4. 1001 FOLLOWERS IN 20 DAYS

FRAMING THE PLAYFUL USE OF FAME-ENHANCING BOTS ON INSTAGRAM

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ABSTRACT
In this paper, I investigate the use of fame-enhancing bots on Instagram, a practice called *botting*. Based on the playful use of social media and online identity construction through self- presentation, I want to explore the notion of transgressive play and cheating within the Instagram community. The bot provider, Instazood, serves as a primary case study and object of study to examine and analyze the practice. Therefore, I compare their services with Instagram's Terms of Use and the Community Guidelines, as well as the project's findings on whether, and how,

it affects other users and community members. I conclude that one can speak of a playful use of Instagram, and consider the practice of botting as a form of transgressive play that, to some users, is perceived as cheating the community on a moral level. Examining social media practices within the scope of the ludification of culture reveals further insights into being human in a platformized society, the notion of playful behavior of Instagram users, and the platform's rules of play, to the DiGRA community.

Keywords

LUDIFICATION OF CULTURE, playful identity, visibility game, Instagram, fame-enhancing bots, cheating

INTRODUCTION

"Influencers converge on the belief that they must play the game to attain influence—that influence is the goal of the game" (Cotter 2019, p. 912). The paper by Kelly Cotter addresses the practice of playing the visibility game, and how digital influencers and algorithms negotiate influence on Instagram. Since 2016, algorithmic ranking has determined which user and what form, or practice of use, gains visibility on the platform. As a result, users observe and mimick successful posts and profiles, assuming that Instagram's content moderation algorithms will possibly reward their imitated strategy with visibility. Cotter observes that "influencers' pursuit of influence on Instagram resembled a game constructed around rules embedded in algorithms that regulate visibility" (2019, p. 896). The supposed factors that increased visibility were increased engagement and followers.

"95 Millionen Bots: Der große Instagram-Schwindel"[1] was the headline of an article published in the German online journal *Focus*

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1. 95 million bots: the great Instagram hoax (transl. by the author).

in July 2018. The author claims that bots and fake accounts appear in large numbers on social media platforms to interact automatically with other accounts, and spread spam content or advertisements (Erxleben 2018). This article discusses the phenomenon of large numbers of fake accounts. Investigating the scandal, I found another dubious practice on Instagram, involving fame-enhancing bots. These automation services can also be used as account management tools, or a service that does some of the work. In this respect, the bot is not simply programmed to act like a human for commercial purposes, but as a tool for ordinary Instagram users to manage their accounts, or boost their popularity. Instazood[2] is a provider of purchasable software that aims to generate "real" interactions and followers instead of simply buying fake ones. Therefore, the bot can like, comment, follow, and unfollow on behalf of the account holder's name (Instazood 2016). One strategy for playing the visibility game is using these automation services and bots. The German media scholar Oliver Leistert (2017) introduced the terminology of fame-enhancing bots. In everyday speech, their use is called *botting* (Tabora 2018). In this respect, I call users of fame-enhancing bots *botters*. Researching the practice of botting, it becomes evident that playing the visibility game with this strategy is not limited to influencers trying to gain influence. Ordinary users of various Instagram communities also use fame-enhancing bots.

The literature on bots has yet to address this specific form of botting on Instagram. This paper aims to explore and analyze the botting process to frame this practice. It is the first published article on fame-enhancing bots that describes the practice in detail, introduces terms, and reveals processes of use, and the perception and classification by the platform Instagram and its users. The paper presents fundamental work on which further research can build. Following a brief introduction to the social media platform, I will use

2.   In the meantime, Instazood discontinued its bot service and reduced its service to a blog on social media marketing. Furthermore, they changed the company's name and web address to *izood.net.*

Timmermans' (2014) and Gergen's (2014) works, in which they speak of a ludification of culture and, a playful use of social media platforms, like Instagram, as a theoretical framework. How can its use be an example of the ludification of culture? In this article, I want to explore the strategy of botting in the visibility game as a playful use of Instagram. How does the practice of botting function, and how "successful" are automated interactions? To answer these questions, I carried out an autoethnographic project that comprised running and using a fame-enhancing bot by Instazood. Since the platform's affordances determine its users' possible actions, I argue that Instagram affords a playful use of the platform if we consider it a "performance of the playing self" within the scope of a ludification of culture. It could also afford a way of cheating (Gergen 2014). The confrontation of the botting practice with the platform's Terms of Use and Community Guidelines as Instagram's rules of play showed that it breaks its rules. The botting project's outcome uncovered the effects of the botting practice that are partly connected to identity construction by maintaining a profile on a social media platform. Therefore, I compare the botting experience to the notion of cheating. I finish my analysis by asking how botting affects the Instagram community.

The theoretical framework and an interdisciplinary approach enable studying everyday culture on social media platforms, like Instagram. The phenomenon of fame-enhancing bots and their use by ordinary users on these platforms is located at the intersection of various disciplines, such as social media studies, internet studies, sociology, and cultural techniques research. The interdisciplinarity of the research object calls for an interdisciplinary approach and methodology. As a scholar trained initially in music, film, and media studies, as well as art history, and working in the fields of internet research and media studies, analyzing the practice of botting from a game studies perspective can contribute to a better understanding of playful everyday cultures and their practices on social media platforms.

