

Liminality and Communitas in Social Media: The Case of Twitter

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1. Introduction

“What’s the most amazing thing you’ve ever found?” Mac (Peter Riegert) asks Ben, the beachcomber (Fulton Mackay), in the 1983 film *Local Hero*.

”Impossible to say,” Ben replies. “There’s something amazing every two or three weeks.”

Substitute minutes for weeks, and you have Twitter. On a good day, something amazing washes up every two or three minutes. On a bad one, you irritably wonder why all these idiots are wasting your time with their stupid babble and wish they would go somewhere else. Then you remember: there’s a simple solution, and it’s to go offline. Never works.

The second part of this quote has been altered: Instead of “Twitter”, the original text referred to “the Net“, and instead of suggesting to “go offline”, author Wendy M. Grossman in her 1997 (free and online) publication *net.wars* suggested to “unplug your modem”. Rereading *net.wars*, I noticed a striking similarity between Grossman’s description of the social experience of information sharing in the late Usenet era and the form of exchanges that can currently be observed on micro-blogging platform Twitter. Furthermore, many challenges such as Twitter **spam**ⁱ or ‘Gain more followers’ re-tweets (see section 5) that have emerged in the context of Twitter’s gradual ‘going mainstream’, commonly held to have begun in fall 2008, are reminiscent of the phenomenon of ‘Eternal September’ first witnessed on Usenet which Grossman reports. The Usenet Culture FAQ, last edited in October 1995, described the phenomenon as follows:

September The time when college students return to school and start to post stupid questions, repost MAKE MONEY FAST, break rules of netiquette, and just generally make life on Usenet more difficult than at other times of the year. Unfortunately, it has been September since 1993. With the growing sensationalism surrounding the “Information-Superhighway” in the United States, the current September is likely to last into the next century.

What used to be an annual, tidal influx has since long become an all-around-the-year phenomenon that involves not only the individual learning to comprehend the established

conventions of a given platform, but also affects the character of the given social medium itself. The present research is led by the hypothesis that the processes of appropriation located on the level of the individual user and the state of integration of a given form of social media into the existing media economy are *interrelated*. The second guiding hypothesis, which derives from the first, is that the progress a user makes in his or her initiation to a given form of social media varies depending on whether a user joined prior to or in the mainstream phase of the respective platform. In this context, I define 'social media' broadly as any form of computer mediated communication where individuals are addressable and, as a consequence, able to interact on a person-to-person (i.e. address-to-address) level; forms of social media thus range from Usenet, email, chat and instant messaging to media sharing, blogging, social networking services (SNS) and microblogging. Twitter, the micro-blogging service my research focuses on, allows users to post updates of a maximum length of 140 characters, which are published in reverse chronological *order*ⁱⁱ on their Twitter homepages. Other users may subscribe to these updates, an act which is called 'following' and which, in contrast to SNS, does not have to be reciprocated.

For the purpose of this research, I provisionally define the 'mainstream phase' of a social medium as the phase when it has already come in contact with other, more powerful socioeconomic spheres that impose their own logic onto it and eventually become the main driver behind its growth. A powerful, historic example is what happened to Usenet in the fall of 1994, when a million new users gained access – not because of their primary interest in the contents circulated on Usenet, but because Usenet had been made a part of their AOL package. The contemporary equivalent to this is when media personalities such as Oprah Winfrey present their micro-blogging accounts on TV, ushering in mass media audiences who initially consider Twitter as an expansion of their means to 'stay in touch' with their favourite TV celebrities.

Content-oriented Twitter research has often relied on the analysis of a body of updates generated by a multitude of users, with the individual user and their activity over time vanishing in the sample (cf. Akshay et al.; Mischaud; Honey and Herring). By contrast, the present research puts the focus on the progress made by individual users as they learn not only to control a new interface, but to comprehend the social dimension inscribed in and enabled by its interface. Theoretically, my investigation is guided by cultural anthropologist Victor Turner's work on rites of passages and social structure, drawing in particular on his concepts of *liminality* – the 'betwixt and between' state of an individual in the middle of a rite of passage – and *communitas*, an

egalitarian community spirit that is associated with liminality. Methodologically, I will begin by analysing social media interfaces with regard to their capacity to engender liminality and *communitas*. This is complemented by an analysis of productivity patterns and content of updates generated by users who signed up in either the pre-mainstream or the mainstream phase of Twitter.

2. Liminality, the Liminoid and *Communitas*: Why Rites of Passage Matter Still

According to the model proposed by Victor Turner, a rite of passage begins with the separation of the ritual subject from society, requiring a clear demarcation of sacred from secular space and time. Entering liminality (from Latin '*limen*', i.e. threshold), the ritual subject passes through "a period and area of ambiguity, a sort of social limbo" ("From Ritual to Theatre" 24) with the signs of his or her previous social status being destroyed and signs of a non-status applied instead. Society, holds Turner, articulates itself as a "structured, differentiated and often hierarchical system of politico-legal-economic positions with many types of evaluation, separating men in terms of 'more' or 'less'" ("Ritual Process" 148). By contrast, what emerges in liminality is an "unstructured or rudimentarily structured and relatively undifferentiated *comitatus*, community or even communion of equal individuals who submit together to the general authority of the ritual elders" (148). Equality is enabled not by virtue of shared personal traits of the initiands, but by their sharing the same position which, with regard to the social structure, is anti-structural: "The novices are, in fact, temporarily undefined, beyond the normative social structure" ("From Ritual to Theatre" 27). At the end of initiation seclusion, ideally, an elevated subject is produced that is reintegrated into society.

