility and trustworthiness of ill-defined performance measures. We argue that auditability does not merely reside in reviews and rankings (Jeacle, 2017) but also permeates actors' online interactions. In addition, we extend Kornberger et al. (2017) arguments that "*platform interfaces consist of an ecology of accounting devices in the form of rankings, lists, classifications, stars and other symbols ('likes, 'links', tags, and other traces left through clicks) which relate buyers, sellers, and objects*" (p.81). Our findings showcase how Instagram is a platform devoid of ranking and classifying devices which forces actors to devise their own performance measures, thus invoking an 'ecology' of implicit calculative practices (e.g. follower/following ratios and follower-likes comparisons). Although such practices may lack specificity or credibility, they are powerful enough to bring together multiple actors, businesses and teleologies. Our findings complement extant studies which identify the need for capturing and constructing new performance measures and metrics on online platforms (e.g. Arnaboldi et al., 2017b; Van Alstyne et al., 2016).

8.4 Implications for practice, limitations and suggestions for future research

The study's findings also have important practical implications. Our paper sheds light on how online platform users fabricate performance metrics and evaluate online content. Such findings are of interest to strategy practitioners and entrepreneurs, marketing managers and management accountants who work on performance measurement and management. This paper further provides valuable insight on the teleologies and inner workings of how users consume and produce content on Instagram. Such findings are valuable to professional accountants through providing an evaluative framework they can employ to measure online platform performance, such as social media reach from brand ambassadors. The study's findings can also benefit employers in strategy formulation and implementation, through identifying the tools and practices which they can use to increase their brand exposure, improve their customer engagement and reputation.

The study is also subject to methodological limitations which should also be acknowledged. Although netnography is a widely accepted methodological approach in capturing the actions and interactions of members of online communities, our findings would benefit from interviews with community members, Influencers and the social media managers who commission their services. Such interviews would strengthen our findings through enabling us to capture users' perceptions of

aesthetic and material value more clearly and potentially shed light to further calculative practices they engage with.

We encourage future researchers to further investigate performance evaluation in social media platforms devoid of robust performance measures. We consider such research timely, since social media platforms are increasingly moving towards implicit evaluation methods. For example, Twitter CEO and co-founder Jack Dorsey revealed that the social network has long been contemplating of removing the like function. In addition, Instagram has tested the removal of the like count from user profiles in several countries. Such radical platform redesign changes aim to promote healthy conversation, improve self-esteem and reduce mental health issues among platform users and will inadvertently encourage users and businesses to invent new ways of measuring and assigning value to social media content. Future researchers may investigate users' calculative practices on YouTube and Twitter, since such multimedia platforms offer a breeding ground for implicit and aesthetic evaluations.

9. Conclusions

Our study examines how Instagram users evaluate performance in a platform which is devoid of well-defined and credible performance measures such as star-ratings, rankings, classifications and reviews. Drawing on an empirical study of the social media platform Instagram, our paper outlines the mechanisms underpinning the calculative practices which actors engage with to evaluate online platform content. Our findings demonstrate that the implicit social etiquette which permeates the platform, actors' aesthetic and palpable evaluations of other user profiles and their posted content, and actors' permissible and illicit tactics are all mechanisms interconnected with prestige and material teleologies which invoke calculative practices for performance measurement. In conclusion, our paper has three key contributions. First, it captures and theorizes the mechanisms which underpin actors' calculative practices for performance measurement in the absence of robust judgement devices, second, it demonstrates how those mechanisms invoke online platform actors' calculative practices and the construction of performance measures, and third, it provides valuable insights and extends performance measurement literature via demonstrating how management accounting is implicated in the evaluation of online platform outputs.

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