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PLAYING WITH INSTAGRAM

I briefly introduce the platform and delineate its use, addressing specific purposes, strategies, and practices. Instagram is a popular application for visual social media culture, and was initially created for iPhone users only. It was launched in 2010. Since then, it has developed into a platform with over 2 billion users worldwide (Leaver et al. 2020). On Instagram, users create and run one or multiple accounts where they set up a profile, including a profile picture and a short bio with the information they want to share about themselves or the content of their postings. Instagram users create content in the form of (moving) images, which implies editing and putting filters on them. They can publish their content as a post remaining on their profile, or as a story showcased for 24 hours unless they save it as a highlight. The posts on the timeline contain captions, including a set of hashtags. Users can perform specific interactions, such as following profiles or hashtags, liking and commenting on posts and stories, or directly messaging other users.

In addition to creating and maintaining a profile on Instagram, we also construct an identity. This identity construction is closely linked to, and constructed by, images. It functions as a visual, personal self-expression and, therefore, as an expression of self- identity (Serafinelli 2018). Like every other social media platform, Instagram has its own "styles, grammars, and logics" and affordances that contribute to the platform's vernacular, which is "also shaped by the mediated practices and communicative habits of users" (Gibbs et al. 2015, p. 257). On the one hand, it extends a particular use that the platform had in mind during the app's development. On the other hand, it is not solely directed by the platform. Still, it evolves dynamically by establishing new user- led practices "which employ the technical and communicative possibilities of the platform" (Leaver et al. 2020, p. 65). In Instagram's Terms of Use, the platform claims that its purpose is to connect users with brands, products, and services that are important to them. For that reason, all platforms owned by Meta, including Instagram, collect users' data, to show them advertisements, special offers, and other sponsored content. These platforms

explain that this service is as important to them as providing "all the other experiences" on Instagram (Instagram 2023b). Apart from that, platforms expect users to behave "authentically" and link it to their imagination of online identity construction (Matamoros-Fernández et al., in press). They do not specify their definition of "authenticity" but keep it ambiguous and narrow (Hallinan et al. 2021).

As Leaver et al. (2020) point out, influencers make up a significant amount of Instagram's user population. They also represent the dominant culture on the platform. According to Djafarova and Trofimenko (2018), social media platforms have spawned a new type of celebrity, called micro-celebrity. They are characterized by their popularity on social media, especially on Instagram*,* and by the high number of followers who recognize, admire, and aspire to emulate them. As Alice Marwick (2013) further outlines, being a micro-celebrity can be seen as an online performance and something that someone *does* rather than *is* in comparison to traditional definitions of a celebrity.

Due to their potential to influence their followers, micro- celebrities are often wooed by companies for advertising purposes linked to the various fields they promote on their accounts, such as fashion, beauty, motherhood, or specific hobbies. Their road to success is gaining as many followers and interactions as possible to grow their fan base. To reach a high status in the social media community, one needs to have many followers and a high engagement to one's content through likes and comments. This development led to the term *instafamous* (Djafarova and Trofimenko 2018, p. 3). Furthermore, Instagram's algorithms reward increasing engagement with visibility because it generates data they can sell to marketers and use it as a "proxy measure for user satisfaction" (Cotter 2019, p. 910). Besides the influencers, other types of communities and cultures exist on Instagram. They are organized around hashtags, interest groups, or follower communities. Interest groups are profiles of content creators according to a specific theme or hobby, including all sports, art, photography, pets like dogs and cats, lifestyle, beauty, and environment.

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Exploring the Playful Use of Instagram

In this section, I want to elaborate on the notion of playfulness that lies in the interaction with social media platforms, and argue that Instagram has an inherent ludic dimension that is connected to medium-specific qualities like multimediality, virtuality, interactivity, and connectivity (Frissen et al. 2014, p.10) and is characterized by a playful use of the platform. Drawing on Jeroen Timmermans' work, "Playing with Others: The Identity Paradoxes of the Web as Social Network," I analyze the playful characteristics of Instagram. In his paper, he states that:

> "Social network sites resemble games, because acting on them is characterized by a playful mood and has playful elements to it (humor, competition, teasing), but also because they constitute a world on their own. A world in which we can experiment a bit with our identity, without suffering immediate and direct consequences outside of the cybersphere." Timmermans 2014, p. 289.

Instagrams platform governance and the platforms affordances, as well as, user practices and their platform culture, found a playground for experiments with one's identity, as I have already pointed out. The history of the platform and how people act on it show various playful characteristics—first, the development of the app has roots in game design. In January 2011, three months after Instagram launched, Kevin Systrom talked about the genesis of the application. His basic idea was to combine some aspects of *Foursquare* and *Mafia Wars* (Zynga 2009). The first version of Instagram was called Burbn and featured location check-ins, future check-ins, awards for spending time with friends, and the ability to post pictures. After test-running it, Systrom and Mike Krieger simplified the app and concentrated on fewer features. Burbn was limited to posting photos, commenting, and liking, and was then renamed Instagram (Systrom 2011). According to its website, the platform, as we know it today, has

one mission: To bring its users "closer to the people and things they love" (Instagram 2023b). In this respect, the initial idea was to combine playful elements with some location-based and photo-sharing features.

Another playful element is the conception of social media platforms, since they induce playfulness and create worlds of their own where users can play with their identities. According to Jansz (2014, p. 269), personal identities manifest in communication. That is to say that communication between users' accounts impacts the actant and the interactant. Timmermans (2014) goes as far as to say that online identities are playful identities. He generalizes that these platforms "provide[s] the perfect stage for people to apply playful, light, and frivolous self-presentation as a way of dealing with utter seriousness and social pressure underlying the process of gaining status and the building of group identities" (p. 287-8). By quoting Raessens, he claims that it is this self- presentation, enabled by mobile telephones and social media, that contains playful elements. According to Raessens (2010, p. 8), these sites offer users the possibility to playfully express who they think they are and, more importantly, how they can be seen as more attractive in the eyes of fellow users. That means one can design and create a profile as a social identity as one wants to be perceived by others (Djafarova and Trofimenko 2018, p. 4).