In "From Ritual to Theatre", published in the year before his untimely death, Turner outlined a theory of the liminoid, which in short can be described as an update of the concept of liminality for post-industrialized societies, "when ritual gave way to individualism and rationalism" (58), and individual option won over ritual duty. Regarding structure and employed symbols, liminal and liminoid phenomena are very similar, yet their role in society and their implications for the partaking individual are different. Liminal phenomena tend to predominate in tribal and early agrarian societies, i.e. in societies where work and play are hardly distinguishable because they are all part of the same duty which Turner calls "the work of the gods" (31).

Liminoid phenomena, by contrast, are typically found in societies that draw a distinction between

work and leisure, with leisure being a matter of individual choice and pursuit, rather than being governed by collective rhythm and representations: “Optation pervaded the liminoid phenomenon, obligation the liminal” (43). As a result, the powers exerted over the initiand in liminoid phenomena aren’t as far reaching and all-encompassing as those in a tribal ritual. Because they are optional, liminoid phenomena have to “compete with one another for general recognition” (54); as such the liminoid not only resembles a commodity, but indeed “often *is* a commodity, which one selects and pays for” (55). A play in a theatre, a Super-bowl Game or an art exhibition are examples of commodified liminoid phenomena Turner cites, and so, I would like to argue, are the various forms of current web 2.0 platforms, vying for the position of most popular liminoid experience.

Beyond enabling and controlling an individual’s position in society or maintaining the rhythm of the collective (as is the case with seasonal rites), the liminal/liminoid is also a key to social innovation. Turner: “I see [the liminal] as a kind of institutional capsule or pocket which contains the germ of future social developments, of societal change, in a way that the central tendencies of a social system can never quite succeed in being [...]. Innovation [...] most frequently occurs in interfaces and limina, then becomes *legitimated* in central sectors” (45). As liminoid phenomena, social media must also own a share of this capacity to accommodate “the germ of future social development”, to nurture it until it can become “legitimated in the central sectors”. From this perspective, the movement from one form of social media to another, which has been described as the ‘Hype Cycle of Social Software’ by consultancy Gartner Inc., can be seen as a reflection of the current state of a given social medium on its journey toward becoming ‘legitimate’. Does the experience it promises still seem so outrageous that it can only exist in an “institutional pocket” (as was the case in Twitter’s early stage, when the activity of regularly informing potential strangers in 140 characters or less about what one was doing was often considered blatantly trivial, or even exhibitionist)? Or has the experience that it promises already become legitimate in central sectors? In the next section, I will discuss Twitter’s interface and that of further, mainly web 2.0 platforms with regard to their ability to prompt liminoid experience and foster a sense of *communitas*.

3. Liminoid Phenomena in Social Media and the Case for Twitter

Twitter and the majority of social media platforms have clear mechanisms in place to separate

pre-liminoid from liminoid space and time: Upon her first visit, the user is usually greeted by a threshold-page that typically contains three types of elements: (a) a sign-up opportunity for the uninitiated, (b) a log-in for already registered users and (c) a description of the platform aimed at those who yet need to be informed about the benefits of the service and the experience it offers. 'Being greeted' is often taken literally: "Welcome, you're new, aren't you?" is the salute web video service vimeo.com extends to the potential recruit; already registered users are offered "Welcome home, username". Even if I am not logged in, amazon.com knows to identify me: "Hello, Jana Herwig. We have recommendations for you" is the standard welcome, leaving a loophole for other visitors in a post-scriptum: "(Not Jana?)".

The log-in prompt, like the archetypal threshold guardian, tests the user, asking for his or her (secret) name and password. For those who have both, it is a symbol of inclusion, for those who don't, of exclusion. This logic of inclusion/exclusion is deliberately utilized by the marketers of web 2.0 platforms to advertise their product. Originally, the purpose of the beta (i.e. pre-release) stage of a website was to test it with a limited population of users; meanwhile, invites to beta stages have become a coveted commodity on the web. As tech blogger Michael Arrington put it upon the launch of TechCrunch's spin-off site InviteShare.com:

One of the most frustrating things for early adopters like ourselves to deal with is the private, limited invitation beta. The startups seed a few invitations to their friends, and each new account has 3 or so invitations that can be given away. If you know the founders or one of the very early users, you can get in quickly. But if you don't, you often have to wait a long time to see a new product.

The rhetoric employed here shows that the question of access to a beta site is not merely a technical one: It testifies to a user's social status within the wider web community. Some websites, e.g. image bookmarking service FFFFOUND.com, even offer a visibly deactivated register button ("~~Register~~") to emphasize exclusivity. If the key commonality of liminal subjects in a rite passage was their submission to the general authority of the ritual elders, then, on the social web, it is the individuals' communal submission to the rules imposed by social media platforms that unifies them.

The sign-up procedure, too, is more than a mere technical necessity: It is a manifestation of the ritual subject's detachment from its previous social status in the form of an interface and usage flow. It is notable that, on Twitter, there is currently no procedure in place to check

whether the full name users specify during sign-up corresponds to their ‘real’ full name – but neither is it surprising that efforts are currently being made to introduce so-called verified accounts that will do just that. Anonymity and effacement are a token of liminality (cf. “From Ritual to Theatre”ⁱⁱⁱ 26) and a prerequisite for the sense of equality that characterizes *communitas* – in social media, it is also a concept that structures the competition between different platforms: On some, anonymity is enforced (e.g. on */b/*, a *Achan.org* image board)^{iv} and on others anonymity is oppressed (e.g. on *Facebook* where ‘fake name’ accounts are suspended). On Twitter, *optional anonymity* is built into the interface: Users may choose to remain anonymous; they may choose not to include a link to a website that would reveal more about them. But optional anonymity competes with various incentives to reintroduce the hierarchies of existing social structures: Immediately after sign-up, users may search their email address book to identify contacts who already are on Twitter; they are presented with a list of popular Twitter users and given the option to follow them. To avoid the ‘horror vacui’ of an empty social media interface, new users are guided through three basic *to-dos* which will disappear only if followed up upon:

