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**Sociology of the Internet**

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**Has Tweeting become Inevitable?**

**Twitter's strategic role in the World of Digital Communication**

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**Abstract**

By minimizing costs of encoding and decoding and by combining functionalities of the Internet and the Mobile phone, Twitter is disposed to play a crucial dual role within the sphere of digital communication. On the one side, Twitter helps to expand such communication to the microscopic level of current events, thoughts and observations; on the other hand, it contributes to a better orientation in the ever growing "Cyberjungle" by propagating signals about new information sources on which users should concentrate their attention. By focusing on current processes and developments and by adding a "push" element based on info (bottom-up) opinion leadership, Twitter is highly complementary to conventional Social network Sites (like Facebook) which specialize more on horizontal networks and stable patterns of social relationships and social structure.

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## 1. Nonlinear quantity-cost relationships in human communication

***lambo601: RT @Lord\_Voldemort7: #Beforetwitter there were these crazy things called books. People read them for pleasure & to be educated so they didn't "talk like this."***

Acts of human communication can be classified according to the amount of information that is transmitted.

The lowest extremes are represented by very simple nonverbal gestures. In an exchange of gazes, for instance, partners can not only send out as well as receive the message without any skills and efforts within fragments of a second, but also verify immediately that the message has arrived and that a successful reciprocal contact has occurred (Simmel 1908:467; Goffman 1963).

At the other end of the scale, we find authors of large tomes that take several lonely, laborious years to be written and much time and mental concentration to be read – and even more time and effort to write replicas and reviews and to feed back to the author whether and in what parts his encompassing writings have been received.

Generally, there are good reasons to argue that the costs of communication rises disproportionately (even exponentially) with the quantity of information conveyed. Compared with a message of 200 words, a text consisting of 400 words does not only increase the work load of its author (e. g. for structuring and synthesizing his thoughts), but also the effort needed for any recipient to read it and to relate it to all other knowledge they already have. In addition, there is a steep loss in predictability because the more complex a message, the more uncertainty about who will read it at what time and in under which contextual conditions, which components of it will be absorbed or simply ignored, and what kind of replies it will eventually evoke.

As a consequence, higher message complexity will cause interactivity to be thinned out and to slow down – or even to be replaced by the dire monological fate of a book author who –like Georg Simmel - has to be dead for decades before his opus magnum (“Die Philosophie des Geldes”) is adequately absorbed.

Given these nonlinear relationships, it has to be expected that in many cases, low bandwidth communication will be preferred over richer channels because the reductions in cost and the gains in interactivity (as well as in certainty about reception) are judged to be more substantial and deterring than the losses in length and complexity.

In particular, such “regressions” are likely to occur when

- communication is highly urgent (e. g. in emergency situations);
- current role activities are so absorbing that only very simple messages can be emitted and absorbed;
- it is highly crucial that an sent out message is readily and adequately received;
- messages refer to highly prestructured issues that don't necessitate elaborated clarifications.

Such conditions may well explain why SMS mobile phone messages have become so popular despite the fact that costs per Byte are much higher than in any other channels of digital transmission.

## 2. Twitter as a functional hybrid

***“You can have a protected account, or not. If not, everything is public.”  
(Dick Costolo, CEO of Twitter)***

A fruitful approach for understanding Twitter is to see it as a hybrid that combines functionalities stemming from the two most influential developments of digital technology within the last 20 years: the Internet (and other computer networks) on the one hand and the mobile telephone on the other. These two systemic macro-innovations are highly complementary in increasing individual empowerment as well as in originating and/or supporting various kinds of social relationships and collectivities irrespective of spatial locations, personal skills and efforts or institutional affiliation (Geser 2010).

*First of all, Twitter amalgamates private und public communication by allowing Short Messages to be exchanged over the Net: thus “combining the flexibility of bilateral mobile phone SMS by with the immediacy of Instant Messaging and the multilateral social networking potentialities of the WorldWideWeb.” (Osborne 2008).* While all tweets are public by default, senders have any options to address them to one recipient as well as to a specified list of receivers. In “Settings Account”, users can chose to “protect” updates, which means that anybody can see my messages (“Tweets”) only with their personal approval.

*Secondly, Twitter bridges the two technologies spheres because communicators can easily use stationary computers well as mobile devices. Given the small size of the messages, they need low bandwidth and can easily be sent from anywhere and received at any place and by any channel of communication: Phone, Email, IM, RSS or the Web.*

*“Twitter is designed to be used like SMS text messages, making it one of the few online tools that’s commonly and easily used on handheld devices. Some organizers have taken advantage of this fact to use Twitter to help communicate with and ultimately rally communities in which cell phones are more common than access to the traditional internet. Others have used the Twitter/phone connection for on-the-spot coverage of rallies, protests and other events, particularly as a means to distribute photos and videos shot with their phones.” (Delany 2011).*

According to Twitter CEO Dick Costolo, 40% of all Twitter posts have originated from a mobile platform in 2010 (while that percentage was just 25% one year before).<sup>1</sup> This shift to mobile devices may be the reason why the average monthly frequency of Twitter visits (by U.S. users) is on the rise, while the average duration of each visits seems become shorter (Perez 2011).