Timmermans (2014) speaks of the ambiguous behavior of people in times of modern, mediated identities that become evident through their use of Facebook. On the one hand, they follow their interests, longing for self-expression and personal growth. On the other hand, they depend on communication and the extension of their community network. These ideas are adaptable to Instagram's platform. The individual interest of its users is, in the first place, to create content by editing and posting photos and videos. The content's creational process and moderation require specific playful handling of the audiovisual material. One tries to create an attractive profile to provoke interactivity. This is an action of self-expression to reach and interact with other users and the Instagram community, and to extend one's network. Content creators are, in that sense, dependent

on their community. Engagement and feedback through follows, likes, comments, and messages affect the content creation process in the way that users try to please their community.

Regarding the visibility game, users depend not only on communication with their community but even more on visibility through algorithmic ranking as a precondition to this communication. This public self-expression through the construction of personal profiles leads to interactivity among the users, and, as Timmermans (2014, p. 288) says, a "reflexivity [that] reflects on users' identities." The interaction with the community becomes as essential as the self-presentation on the platform. Due to its feedback structures and the resulting reflexivity, it influences the user's self-understanding and the construction of identity. High follower numbers and quantitative likes and comments function as rewards for a successful and admirable content creation that is simultaneously crucial for the visibility game. This leads to social competition: the amount of interactivity and followers that users' content provokes indicates status, and impacts user behavior to mimic and follow up on other, more successful users.

In Gergen's (2014) writing on "Playland," he speaks of a ludification of culture that augments through the playful use of social networks. According to him, a playing self is emerging who performs in a cultural life of game-like activities. Gergen categorizes three different forms of play; the first is called "social play." He considers it the constitution of most communication on social media platforms, and adapts it to the playful ambiance. The second form, "spectator play," is characterized by identifying with the subject and losing the sense of authentic being. According to Djafarova and Trofimenko (2018), it is expected that Instagram users are trying to imitate the success of their favorite celebrities, and long for a comparable positive engagement with their profiles.

The "competitive play" immerses the player into the play's world and invites them to become, as Gergen calls it, a "second-order self" (2014, p. 57). He concludes his argumentation with three different states of mind, depending on the form of play: "Activities in social

networks invite playing with one's identity, while spectator activities invite the imitation of players and with competitive games, one indeed does become a player" (2014, 63).[3] As the previous analysis has shown, all these forms of play take place on Instagram. The boundaries of the three categories are fluid and can be applied to the interaction of an Instagram user with the platform. Considering the interactive function to follow other accounts, and the rise of micro-celebrities, the user also becomes a spectator being pushed to imitate the influencers' behavior, for instance. As I have already mentioned, the hunt for followers and interaction with other users, and playing the visibility game on Instagram, have competitive dimensions. This may imply an extreme competitive behavior that tempts to cheat. With the aim of boosting one's popularity on Instagram, one is likely to consider botting as a form of cheating.

PLAYING WITH *INSTAZOOD*

Due to their design of mimicking human behavior, and the resulting invisibility on the platform, fame-enhancing bots are difficult to trace and observe. Since Instagram shut down its APIs and cut researcher access to data on the platform, it has become difficult to collect data and research social media platform culture and practices (Leaver et al. 2020). To uncover botting and understand its practice processes, I chose autoethnography as a method, and ran Instazood's Instagram bot myself. The botting project serves as a case study to underpin the argument that botting is a form of play on Instagram. "Get followers on Instagram with our Instagram bot" was the slogan and main point of Instazood's advertisement of their product, along

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3. René Glas (2013, p. 5) slightly distinguishes between player and user in his analysis of a playful use of Foursquare as an example of a ludification of culture: "The line between being a player and being a user is, of course, thin." Adapted to Instagram, one could think of a dual experience of Instagram as a game or photo-sharing app, since not everyone is playing the visibility game. Considering the argument of an inherent ludic dimension and the playful use of the platform, there is no distinction between Instagram users and players, only distinguished forms of play.

with the following message: "Start your growth today and get more Instagram followers easy, fast, and safe with Instazood" (Instazood 2016a). This company provided automated bot software that helped customers promote their Instagram profiles. Instazood's idea, similar to that of other bot providers, was to generate "real" followers through interaction: If one follows and interacts on other peoples' accounts, there is a high probability that they will interact with and follow back, in return.

Methodology

STUDYING a technological research object that is programmed and used to operate invisibly is a methodological challenge. There are no computational methods to retrieve data about interactions on Instagram. Interactions performed by a fame-enhancing bot are not distinguishable from those of human users, unless its preset comments contextually lead to the assumption, that a comment was not written by a human user but by a bot. Therefore, they are almost impossible to observe. For that reason, I could not find botters to interview. Consequently, the need arose to study fame- enhancing bots and their use with an autoethnographic approach, and become a botter myself.[4] This required not only using a bot, but also becoming a creator of content that may interest future followers. Autoethnography provides a different perspective based on personal experience that, according to Adams et al. (2017), complements or fills gaps in research that contradicts or offers alternatives to established research narratives. In this case, autoethnography, in the first place, enables access to the field and a method to study the practice of using fame-enhancing bots on Instagram. Another purpose of autoethnography

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4. Snickars and Mähler (2018) ran a comparable project on Spotify to find out what happens when bots mimic human listening behavior on Spotify to the extent that it becomes impossible to distinguish bots from human behavior. Therefore, they programmed bots for various tasks and used them as research informants that generated empirical data.

is to "articulate insider knowledge of cultural experience" (Adams et al. 2017, p. 3). Using a fame-enhancing bot, I could reveal its functions, affordances, performance, and some implications to other Instagram users. The autoethnographic approach further allows one to experience and describe everyday practices and user behavior on Instagram in mundane settings. To evaluate the findings and frame the practice, I combined autoethnography and a close reading of Instagram's Terms of Use, as well as its Community Guidelines.