What to do now:

1. Tell us what you’re doing in the box above
2. Find some friends and follow what they’re doing
3. Turn on your mobile phone to update your friends on the go

Yet what is in place in the sign-up procedure is a mechanism to check whether the desired user name by which one will be known (i.e. addressable) has already been taken or not. Often users have already decided on a preferred, default nickname (representing another technique to reintroduce structure and gain notoriety across platforms); however, the fact that a user name has to be *unique* and may only be *up to 15 characters long* leaves us in no doubt about its techno-centric, asocial nature. This matters: Turner (27) noted that liminality places the novices “in a close connection with non-social or asocial powers of life and death. [...] They are dead to the social world, but alive to the asocial world.” In this asocial world, initiands are confronted with “symbolic patterns and structures which amount to teachings about the structure of the cosmos and their culture as part and product of it” (27). While it may seem outrageous to suggest that Twitter use might entail a lesson about “the structure of the cosmos”, this is put into perspective if we consider that using Twitter is not a ritual imposed by the authority of the elders, but a

liminoid phenomenon, an experience the user opts for and is also free to opt out from (many first time Twitter users, as we shall see, do indeed decide to opt out, if temporarily). What is indeed obvious is that Twitter's interface – like many social media interfaces – is rich with symbolic patterns. The central concepts that shape Twitter's liminal experience (as judged by the interface) are *following* and *followers*, *updates* and *direct messages*. And while some of these have social connotations, for the initiated the count for all of them is 'zero' – a powerful symbol for the ambiguity of this meant-to-be-social, yet strangely asocial world. Above everything else, the question "What are you doing?" is towering, complete with a text field and submit button to respond to this call – just what the present problem or occasion was that gave rise to the question remains unclear. In liminality, Turner notes, "the factors of culture are isolated" (27); by reducing social experience down to these few aspects, new Twitter users are literally forced to learn the language of the social anew and, in doing so, gain insights into the nature of the social.

There is a whole array of questions relating to social meaning that this initially void interface triggers, negotiations of the social that have been mulled over, written about, commented on and shared countless times in various forms of social media, from blogs to social network discussions and on Twitter itself. Questions such as: Why should I answer this question or read someone else's response to it? What or who are followers? What do I do if someone (I know/I don't know) starts following me? Do I have to follow back? What if I follow someone and the person *doesn't* follow back? May I, or must I be offended if someone *unfollows* me? A veritable meta-discourse has been established whose key tenets are that Twitter does barely make sense to the first-time user and that it takes a while to understand its benefits (see my compilation of blogposts, "Stages of Twitter Appropriation"). The next section examines whether the view that is reiterated by the discourse corresponds to observable behaviour on Twitter or not.

4. Assessing the Early Stage of Twitter Use

To be able to assess the progress of a user's initiation to Twitter in the pre-mainstream phase, I identified a sample of 16 users who had signed up before April 2007 and who were still active in May 2009. To obtain such a sample, I submitted the phrase "I joined Twitter on" to the Twitter search; the search only considers updates posted in the past 1.5 weeks. The string "I joined Twitter on" is contained in the pre-formatted update that users of the web application whendidyoujointwitter.com are encouraged to post; the application itself allows them to look-up

their sign-up date. To be considered in the sample, a user would have had to sign-up between 1 October 2006 and 31 March 2007 and post an accordingly formatted update with the sign-up information within the 1.5 weeks before the sample was defined. This method yielded 35 users, a number which was further reduced because three users mainly posted in languages other than English; one had protected their updates for the first two years and 15 had already exceeded the technical limit of 3200 updates, making their earliest posts unretrievable.

A first inspection of the activity of users in this sample revealed that 15 out of 16 (94%, with the exception of user O), had at least once stopped writing updates for a period of at least 28 days (which in the context of this research will be referred to as a 'hiatus'). 12 users (75%) went on a hiatus already in the first two months after signing-up, and nine experienced at least two such phases of inactivity. Of the 32 observed hiatuses, half were in the below-100-days range with the average duration of a hiatus being 173 days and the duration varying between 36 and 600 days. Four users (25%) didn't even write their first update within the first four weeks after signing up, taking 61, 64, 87 and 600 days respectively to accomplish this task.

These figures alone are interesting in the light of a widely reviewed study by Nielsen Media Research which reported that more than 60% of U.S. Twitter users "fail to return the following month", claiming that these "Twitter quitters" presented "a roadblock to long-term growth". Considering the limited size and bias of my sample – containing only users still active in May 2009 – its results can clearly not be applied to the Twitter population at large. But what it suggests is that four weeks of inactivity do not necessarily imply that a user has "quit", as he or she might return when they are 'ready' for the initiation. Idle user accounts may be reactivated at a later stage. While liminoid phenomena are optional, this doesn't mean they can or will happen just any time – rather, *because* they are optional, users are in a position to debate whether they are prepared to start using a service or to return at a later, better date.