*Thirdly, Twitter has established itself at the crossroads between communication and information. While being widely used as a discussion forum and an instant messaging system, it also functions as a bulletin board for propagating information about job openings (Dortsch 2011), new blog entries, innovative commercial products, recently released websites or shortly scheduled events.*

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<sup>1</sup> In: Coppinger, Rob, Febr. 15 2011.

Finally, Twitter can be conceptualized as a “directed social network” (Brzozowski/Romero 2011; Kivran-Swaine/Govindan/Naaman 2011) that combines the reciprocal (many-to-many) capacities of conventional social media sites with asymmetric (one-to-many) features better known from the conventional sphere of mass media. This is manifested in the highly skewed frequency distributions of followers: about 35% having 10 or less people following, while 0.2% possess more than 2500 (HubSpot 2008: 6).

*“In some sense Twitter lacks the reciprocal nature of a true social network — plenty of feeds have thousands of followers but follow far fewer people in return themselves (do you think that Ashton Kutcher really pays attention to what you say?). (Delany 2011).*

Originating in March 2006, Twitter has experienced spectacular growth. In Jan 20 2011: Twitter has reached 200 million users and 110 million tweets per day, and it was growing at around 6.4 million new users per month. Recently (2011), highest growth rates are found in Latin America: in Brazil as well as Venezuela, the penetration rate has reached 20% - compared with 8% in the United States.<sup>2</sup>

However, only about 22.5 percent of users are responsible for 90 percent of all tweets; 40% of them never even sent a single tweet at all, and 80% of the users tweeted fewer than ten times. In addition, the site records 190 million site visitors per month – indicating that a large volume of people are reading content on Twitter, even if they aren’t participating in the conversations themselves (360i LLC 2010: 3). While Facebook has still affinities to younger peer group cultures, Twitter has a more balanced universe of participants covering also more senior segments of the population. Thus a majority of more than 53% Twitters users (in comparison with only 37% Facebook users) have been older than 34 in 2010 (Digital Surgeons 2011).

### 3. Twitter as a most informal level channel of written communication

*“It needs to be water. It’s instantly useful. It’s simple. It’s always present.”  
(Dick Costolo, CEO of Twitter )*

Until a few years ago, the system of human communication was rather neatly segmented in a sphere of writing where relatively complex communication units (like books and articles) were processed, and a sphere of oral communication that provided opportunity for low-complexity verbal exchanges as well as for nonverbal, gestural articulations. (Even an exchange of mailed letters was a cumbersome endeavor insofar as there was a normative pressure to observe ritualistic formats, to choose careful language and to strictly avoid any orthographic or grammatical errors.)

Today, the digital media have expanded the sphere of writing to more informal and less complex levels (e.g. in the case of Email and Short Text Messages): bridging the hitherto large gap between written and oral sphere. The expansion of the sphere of written culture to more elementary levels has opened the gate for the working of a kind of “Gresham’s law of communication modes:” the tendency of more complex patterns of writing to be crowded out by more simple varieties: exem-

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<sup>2</sup> <http://liesdamnedliesstatistics.com/2011/04/is-twitters-real-user-base-around-20-million.html>

plified by the offline press where many recipients have turned from elaborated conventional newspapers columns to the text snippets as they are propagated by freesheets and tabloid papers.

While the initial Web 1.0 has mainly provided an additional outlet channel for conventional text documents (whose “monological” nature is highlighted by the PDF-Format that is intrinsically inimical to any modifications or feedback), the Web 2.0 offers a wide variety of middle-to low-complexity modes of writing much more designed to facilitate and catalyze interpersonal communication: e.g. discussion fora, Wikis, Blogs and personalized Social Media pages.

Among all these applications and platforms, Twitter represents the most extreme case of a smallest-bandwidth facility limiting the uppermost size of communication units to 140 digits.<sup>3</sup>

Such restrictions contrast sharply with the polyvalence and flexibility of conventional Social Media Sites like Facebook where much longer texts as well as media of all other sorts (pictures, videos, audio-files etc.) can be posted. It is exactly this brutal reduction of complexity that facilitates its usage: by minimizing the efforts necessary for emission and reception, and by maximizing the certainty that (and how) messages will arrive.

Given these harsh technical constraints, Twitter is more about forwarding simple information snippets and communicating simple, highly focused ideas, perceptions and reflections than about cultivating complex social relationships and interactions that demand elaborated exchanges.

*“...at least for a guy like me who is less driven by relationships and more driven by ideas--- Twitter is a place that requires less commitment. I don't have to worry about whether I respond to every message that is shared with me. That's not an expectation in Twitter----which means I can follow more people without investing more time in maintaining or monitoring relationships with everyone who I am following or who is following me.”<sup>4</sup>*

In the longer run, Facebook may well be too cumbersome for most users who are not willing to spend much of their time on daily online activities: because much effort is needed to keep the personal website updated and for remaining informed about changes in the websites of friends.