The botting project started by creating a new account, setting up a profile, and deciding on a specific theme for its content. For simplicity's sake, I created an online identity for my dog, having enough material to regularly post photos and videos of her. Every two days, I posted audiovisual material about my dog that my soon-to-gain followers could be interested in. The postings came with a caption that contained up to ten hashtags related to the content and everyday life with a dog. In a second step, I purchased a month of botting for ten euros via the bot provider, Instazood, and ran its bot between October and November 2018. Instazood provided several services such as post and comment management tools, the option of purchasing likes and video views, or becoming a franchise partner, of which the Instagram bot was the leading service. They considered the essential goal of their service to be to find real and active followers.

Therefore, the bot could be triggered to engage with specific targets the user has set. These targets could be other pages, hashtag owners, hashtag lovers, or particular locations, with the possibility of modifying the activities (likes, comments, and follows on that target) of each. In my case, I set targets on hashtags, profiles, and locations linked to my dog's breed, a popular hobby of dog owners, and where most of the photos were taken (e.g., the Thuringian Forest in Germany). The bot's engagement consisted of automatically following, liking, commenting, and unfollowing other profiles and their content. The latter action was significant, since Instagram has limited the number of followees to 7,500 (Instazood 2016b). For this reason, the bot kept following and unfollowing, to interact with more profiles

than the limitation allowed. During the project, I observed the inter-actions of my bot, the follower number, and the engagement with my account. I collected screenshots of my profile and interactions with users who engaged with it. On the twentieth day of running the bot, I checked the Instagram account, and the number of followers had increased to 1001. After 32 days of use, the statistics showed 1368 generated followers. During that time, the Instagram bot had followed 12,761 and unfollowed 9,790 accounts. It commented on posts 2,396 times and liked 1,858. At the end of the project, the dog profile achieved 1,456 followers and received 337 likes for the most successful post. The statistics show that the automated interactions attracted attention to the dog profile and gained visibility.

Ethical considerations and limitations of the botting project

As Highfield and Leaver (2015, n.p.) say, "privacy in relation to social media platforms of all types remains an ongoing issue." The definition of perceived privacy can be very different among Instagram users. Furthermore, the sensitivity of the material and the vulnera-bility of online environment users should inform ethical decision-making (Markham & Buchanan 2012). Instagram has a binary privacy practice in which users set their profile and content to a public or private mode (Marwick 2015). The latter setting needs confirmation of the following request to connect with the profile. In this case study, people either provided their data publicly or actively confirmed the interaction with the created profile. Since I only observed the bot's performance, interactions with my profile, or comments on the bot's engagement, the case study did not violate any privacy concerns related to other users' profiles. To protect the interactants' privacy, all collected data in the form of screenshots of a few private messages and showcased interactions and comments have been anonymized and blacked out to the extent that users' identities are not traceable.

The posted content was real and contained true information on my dog's everyday life to the extent that it did not cause any harm to

other Instagram users by showing sensitive content or setting up a fake identity. The fame-enhancing bot solely performed its interactions. The bot's metrics did not reveal detailed lists of profiles it interacted with. According to the presetting, it interacted with possibly any profile engaging with specific hashtags, profiles, or locations. Therefore, interaction with other users was not limited to particular nationalities, genders, education, or popularity. Interactions performed by the bot could possibly affect other users. Its preset comments were exclusively positive. The perception and implications of interactions on Instagram are generally very diverse in meaning and values. Out of more than 25,000 performed interactions, only two users got back to me to comment on the bot's unfollow interaction, one with sarcasm and the other with anger. Considering the vast amount of research on harmful content and behavior on social media platforms, such as wide-spread hate speech, fake accounts, and trolls manipulating national elections worldwide, the bot's interactions are unlikely to have a negative effect, or profound implications. Furthermore, the two reactions to the bot's unfollow show that these interactants were unaware that a fame-enhancing bot performed the interaction, but ascribed it to me.

Due to the content creation of private audiovisual footage of my dog, it was necessary to adhere to an intentionally set boundary for research and personal effort. Therefore, I allocated a limited duration for running the bot, and a specified effort for posting content every two days, which I had created in my personal life. Another limitation is that the research profile and its content were built beforehand from scratch without any followers, visibility, or reach. The experience could have been different if the bot was run on a more advanced profile with a more extensive content archive and an existing community. The project's setup does not reveal the implications of a fame-enhancing bot to an established profile regarding visibility on the platform and reaction to its interactions, which raises further questions such as: Would other users feel less affected by an unfollow if the profile had been more advanced and less intimate? A participant

with an established profile could repeat the project to compare different experiences and outcomes of the botting practice.

Furthermore, the content creation about the hobbies and interests of dog owners aims at one niche community. The project results could have been different for another themed community, especially if it had been a community such as fashion or lifestyle, where influencers can earn a lot of money. Since many everyday Instagram users also run fame-enhancing bots, I did not focus on them, but chose a niche community according to my hobbies and expertise.

The results were evaluated by comparing them to Instagram's Terms of Use, and Community Guidelines to represent Instagram's rules of play. Future research could consider the user's perspective of the platform's rules and values, and study the community's views of these rules by conducting qualitative interviews. Nevertheless, some project results allow for conclusions regarding rules and values from a user's perspective.