In their first update, a clear majority of users did as they were instructed by the interface: 14 out of 16 users (87.5%) reported what they were doing at the time; user H reported what s/he was *going* to do in the summer, D posted an incomprehensible sequence of characters. This represents a considerably higher share than the average of 41.5% of updates responding to the question "What are you doing?" that Mischaud identified in 2007, analyzing 5767 updates from 60 different users, but with no specific consideration for early updates. This is a first indicator that initial Twitter use for someone who signed up pre-mainstream was a rather solipsistic than

social experience, a confrontation of user and interface rather than a person-to-person encounter. An update from user L (“@xxx -- my first @ response so now i can see how that works. now twitter is making some sense. heh”) then led me to the hypothesis that use of the so-called @-response could be interpreted as a confirmation that a user had indeed become aware of Twitter’s social dimension (here meaning: the co-existence with other users).^v Across all users in the sample, I observed a range from 21 days (user I) up to 747 days (user A) that it took someone to first use the @-response. In terms of updates, results ranged from 3rd update (user F) to 302nd update (user B). It was interesting to note that user E, who was the one who had followed Twitter’s instruction the most religiously, posting nothing but straight reports of what s/he was doing in the first 50 updates, was among the slower ones to adopt the @-response, taking 430 days and 106 updates respectively. B was another user who applied a consistent, in B’s case rather introspective style, most of the time responding to the question “What is on your mind?” rather than to “What are you doing”. An example of four back-to-back posts by B (20th day, updates no. 17-20):

Realizing that I desperately need to lose weight!!!! [3:56 PM]

Why did get that banana nut bread with my coffee? [3:57 PM]

tri tip? salad? tri tip? salad? [5:36 PM]

Am I really going to the gym? [11:12 PM]^{vi}

B, too, was rather slow at showing awareness of Twitter’s social dimension, using the first @-response after 410 days and 302 updates respectively.

Examining updates chronologically, with special attention devoted to ones that ended a phase of inactivity, I was able to identify four possible, non-exclusive views on Twitter that could shed more light on a user’s motivation to use or to return to Twitter after a hiatus. (N.B.: In the following, names of mentioned media personalities remain unchanged; ‘xxx’ indicates that a name or user name has been rendered anonymous. Considering, again, the limited size of the sample, this categorization can only be considered provisional.)

View on Twitter as a (web) technology:

A number of users’ initial interest in Twitter seems motivated by their view on Twitter as a web technology, rather than as a means to keep in touch with people: User G, following a break of 492 days, posts both 2nd and 3rd update within one hour: “Trying to understand REST use in

Flex” and “*Testing this twitter Flex interface*”. G then discontinues posting for another 44 days. User F, as a first update posted 87 days after signing-up, is “*wondering if there’s a way to push Adium / Facebook updates to Twitter automatically*”. User J’s 3rd and 4th update read: “*Just telling you I can do this from my terminal window!*” and “*Just twitting from my DOS console*”. User M posts update no. 2-6 within three days: “*Trying to figure out the twitter api*”, “*test*”, “*test3*”, “*test2*”, “*test*” and then stops updating for 336 days. According to their Twitter profiles, G, F, and J are programmers.

View on Twitter as part of a mobile gadget culture:

After 336 days of inactivity, M re-emerges: “*Loving my Touch. Mobilicious.*” Further updates reveal that M has purchased an iPod Touch and installed a Twitter client. Similarly, user H, after the second hiatus, writes: “*Got a nokia e61i now... Getting connected to everything mobile.*” H’s sixth and final hiatus ends with: “*Google Latitude... Cool... <http://is.gd/ijOV>*”. In each case, using Twitter seems to be an activity that is related to their interest in a mobile gadget culture.

View on Twitter as a social sphere:

The view on Twitter as a sphere to connect with people with similar interests seems to be a motivator to return, for instance when user I writes after a 56 day hiatus: “*thinking about next season as a Happy Hammer - prompted by a fellow fan now following me.*” (A Happy Hammer is a fan of football club West Ham United). User D ends a 234 day break with updates addressed to or referring to TV and netcasting personality Amber McArthur:

@xxx You are not the only one in the UK that is glad to see AmberMac back on here, Shame Net@Nite is no longer recorded live though [1:10 PM]

@ambermacarthur So if your stalking Leo on here again, does that mean I can start stalking you on here again? Sorry I'm a bit slow [1:13 PM]

McArthur’s presence had probably been among the reasons why D started posting on Twitter in the first place. D’s second update (23 days after signup) read: “*Hi amber Just testing via mobile Your my only follower so far Hope you get this 5lbs choc Loads of valentines then L&L xxx*”. In the whole sample of 16 users, this is the only early update that appears socially motivated. It has to be noted, however, that this update was directed at an individual whose presence on Twitter

was boosted by her presence in other media, presenting an early example of the coming in contact with other, more powerful social spheres discussed in the introduction.

View on Twitter as a liminal challenge:

This is the category in which users' awareness that using Twitter might cast them into a state of ambiguity becomes the most apparent, with the interest to figure out just what this might be about being the main motivator. User A posts from web as a first update: *"Testing this gadget"*. Three updates and a 195 day hiatus later, A writes: *"Testing twitter"*, merely reasserting the previous. User C announces in the second update (following a 240 day break): *"back"*. In the course of the same day, C writes *"ASDf"* (i.e. four characters next to each other on a keyboard) and *"mic check, 1-2"*, as if trying to find the appropriate voice. Several users reveal that they are aware of their intermittent presence. P states: *"i totally forgot about twitter, i suck"*, ending the first of three hiatuses. At the end of the last one, P observes: *"Wow I have been away for a while. I have been spending quality time with MGS4/MGO. Still haven't beat Zelda. Lol"*. User M, after another hiatus of 135 days, posts: *"trying to remember how to use twitter"*.

As user activity patterns vary greatly, drawing comparisons without the context of the given activity pattern is problematic. Some users (A, G, H and M) take more than a year to even write ten updates, while others (B, E and I) are particularly prolific in the beginning, producing at least 60 updates in their first four weeks alone. Using the web application TweetStats.com, one can visualize the activity pattern as a bar chart, beginning with the first update (i.e. not with the sign-up date). While the long-term output in terms of number of updates tends to grow continuously with some (C, F, G, and N), it seems to go through tidal waves with others (B, O).^{vii}

I conclude this section with a final observation regarding activity patterns, which I interpret as a confirmation that the initiation of a user cannot be accomplished unless he or she understands the platform's social dimension: Among the 15 users who at one point stopped updating for more than 28 days, 12 used the @-response for the first time *after* their final hiatus. Put differently: 75% of all users did *not* experience a hiatus after having posted their first @-response; three even posted their first @-response on the same or the day after returning to Twitter. The next section follows up on the assumption that a distinction needs to be drawn between a technical and a social understanding of a social media service, focusing on the different types of available social mechanisms on Twitter.