Confrontation with Instagram's Rules of Play

To evaluate the usage of services like the Instazood bot, as described earlier, I wanted to explore whether Instagram permits or supports them. I did this by carefully reading their Terms of Use and Community Guidelines, where the platform specifies "appropriate" user behavior and consequences of noncompliance. Do botters follow the rules, or bend them to achieve the greater good? As Cotter (2019, p. 907) shows, "these documents serve as regulatory devices or the articulation of the platform's 'rules' that Instagram encodes into and enforces with algorithms."

The user has specific obligations towards Instagram in return for the platform's services. One of these is that the user must provide correct and current personal information. Users do not need to reveal their identity, but they must refrain from impersonating other people, or providing inaccurate or wrong information. Further, users are not allowed to register an account for someone else without their explicit authorization (Instagram 2023b). If a user is obliged to provide accu-

rate information, how could one not reveal at least some elements of their identity? From Instazood's point of view, they do not violate this rule, since botters authorize them to act on their behalf. For me, this is an interesting question. I based the content for the botting project on my dog's life.

Firstly, the information provided was not related to my "identity." The contact information contains a nickname for the profile that relates to the dog's name and the account's email address. In this sense, this is rather a hybrid of my, and the dog's "identity", and the information one can gather from the content of the posts. It is unclear whether the interdiction of running an account for someone else includes or excludes pets, but these accounts are indeed accepted or tolerated. Leaver et al. (2020, p. 16) write that, unlike Facebook, Instagram was historically more flexible regarding names, identities, and multiple accounts.

Secondly, it is the algorithm that performs the interactions by liking and commenting being triggered on specific targets, such as hashtags. In this respect, it is not my choice whether I appreciate a photo and, therefore, like or comment on it, but it is the choice of the algorithm, which does not reflect either my or the dog's "identity."

Another rule says that one is not allowed to transmit or even sell parts of one's account to third parties—the same applies to one's rights and obligations without having asked beforehand (Instagram 2023b). To use the services of a bot like Instazood, one must provide access to the respective account on Instagram, including its access data. Otherwise, the bot cannot act on behalf of the botter.

Looking at the Community Guidelines, this exploration becomes more interesting. The first sentence contains the obligation that the platform remains an authentic and safe place of inspiration and expression. Therefore, users ought to support "meaningful and real interaction." Whether we can consider the bot's interaction as "real" or not is questionable. However, it is not "meaningful" in that it spreads likes and comments as feedback on photos, because it is configured to be triggered by hashtags and profile names. Apparently, Instagram wants human users to perform interactions manually

based on their interests and thoughts, which does not apply to automated interactions performed by a bot. Matamoros- Fernández et al. (in press) pointed out that platforms associate authenticity with content and behavior. In this respect, "fake- engagement, repetitive posting, coordination, and scams are largely banned." Further, they suggest that users should "stay spam-free by not artificially collecting likes, followers, or shares, posting repetitive comments or content, or repeatedly contacting people for commercial purposes without their consent" (Instagram 2023a). This is an interesting point because one can assume that Instagram understands botting as artificially collecting likes and followers, and posting repetitive content. They describe the use of bots without clearly defining what they mean by "artificially collecting" likes. One reason could be that there are automated functions that support the management of an Instagram account by simply posting prepared posts at a particular time. In this case, the software does not interact with human agents, but only specified processes and actions in motion. However, the user would also have to provide access to their account. The question arises, would it be regarded as collecting likes too artificially if users interact quantitatively, but manually, to attract attention to their profile?

Another reason is the assumption that tech companies deliberately use vocabulary such as "spam-free" or "inauthentic" to "deflect criticism for nefarious uses of their platforms onto 'bad actors' rather than acknowledging the ways their very own architecture, affordances, and incentive structure actively enable the sorts of practices they delegitimize as 'manipulative' or 'disruptive'" (Matamoros-Fernández et al., in press). Evaluating Instagram's Terms of Use and Community Guidelines, it becomes evident that, from their point of view, botting breaks their rules.

CHEATING on social media platforms

Salen and Zimmerman (2004, p. 268) state in their book on rules of play that breaking the rules is an intrinsic part of playing games. Rule-breaking players are a different type of player. According to

René Glas (2013, p. 4), "such players, who play not by, but rather against, the rules, are usually referred to as cheaters." Players cheat when they get stuck at a point where they cannot progress further without help. They break the rules to win the game (Consalvo 2010, p. 27).

De Paoli (2016) has made a strong connection between the use of robotic software in Massively Multiplayer Online Games (MMOGs) and on social media platforms in his work on "The Rise of the Robots in Virtual Worlds." He, therefore, uses data collections from previous work on cheating in massive multiplayer online role-playing games (MMORPGs), in which he proposes a new concept of defining cheating in those games. De Paoli and Kerr (2016, n.p.) summarize their discussion of the various definitions of cheating by claiming that most of the literature looks at "cheating as a practice where someone obtains unfair advantages." The media studies' point of view is that cheating can be seen as a cultural element that mostly has something to do with proof of power. They quote a definition by Brooke et al. (2014) within the context of "Virtual Societies" as "gaining some unfair advantage over other participants" that complies with the definition by Mia Consalvo (2007, p. 87).

In view of this, cheating on Instagram could be considered as all playful behavior and usage of the platform that is against its Terms of Use and Community Guidelines, and obtains an advantage over other users. The analysis results have shown that botting breaks the rules of Instagram. The statistics of the botting project prove an advantage of botters over other users who are physically unable to keep up with quantitative interactions performed by the bot, which is an essential principle of its success.

PLAYING WITH IDENTITIES

What is the effect of cheating on other users? Reflecting on the notion that maintaining a social network profile brings one's identity into being, Glas (2013, p.9) outlines that, following the notion of a ludification of culture, "maintaining profiles like Foursquare's

attribute to what can be considered playing one's identity into being." He further states that through identity construction, players and users are affected if cheaters interfere with their profiles. In her book on celebrity branding in social media, Marwick writes that technologies like Twitter can be used for all types of self-presentation. This also applies to Instagram, Marwick (2013, p.194) further outlines the importance of a strategically created "audience-targeted identity," which she calls the edited self. Using services like Instazood does not only affect the provider and the botter. It also mainly affects other community members, or edited selves, since the bot interacts with their accounts and contents, and, therefore, somehow with their identity.

By experimenting with the bot, I could distinguish two different forms of reactions. The first ones were direct reactions to the interaction performed by the algorithm. These reactions were thankful messages for likes and follows, offers for promotion on other users' accounts or hashtags, or direct answers on the bot's comments on randomly selected posts. Since the bot is triggered on specific targets, the photos it comments on are randomly chosen on that basis and not because of their visual content. I mainly targeted dog-related hashtags and pages to reach the niche interested in dog content. It, therefore, happened that "I" liked and commented on photos with visual content that I did not like at all but happened to have a connection to the same hashtags. Such a comment could have been "the best of the best," for instance. Incidents such as these happened regularly. Some people reacted to this feedback, and I received answers to the comments the bot created.

In some cases, this interaction embarrassed me, since it was neither my choice to comment on that specific photo nor the words I would have chosen related to the content. In these cases, the bot plays with my identity by mediating behavior and a personality that does not correspond neither to my "real" nor my dogs identity. On the other hand, the bot plays with the identity of the other users by giving feedback on their content and, therefore, on their self-presentation and identity. Considering the bot's exclusively positive and

broad comments, one can assume that its impact on the identity of other users is minimal and positive. Only knowledge about the bot and the nature of its likes, follows, and comments seem to devalue the interaction.

The second reaction was to a less obvious action by the bot. Unlike the direct answer on comments or likes, I received a response, not to a specific interaction, but to the bot's disconnection. For instance, one affected user of the follow-and-unfollow policy sent a direct message complaining about that behavior. The user wrote: "DON'T follow me then unfollow once I follow back. SHAME ON YOU. This is not what this platform is made for."[5] In this case, the user felt personally affected by the bot's "behavior." Interestingly, the user noticed the unfollow. Many people, and probably bots, followed and unfollowed my account throughout the project. It was only the fluctuation of follower numbers that caused me to notice that the dog account was probably also affected by bots. I didn't have access to the names or identities of the followers of the dog's profile. This user either knows their follower network or liked the dog content enough to notice the missing connection. Consequently, the person actively searched for the profile to send a message expressing their thoughts about the bot's unfollowing action. Interestingly, the user stated their understanding of the platform's purpose in their complaint, that supposedly users should not aim for high follower numbers, but show "real" interest in each other. Having said that, I must admit that my automated interactions do not mean I wouldn't be genuinely interested in other profiles.

Another reaction to the same scenario was a farewell message: "Bye bye unfollower 🥹😘 I lost my time with you !!! I'm happy without you yes 😄😂🤣." This user also noticed the missing connec-

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5. There is another set of rules developed in the process of cultivation of platform culture by Instagram users and communities themselves. Salen and Zimmerman (2004, p. 30) call them implicit rules that "concern etiquette, good sportsmanship, and other implied rules of proper game behavior." In a future project, one could conduct interviews with Instagram users to research the implicit rules of a playful Instagram use.

Similar to the other message, this user took the unfollow personally and expressed this effect via a direct message. This user mentioned the loss of their time. Their account was unfamiliar to me, and we never had direct contact. The only interaction could have been a random comment on one of their posts by the Instagram bot, which I could not trace due to the large number of comments the bot created, and the fact that they weren't registered. Nevertheless, they stated that they had lost time, although the dog account was only online for a month, with 26 posts. The unfollow did not meet their expectations regarding connection between profiles, and shows that this user related the unfollow to their personality and identity. Furthermore, this user tried to claim that they were not involved enough to "suffer" from the canceled connection. The contradiction between those two sentences and the fact that they were motivated to send the message shows that it still affected them in a certain way. At this point, it is essential to recall that the affected users do not know that the bot performed the interaction. In this case, the unfollow practice has the potential to influence others, irrespective of whether or it is performed by the user or a bot.

The last reaction also claims that building relationships and connections in this virtual community does not take time or specific qualitative interactions. A reason could be that one feels part of the community or a particular niche, and, therefore, a connection to its members. They share the same interests or hobbies, which seems enough to welcome new members without knowing each other. That could be why it affected these two users, who dealt with the perceived rejection through the unfollow action in different ways and were motivated to let me know. I suppose that all or most users who reacted to the bot's interactions were unaware that a bot had performed the precedent interaction. It follows that a particular behavior on Instagram provokes reactions, and whether the interaction was performed by a bot or by a human user acting like a bot becomes unimportant. The platform fosters bot-like behavior (see Matamoros-Fernández et al., in press). Considering the statistics of

unfollowed accounts, only two out of almost 10,000 unfollowed users acted and conveyed the effect the unfollow had on them.

According to Jansz (2014, p. 271), the relationship between a player and the game character enables them to develop their identities in interaction with the game content. Applied to a playful use of Instagram, can playful identities on the platform also develop in interaction with the app content? Leaver et al. (2020, p. 39) dedicate a whole chapter of their Instagram book on aesthetics, showcasing the development of Instagram aesthetics "that take in both the functions and affordances of the platform and the tropes and practices developed by its users." According to Elisa Serafinelli (2018), the extensive use of Instagram founded and shaped a new mobile visualities aesthetic. In this respect, the interaction impacts one's identity, and the cheating practice, through automated interactions on social media platforms, affects other users.