5. Default and Emergent Social Mechanisms

Looking at the various mechanisms to engineer the social that Twitter currently offers, a distinction can be drawn between those that are already built into the system and others that have emerged through users' appropriation of Twitter. Part of the first group, which I propose to call 'default mechanisms', are the follower/following logic and the @-response. If a user clicked on all available options on Twitter's interface, he or she would sooner or later be following someone or be responding to someone, even if the social implications were not apparent to the user: default mechanisms are inscribed into the interface, and activated or undone at a mouse-click. By contrast, the second group, which I propose to call 'emergent mechanisms', includes mechanisms which are the result of a collective experiment with the semantic opportunities of a 140 character text field. As such, they can be considered products of the "economy of collective intelligence" proposed by Pierre Lévy in 1997, which "will center, as it does already, on that which can never be fully automated, on that which is irreducible: the production of the social bond, the relational" ("Collective Intelligence" 31).^{viii} The currently most prominent examples of emergent mechanisms on Twitter are the 're-tweet' and the 'hashtag' which are explained in the following.

A single update on Twitter has come to be called a 'tweet'. If a tweet is copied and posted again, usually by someone else, it is called a re-tweet. It has become a common practice to give credit to the previous author(s) by mentioning their username. Here is an example where user O re-tweets someone else's: *"retweet via @xxx flash mob tonight at rio. I want to go, but have a meeting with @xxx. Can he be coerced? Stay tuned..."* Alternative styles are "RT @username" or "retweeting @username". Re-tweeting has become standardized to the extent that some Twitter clients offer special 're-tweet' buttons that automatically copy and paste the message, complete with reference to the previous user. It has to be noted, however, that automated re-tweets are not able to bring about the type of semantic innovation that initially gave rise to the emergence of this mechanisms. While re-tweeting is not yet a native feature of Twitter's interface, "Project Retweet" was announced in mid August 2009 on Twitter's blog, whose aim is to turn the emergent mechanism of re-tweeting into a default one.

A hashtag is a string of characters consisting of the #-symbol (a.k.a. 'hash') and a sequence of characters which may consist of an acronym or of one or several words (without a blank space in between). It is called *hashtag* because it adds a tag, or label, to an update.

Technically, the purpose of a hashtag is to allow searching for updates containing the same, uniform sequence of characters. According to web folklore, collective use of hashtags emerged during the **October**^{ix} 2007 San Diego forest fires, when one user first used *#sandiegofire* to identify updates related to the disaster, which was then picked up by others. Hashtags are particularly powerful when it comes to connecting dispersed people, who often neither know nor follow each other, e.g. around an event or item of interest. User O, in the following example, refers to the Consumer Electronics Show, CES: “*After spending an hour looking for the Leaders in Tech shuttle, I’m out of time to go to #CES today. Have to get ready for the LIT dinner.*” An alternative use^x of hashtags has emerged where it is used as a commentary or appraisal. Consider this example, again by O: “*@xxx gimme a fricken break! Are these the same people airing America’s Top Model? #utterbullshit*”. New social meaning can be created and attached to a purpose spontaneously, resulting in a taxonomy that is both flexible and ‘flat’, i.e. lacking hierarchy.

As these emergent mechanisms are at the heart of the ‘social bond’ that is engineered on Twitter, beginning to use them can be considered a crucial step in the initiation to Twitter *as a social medium* (not excluding the possibility of other uses of micro-blogging, e.g. as a shopping list or news outlet). In the sample of 16 users introduced in the previous section, user O was the first one to use either a hashtag (on 8 January 2008) or a re-tweet (on 30 April 2008). Judged by the content of O’s updates (and confirmed by O’s blog), O was also the one who attended the biggest number of events that typically get live coverage in social media. Accordingly, O’s first hashtag use referred to the Consumer Electronics Show and the first re-tweet announced a flashmob taking place in Rio (see above). This suggests that emergent mechanisms are not sole creations of online interactions, but are more likely to emerge at interfaces where online and offline interactions interpenetrate each other. Furthermore, conferences and community gatherings are also examples of liminoid phenomena in the best Turnerian sense.

Across the sample, it took users between 405 days (user O) and 947 days (user B) to re-tweet a message for the first time. Hashtags were first used between 292 days (user O) and 957 days (user E) after sign-up. Of these 16 first-time hashtags, four related to face-to-face events and four to online events (e.g. a simulated U.S. presidential election decided by Twitter votes). Of the remaining eight hashtags, four were broadly related to web culture (software and online gaming references), one to marketing and one to career-building; two were not classifiable. Not a single user acquired the technique of re-tweeting or using hashtags *before* using the @-response –

having said that, re-tweet and hashtag had probably not even emerged when some of them signed up.^{xi} A slight majority including 'lead user' O (50%) adopted the hashtag before the re-tweet, with two users (12,5%) adopting both techniques on the same day.

6. Acquiring Social Mechanisms: Then and Now

To be able to assess whether these patterns had changed in the mainstream phase, a second sample was defined covering users who joined between 1 March and 31 July 2009 using the described method. An original number of 36 users was further reduced to 14 (A2-N2) because 19 posted in languages/alphabets other than English/Latin; two had meanwhile protected their updates and one was a commercial account announcing special offers.

Upon a first inspection, it turned out that three users had manually deleted their initial updates. While one cannot assume that such a thing did not occur in the first sample (if it did, the users did not mention it in their updates), it is remarkable that users F2, J2 and N2 seem to worry about the 'unbalanced', 'lame' or 'boring' public impression their initial updates might evoke. The 'new' first updates now read (F2, J2, N2):

*Building up a new structure here after taking some time off. Maybe twitter and I will find harmony this time.
I deleted all my previous tweets because they were lame. I'm making a new start. New tweets, new name.
Ahh I keep getting bored so I keep deleting my posts. Hahaha.*

In comparison to the early adopters in sample 1, the 11 users in sample 2 were much faster at showing awareness of Twitter's social dimension **and their co-existence with other users**,^{xii} becoming chiefly manifest in their use of the @-response. Three posted their first @-response on the day they signed-up, and the longest that it took a user was 25 days. One (M2) even put one in the very first update, amounting to a span **across the sample**^{xiii} from 1st to 64th update; nine users (82 %) use the first @-response within their first eight updates. The average time between sign-up and first @-response amounted to 8 days – a stark contrast to the average 411 days in the first sample. This corresponds to an average of 14 updates between sign-up and first @-response in sample 2 – again, considerably less than the average of 68 updates in sample 1.

A similar result can be observed with regard to emergent mechanisms. While I expected that these would mainly be learned through observation, and would thus require considerably more time to adopt, there were two users who included either a hashtag (E2, two days after sign-

up) or a re-tweet in their very first update (I2, on sign-up date) – there weren't any indicators allowing conclusions regarding the origin of this social knowledge. All but one user (G2) made use of hashtag and re-tweet within the observed time span – regardless of the fact that the overall time on Twitter had been much shorter, barely amounting to two months for two of them (L2, M2). 94 days was the longest duration a user needed to post the first re-tweet, 143 days to post the first hashtag (both by B2). Not considering G2, the average was 39 days for a first re-tweet, and 45 days for a first hashtag. Given the already mentioned circumstance that these emergent mechanisms were probably not even known when some of the users in sample 1 signed up, an immediate comparison of the samples must inevitably be skewed. The contrast is indeed sharp: In sample 1, users took an average of 697 days (652 days more than the average of sample 2) to use the first hashtag, and an average of 701 days (662 more^{xiv}) to post the first re-tweet. The occurrence of hiatuses blends in with the overall pattern: Only one user, G2 (9% from eleven) interrupted their activity for more than four weeks, returning to Twitter after 70 days to make the announcement “*is off to Norway!!!*” To put things into perspective: 75% of the users in sample 1 (see above) had gone on a hiatus within the first two months.

Regarding the content of updates, one significant change can be observed: the increase in references to media personalities, and not of the netcasting kind (e.g. Amber MacArthur), but belonging to the mainstream segment of popular culture (e.g. Ashton Kutcher, Oprah Winfrey). User M2,^{xv} particularly in the initial phase, addresses the majority of updates to Twitter accounts of *New Kids on the Block* band members, often merely repeating messages, e.g. invites to come to a pre-concert party in a bar. Within the first 100 updates, C2 sends @-responses to a total of 15 different celebrities, ranging from soul, pop and hip hop performer to TV host, Hollywood actor and film maker, often initiating the first message with a bible quote; to one, C2 offers s/her services as a freelance PR agent. Also within 100 updates, E2 writes @-responses to 11 celebrities from music, film and TV, occasionally responding to so-called ‘fake’ accounts where someone impersonates a celebrity; L2 responds repeatedly to the (fictitious) accounts of two characters from a TV show, two accounts associated with a radio show and to one internationally known British comedian. (Cf.: gender distribution)^{xvi} The increasing perception of Twitter as a sphere to connect with celebrities is voiced by H2, who writes in three successive updates (no. 3-5):

Still seems a little nuts to me...i mean where is barack and ashton??? i will get the hang of it..i graduated u of c

so far i have done sports update and obama query...hihihi.

ok i just checked on your boy ashton. it is a bit more complicated than status updates. "thumbs up"

This increased presence of celebrities is paradoxical: At first glance, it seems to suggest that the relationship between media personality and individual is levelled (and levelling would indeed be required to experience *communitas*). On closer inspection, it becomes apparent that the hierarchy inherent to the 'traditional' star/audience relationship is simply adapted and reinjected. It is the notoriety of the (star) image that renders a media personality nearly immune towards a merging in with the community; even if celebrity accounts barely engage with the social dimension of Twitter (like Oprah Winfrey's which receives several @-responses every hour but has responded in turn only six times in **its first** seven months **on Twitter**,^{xvii} and only once to a non-celebrity), they attract many users' attention, contributing to the synchronization of the Twitter community with the sphere of mainstream media. It does not require a celebrity of the proportions of Oprah Winfrey (more than 2 million followers) to engender such effects. An example from Austria: Even though the informal 'Du' is the common address among German-speaking Twitterers, TV news anchor Armin Wolf (now nearing 8000 followers) is consistently addressed formally ('Sie') by other users, **confirming**^{xviii} that the social capital accumulated in other, more powerful public spheres is transferred to Twitter. It is obvious that the kind of community spirit and anti-structural, non-hierarchical relations intended by Turner with the concept of *communitas* cannot be fully realized in such a sphere.