DISCUSSION

This paper and the project show that botting is perceived as cheating by the platform and by Instagram users who are affected. In future research, it would be essential to include the perspective of botters. The theoretical approach and thinking about playful uses of Instagram allowed framing and describing the practice within the scope of the visibility game. The perception of botting as cheating is an explanation for the rejection of bots, and their ascription of being evil. Instagram users who are playing the visibility game are not limited to the strategy of using fame- enhancing bots. They also perform quantitative interactions to attract attention to their profile manually. Since this is a common practice and it is indistinguishable whether a bot or a human user performed the interaction, shouldn't we judge bots, in general, more objectively? What does the practice reveal about interactions on Instagram, such as the meaning of a "like"? Instagram users like posts, not only because of the image content, but also to attract attention to themselves or to support their content creators. That raises the question of whether a bot like is less

worthy than a human-performed like. What is the difference, and is it important to distinguish them?

Instagram is a virtual space in which we construct an online identity and play with it on various levels. It is essential to acknowledge that this constructed virtual identity represents a specific part of our identity that is reciprocally shaped by ourselves, other users, and the platform. Timmerman frames social media platforms as serious games. The results of the project confirm this. Botting is an answer to Instagram's visibility policy and a strategy of the visibility game. Framing botting, from the perspective of users, as perceived cheating, helps us to understand their reaction and rejection of the practice. Furthermore, the theoretical framework of botting as a form of play has practical implications. Understanding oneself as a player on Instagram can potentially enable users to more effectively handle its negative implications, and take interactions, such as unfollowing, less seriously. Knowledge of botting helps to contextualize the practice from its practitioner's perspective, instead of applying its outcomes to oneself.

CONCLUSION

Creating and maintaining an online identity on Instagram informs various playful use practices such as the visibility game. Playing the visibility game as an example of the ludification of culture produces different strategies like botting. Botters perform automated social interactions to attract attention to their profiles, and gain visibility. Including Timmermans' and Gergen's works, we can speak of the use of Instagram as playful, especially considering that the developer purposely included playful elements. This theoretical framework laid the foundation for further explorations on botting.

Instagram's use has an inherent ludic dimension grounded in the history of app development; it induces a playful identity construction and a playful use. It, therefore, is an example of the ludification of culture. It further and ambiguously generates playful practices like botting through the architecture of its platform and delegitimizes it

in its Community Guidelines simultaneously. According to Instagram's Terms of Use and Community Guidelines, the botting practice as a form of play on Instagram breaks the rules. Since botting impacts higher engagement, followers, and, therefore, greater visibility, botters gain an unfair advantage over other participants. From that point of view, botting is a way of cheating. As De Paoli (2016, p. 80) cited in an article of *Social Media Today*: "No one wants a relationship with a robot." This statement and the abovementioned experience of the bot's follow-and-unfollow policy show that parts of the community do not accept the automated practice of interaction. According to some users and the platform itself, Instagram is meant to be a network with "genuine" interaction among human beings that should not be superseded by automated software. The analyzed reactions to the unfollow-action of the bot have also shown that its use is not only not accepted but condemned by some Instagram users and community members.

Timmermans concludes his provisions with the statement that playful social media platforms are serious games in which users playfully interact with each other. Still, some elements consist of severe social mechanisms:

> "They [social network sites] invite users to playfully interact with each other and with the medium, while knowing the serious social mechanisms that are at play. Social network sites are 'serious games': the line between play and reality is inevitably blurred. Online, all identities are, to some degree, playful identities." Timmermans 2014, p. 290.

In this respect, users play with each other's identities playfully, possibly affecting each other. Therefore, one can speak of botting from the perspective of parts of the community and the platform as cheating on them and their identities or, as De Paoli (2016, p. 80) has called it, "a form of 'unethical and unfair competition.'"

This case study is a starting point for further research on botting on Instagram. In a future project, researchers could interview botters

to learn more about the botting process, its results, and possible detection by Instagram, and what follows detection. There are countless programming projects on Git Hub to program fame- enhancing bots oneself, as well as several other bot providers. Continuative research could analyze different technological functionalities and the scope and impact of their use to produce further knowledge of playful, everyday cultures on social media platforms.

BIBLIOGRAPHY

Adams, T.E., Ellis, C. and Jones, S.H. 2017. "Autoethnography." In: J. Matthes, C.S. Davis and R.F. Potter (eds.), *The International Encyclopedia of Communication Research Methods*.

boyd, d. 2010. "Social network sites as networked publics: Affordances, dynamics, and implications." In: Zizi Papacharissi

(ed.), *Networked Self Identity, Community, and Culture on Social Network Sites*. New York: Routledge, p. 39-58.

Brooke, P. J., R. F. Paige, J. A. Clark, and S. Stepney. 2004. "Playing the game: cheating, loopholes, and virtual identity." *ACM SIGCAS Computers and Society* 34 (2). URL: http://portal.acm.org/citation.cfm?id=1052791.1052794. Accessed May 2023.

Consalvo, M. 2007. *Cheating: Gaining Advantage in Videogames*. Cambridge, MA: MIT Press.

Consalvo, M. 2010. "Rule Sets, Cheating, and Magic Circles: Studying Games and Ethics." *Computerspiele (2010)*, p. 23–30.