7. Conclusion

With this research, I aimed to examine user initiation to Twitter, using the term 'initiation' as a concept that goes beyond the acquisition of mere technical knowledge. The ability to use social media isn't limited to knowing which buttons have to be pushed to which effect – it also means to understand their social dimension. I departed from the hypothesis that the ability to understand the social dimension of a service, in turn, is a process that depends upon the integration of the given medium into society at large – the hypothesis receives confirmation by the evidence produced by the different pace at which early adopters and mainstream users have appropriated Twitter's social mechanisms. The relative slowness with which early adopters explored Twitter's social dimension can be viewed as a prerequisite to later, mainstream users' swiftness in appropriating the new social medium – the knowledge and conventions produced and solidified

by the former are then more accessible to the later. The case of emergent mechanisms reminds us that social media can never be reduced to a technology: Instead, social media exist at the interface of technology, individual practice and society. Victor Turner's concepts of liminality and *communitas* proved to be a suitable instrument to both chart the individual user's initiation to Twitter and to tie this process back to society, wavering between society as structure and society as *communitas*.^{xix} While *communitas* emerges as an option at various moments – becoming manifest for instance in the egalitarian way in which one addresses each other by one's username – it is also volatile, curbed by the reintroduction of hierarchical structure manifest in the interface and achieved through the synchronization with other, structurally differentiated public spheres. If social innovation can best thrive in “institutional pockets“, then the folds that enwrapped micro-blogging have almost slipped away– at the same time, some of its innovations have also been integrated into society. The fact that individuals, prominent or ordinary, highly or barely technology-savvy, can now be addressed at a unique, public web address can for instance be considered a vital step towards paving the way for the Semantic Web (a.k.a ‘Web of Things’). But it also takes us closer to Pierre Lévy's utopia of a collective intelligence where the individual does not vanish in the mass, but remains an addressable, unique contributor in the “molecular group“ that is able “to reorganize itself in real time, minimizing delays, deadlines and friction” (53). In comparison to other forms of social media – such as social networking site Facebook or media sharing site YouTube, which model and automate social interaction in greater detail – Twitter's approach to engineering the social appears relatively austere. At the same time, it seems as if this austerity and the renegotiations of the social it provokes in users provide an ideal environment for semantic and social innovation. This suggests that, rather than putting the emphasis on a rich, multimedia-based experience, innovative forms of social media should rather focus on that which cannot be automated, on that at which humans excel – for instance the task of filling a 140 character field with meaningful content.

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Word count: 7705, 31 Aug 2009

Word count: 7747, 3 Sep 2009 (excluding annex and annotations; see pages 19 et seq.)

Annex: 1. Data

Figure 1: User who signed up between October 2006 and March 2007

sign-up	ID	1st update	1st @-response	1st re-tweet	1st hashtag	hiatuses (>28 days)	
01.10.06	A	0	767	128	865	865	195, 272
15.11.06	B	0	410	302	947	943	52, 36
15.12.06	C	0	398	88	635	635	240
24.01.07	D	23	79	33	505	740	234
15.01.07	E	0	430	106	621	957	302
27.01.07	F	87	88	3	602	665	87
09.02.07	G	0	572	27	810	773	485, 44
21.02.07	H	61	831	30	833	835	61,64,154,206,201,96
22.02.07	I	0	21	143	789	677	56
26.02.07	J	64	310	87	489	458	64, 45, 61
27.02.07	K	0	605	42	760	856	160, 60, 346
02.03.07	L	600	745	6	872	773	600, 92, 37
03.03.07	M	0	342	8	650	478	336, 135
20.03.07	N	0	377	22	796	595	358
22.03.07	O	0	81	35	405	292	none
28.03.07	P	0	525	21	566	670	69, 40, 349
		days	days	updates	days	days	days

Figure 2: Users who signed up between March and July 2009

sign-up	ID	1st update	1st @-response	1st re-tweet	1st hashtag	hiatuses (>28 days)	
05.03.09	A2	1	4	6	21	22	none
17.03.09	B2	0	22	4	94	143	none
17.03.09	C2	0	0	2	48	92	none
22.03.09	D2	0	11	51	57	40	none
25.03.09	E2	2	8	8	9	2	none
15.04.09	G2	0	0	3	never	never	70
17.04.09	H2	0	3	6	93	62	none
12.05.09	I2	0	17	64	0	0	none
12.06.09	K2	22	25	3	53	72	none
09.07.09	L2	0	1	7	4	5	none
11.07.09	M2	0	0	1	15	7	none
		days	days	updates	days	days	days

Annex: Changes in this version

This paper was submitted to the peer-reviewed conference *Internet Research 10.0 - Internet: Critical* held 7-10 October 2009, in Milwaukee, WI, USA. The overview of the data on page 19 and these annotations (pages 20 et seq.) were not included in the paper published on the conference system; open access for the conference will begin on 14 Jan 2011. I have published this paper on my blog as I wanted to make it easily accessible, in particular to the people with whom I had debated the idea and who had contributed to the paper with their feedback.

Pagination on pages 1-18 in this version is identical to the version uploaded to *Internet: Critical* conference systems. I have corrected a few typos and style-guide related glitches – if anything is set in red on pages 1-18, it has been changed; an explanation is offered in the endnotes. Furthermore, in the endnotes starting on page 21, I have included a brief discussion of the gender difference (12,5% of users in the 2006/2007 sample, and 91% of the users in the 2009 sample were women) and of an upcoming paper about retweeting as a conversational practice by danah boyd, Scott Golder, and Gilad Lotan. If you are reading this paper before having read the related blog post, please consider reading it. It will tell you more about my background and the intended scope of this research. This paper is just first step in a direction which I want to investigate further. If you have any feedback, please contact me at jana.herwig@univie.ac.at, or (preferably, so others can benefit as well) leave a comment on the blog post:

URL: <http://digiom.wordpress.com/2009/10/05/coming-to-grips-with-twitter-200607-vs-2009>

Short link: <http://wp.me/peBnE-u4>

ⁱ Was: Spam, is: spam.