Cotter, K. 2019. "Playing the Visibility Game: How Digital Influencers and Algorithms Negotiate Influence on Instagram." In: *New Media & Society* 21 (4), p. 895–913.

De Paoli, S. 2016. "The Rise of the Robots in Virtual Worlds: A Comparison and a Framework for Investigating Bots in Social Networks Sites and MMOGs." In Y. Sivan (ed.). *Handbook on 3D3C platforms.* Springer International Publishing, p. 59-83.

De Paoli, S., A. Kerr. 2010. "The Assemblage of Cheating: How to Study Cheating as Imbroglio in MMORPGs." *The Fibreculture Journal*16:Counterplay.URL: http://sixteen.fibreculturejournal.org/the-

assemblage-of-cheating-   how-to-study-cheating-as-imbroglio-in-mmorpgs/. Accessed May 2023.

Djafarova, E., O. Trofimenko. "'Instafamous' – credibility and self-presentation of micro-celebrities on social media." *Information, Communication & Society*, 2018.

Erxleben, C. 2018. "95 Millionen Bots: Der große Instagram-Schwindel." *Focus online*. URL: https://www.focus.de/digital/experten/95-millionen-bots-der-grosse-instagram-schwindel_id_9312000.html. Accessed May 2023.

Frissen, V., S. Lammes, M. de Lange, J. de Mul, J. Raessens. 2014. "Homo Ludens 2.0 Play, media, and identity." In: Frissen et al., (eds.). *Playful identities: The ludification of digital media cultures.* Amsterdam: Amsterdam University Press, p. 1-42.

Gergen, K. J. 2014. "Playland: Technology, self, and cultural transformation." In: Frissen et al. (eds.). *Playful identities: The ludification of digital media cultures.* Amsterdam: Amsterdam University Press, p. 55-73.

Gibbs, M., J. Meese, M. Arnold, B. Nansen & M. Carter. 2015. "#Funeral and Instagram: Death, social media, and platform vernacular." *Information, Communication & Society* 18(3), p. 255-68.

Glas, R. 2013. "Breaking Reality Exploring Pervasive Cheating in Foursquare." *Transactions of the Digital Games Research Association Journal* 1 (1).

Hallinan, B., Scharlach, R. & L. Shifman. 2021. "Beyond Neutrality: Conceptualizing Platform Values." *Communication Theory* 32(2), p. 201-222.

Highfield, T., T. Leaver. 2015. "A methodology for mapping Instagram hashtags." *First Monday,* 20(1).

Instagram. 2023a. "Help. Community Guidelines." https://help.instagram.com/477434105561119?ref=igtos. Accessed May 2023.

Instagram. 2023b. "Help. Nutzungsbedingungen." https://help.instagram.com/581066165581870. Accessed May 2023.

Instazood. 2016a. "Home." https://instazood.com. Accessed November 2018.

Instazood. 2016b. "Instagram-bot." https://instazood.com/ instagram-bot/. Accessed November 2018.

Jansz, J. 2014. "Playing out identities: Introduction." In: Frissen et al. (eds.). *Playful identities, The ludification of digital media cultures.* Amsterdam: Amsterdam University Press, p. 267-280.

Laestadius, L. 2017. "Instagram." In: Sloan et al. (eds.). *The SAGE Handbook of Social Media Research Methods*, London: SAGE Publications, p. 573-592.

Leaver T., T. Highfield, C. Abidin. 2020. *Instagram: Visual social media cultures,* Polity Press Cambridge.

Leistert, O. 2017. "Social Bots als algorithmische Piraten und als Boten einer techno-environmentalen Handlungskraft." In: R. Seyfert, J. Roberge (eds.). *Algorithmuskulturen. Über die rechnerische Konstruktion der Wirklichkeit.* Bielefeld: transcript, p. 215–234.

Matamoros-Fernández, A., L. Bartolo & B. Alpert. (in press). Acting like a bot as a defiance of platform power. Examining YouTubers' patterns of 'inauthentic' behavior on Twitter during COVID-19. *New Media & Society*.

Marwick, A. E. "Instafame: Luxury Selfies in the Attention Economy." *Public Culture* 27, no. 1(75), p. 137-160.

Marwick, A. E. 2013. *Status Update: Celebrity, Publicity, and Branding in the Social Media Age*, Yale University Press.

Markham, A. & Buchanan, E. 2012. *Ethical Decision-Making and Internet Research: Recommendations from the AoIR Ethics Working Committee* (Version 2.0). URL: http://www.aoir.org/ reports/ethics2.pdf.

Raessens, J. 2010. *Homo Ludens 2.0. The Ludic Turn in Media Theory*. Utrecht: Utrecht University Press.

Salen, K. & E. Zimmerman. 2004. *Rules of Play: Game Design Fundamentals*. Cambridge, MA: MIT Press.

Serafinelli, E. 2018. *Digital Life on Instagram: New Social Communication of Photography*. Bingley: Emerald Publishing Limited, UK.

Sloan, L., A. Quan-Haase (eds.). 2017. *The SAGE Handbook of Social Media Research Methods*. London: SAGE Publications.

Snickars, P., R. Mähler. 2018. "SpotiBot — Turing Testing Spotify." *DHQ: Digital Humanities Quarterly* 12 (1), p. 1-11.

Systrom, K. 2011. "What is the genesis of Instagram?" *quora.com*, https://www.quora.com/Instagram-company/What-is-the-genesis- of-Instagram. Accessed November 2018.

Timmermans, J. 2014. "Playing with others: The identity paradoxes of the web as social network." In: Frissen et al., (eds.). *Playful identities, The ludification of digital media cultures.* Amsterdam: Amsterdam University Press, p. 281-292.