ⁱⁱ Added: order

ⁱⁱⁱ I switched style-guides during writing, and then failed in adjusting it all to MLA 2009. I used the MLA 2009 guidelines as stipulated here: Purdue OWL. “MLA 2009 Formatting and Style Guide.” The Purdue OWL. Purdue U Writing Lab, 30 Sep. 2009. Web. 30 Sep. 2009. MLA 2009 doesn't require URLs anymore, as articles on the web can usually be found with search engines. If you can't google it: <http://owl.english.purdue.edu/owl/resource/747/01/>.

^{iv} This originally read: “On some, anonymity is enforced (e.g. on the 4chan.org image boards) [...]”. This isn't quite accurate, as /b/ is the only board on 4chan where anonymity is enforced, or rather: encouraged by the rules. Rule no. 3 of the global rules stipulates: “Do not post the following outside of /b/: Trolls, flames, racism, off-topic replies, uncalled for catchphrases,

macro image replies, indecipherable text (example: “lol u tk him 2da bar|?”), anthropomorphic (“furry”), grotesque (“guro”), or loli/shota pornography.” And rule no. 1 of the /b/ board goes: “ZOMG NONE!!!1*”. 4chan. “Rules.” 4chan, 30 Sep. 2009. Web. 30 Sep. 2009.

^v Added: (here meaning: the co-existence with others users)

^{vi} Changed formatting to square parentheses, non-italicised.

^{vii} Break added before „I conclude this section[...]“.

^{viii} Style adjustment (see iii).

^{ix} Added ‚October‘, for clarification.

^x Was: alternative user, is: alternative use.

^{xi} There was not enough time to consider the following, upcoming paper before the submission deadline: danah boyd, Scott Golder, and Gilad Lotan (Forthcoming, 2010). “Tweet Tweet Retweet: Conversational Aspects of Retweeting on Twitter.” To appear in: *Proceedings of HICSS-42, Persistent Conversation Track, Kauai, HI: IEEE Computer Society*. January 5-8, 2010. This paper analyzes re-tweeting as a conversational practice, highlighting “how authorship, attribution, and communicative fidelity are negotiated in diverse ways” (cited from the abstract, page 1, draft version). The authors compare the practice of re-tweeting to email-forwarding, e.g. in the practice of email chain letters (1, 3). While comparisons can always only highlight some features, and must neglect others, I have argued myself that re-tweeting shares some traits with re-posting a message in a use group. This appears to be a more useful comparison if we consider that use-groups are less personal than email inboxes. Like Twitter, use-groups have a stronger feeling of a shared space. While users might be happy to receive an @-response comment from a user who discovered their profile through the practice of re-tweeting on this shared space, it is unlikely that they would similarly appreciate email from someone who got their address through a chain mail. Both reposting and re-tweeting also give a sense of the importance of a message, which may rise with the number of reiterations. If something gets not re-posted, it quickly disappears from a user’s screen, as new messages trickle in. Thus, the more often a message is re-tweeted, the more likely it is to be noticed by other users, possibly entering Twitter’s Trending Topics; boyd, Golder and Lotan report on an instance where 400 users re-tweeted the message “‘Pro-life leaders condemn murder of abortionist’, and many of these tweets contained the text, ‘RETWEET THIS UNTIL IT TRENDS’”(7). The tolerance of email users toward receiving the same email over and over can probably be assumed to be much lower, lacking the sense of

communal action that can unfold only in a shared space such as Twitter, or in usegroups. On some social networking sites with an in-mail system sending chain letters is even forbidden (e.g. on the German site <http://www.wer-kennt-wen.de>).

^{xii} Same addition as in endnote v.

^{xiii} Added ‚across the sample‘ for clarification.

^{xiv} Was (+652) and (+662); as I couldn't make sense of this myself when rereading the paper, I added a brief explanation in prose.

^{xv} Correction: User M2 (User M belongs to sample 1).

^{xvi} Twitter does not require users to specify their gender; whether someone is male or female can only be guessed on the basis of a masculine or feminine appearance of names, nick names and profile pictures. Applying such criteria (which are socio-culturally defined), the women-to-men ratio was 1:8 in sample 1: 2 out of 16 (12.5 %) appeared to be women, 87.5% men. In sample 2, this had changed dramatically: 10 out of 11 users appeared to be women (91% women, 9% men). Initially, sample 2 had consisted of 14 users and was reduced to three when I discovered that three users had deleted their early tweets. They were also not considered in the calculation of averages. The result would not have been less distinct, however, as all three of them appeared to be women. One hypothesis that might be used to explain this difference is that, in its early phase, Twitter was adopted in particular by people with an interest in the IT and web industry, the majority of which appear to be men. Secondly, the practice of ‘securing one’s nickname’ by signing up early – even if one is not using the new service much – might be more common in this, mainly male, group. Thirdly, as Twitter’s mainstream phase is also marked by the number of celebrities using it as a PR outlet, it would not be unlikely that new users were strongly recruited from segments with an interest in celebrity culture, the majority of which appear to be women.

^{xvii} Was: in seven months, now is: in its first seven months on Twitter; added for clarification.

^{xviii} Was: conforming (spelling error), now is: confirming.

^{xix} The first igniting spark for this research was a seminar session with Elke Mader in the internet research group meetings at the Graduate Centre for Social Sciences, Vienna University, Austria. For a further discussion of the concepts of society as structure and society as *communitas*, see: Philipp Budka and Elke Mader. “New forms of socialities on the web? A critical exploration of anthropological concepts to understand sociocultural online practices.” *Paper presented at the “Web as Culture” conference. 16-18 July 2009. Giessen.* I presented a first sketch of this present

research at the same conference; it was a remark from Philipp Budka, relating our presentations, which made me realize how volatile communitas in social media really is. Philipp Budka can be contacted at <http://www.philbu.net> for a copy of the paper.