*“Twitter...will be preferred because it is so flexible and time-saving: involving no social norms that specific (e. g. daily or at least weekly) updates have to be posted, and absorbing very little time for sending out as well as for reading incoming tweets. You can get the general picture of what everyone is doing without getting stuck in the 2 hours time warp that you can't avoid once you sign onto Facebook. On that same note, when it comes to saving time, Twitter is like the Target of the internet -- one stop and you're all set! You can check up on your favorite celebrities, on politics, on your friends, on your favorite bands. All you need is 20 minutes a day and you can call yourself a well-rounded individual.” (Chan 2011).*

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<sup>3</sup> Originally, the founders decided to reduce the standard SMS format of 160 bytes to 140 digits because they hoped that the remaining 20 bytes could be used for advertizing purposes. In China, Korea and Japan, this limitation is far less restrictive than in Western countries because each digit can be used for transmitting a whole word, syllable or “logogram”. As a consequence, Twitter is used for more elaborate communications: e. g. in the case of the Japan earthquake/Tsunami in March 2011, where atomic scientists like ryugo hayano maintained a twitter account that had many ten thousand followers (<http://twitter.com/#!/hayano>).

<sup>4</sup> Entry posted by Nancy Flanagan in “Teachers Leaders Network: The tempered radical. February 24, 2011 [http://teacherleaders.typepad.com/the\\_tempered\\_radical/2011/02/twitter-can-save-you-time.html](http://teacherleaders.typepad.com/the_tempered_radical/2011/02/twitter-can-save-you-time.html)

As a result, users are usually less worried about losing “unproductive” hours on Twitter, as they often are when using popular sites like Facebook (ExactTarget 2010: 6).

Like no other digital application, Twitter provides individuals with the capacity to make their most private individual thoughts public in Real Time: thus synchronizing their public communications with their current situational circumstances, instant sensory perceptions and innermost psychological conditions.

*“People use the microblogging platform to lifecast their daily activities – often relaying their ephemeral thoughts as a stream of consciousness while at home, at work or on the go via mobile devices. An overwhelming 94% of tweets analyzed were personal in nature (e.g. what someone did, what they are doing, a conversation with a friend) while only 2% were professional/self-promotional (e.g. sharing industry news, providing updates about one’s career from a personal account or promoting a business), despite some claims to the contrary.” (i360 LLC 2010: 6).*

At least one empirical study supports the introductory hypothesis that as a result of its simplicity, Twitter tends to crowd out more sophisticated modes of verbal expression (especially blogging) at least within younger generations.

*“Blogs were once the outlet of choice for people who wanted to express themselves online. But with the rise of sites like Facebook and Twitter, they are losing their allure for many people — particularly the younger generation. The Internet and American Life Project at the Pew Research Center found that from 2006 to 2009, blogging among children ages 12 to 17 fell by half; now 14 percent of children those ages who use the Internet have blogs. Among 18-to-33-year-olds, the project said in a report last year, blogging dropped two percentage points in 2010 from two years earlier. Former bloggers said they were too busy to write lengthy posts and were uninspired by a lack of readers. Others said they had no interest in creating a blog because social networking did a good enough job keeping them in touch with friends and family.” (Kopytoff 2011).*

In the past, local and regional dialects were very much restricted to oral communication, because writing was subject to high formalization and conventionalization (even in private mailed letters). Recently, Email, SMS and Twitter have given rise to a much more informal level of writing in which many people participate who never write letters, and even less anything destined for public communication. As these media allow more spontaneous expressions in accordance with idiosyncratic and local variations of spelling, pronunciation, lexical habits and morphosyntactic features, it is highly probable that they give rise to more dialectical differentiation on the level of written language: thus “balkanizing” hitherto homogeneous, transterritorial written languages like “Standard English” or “High.German”.

In fact, such developments have been observed in a recent sociolinguistic study based on 380 000 of tweets sent in the first week of March 2010 by about 9500 users (Eisenstein et. al. 2010).

*“In northern California, something that’s cool is “koo” in tweets, while in southern California, it’s “coo.” In many cities, something is “sumthin,” but tweets in New York City favor “suttin.” While many of us might complain in tweets of being “very” tired, people in northern Califor-*

*nia tend to be "hella" tired, New Yorkers "deadass" tired and Angelenos are simply tired "af."  
(Spice 2011)*

Given its rigid text constraints, Twitter may in addition well catalyze the emergence of additional group specific shorthand codes being used for abbreviations.

#### **4. Twitter as the most accessible channel of multilateral communication: some sociological consequences**

*"4,000 tweets per second can't be wrong"  
(Rob Copping 2011)*

On the basis of a minimal digital infrastructure and some fundamental knowledge of writing, almost anybody is physically able to "Twitter" anytime and at any places, because so many technical channels (cell phone, Email, Web etc) are alternatively available, because writing such a short text takes very little effort, and reading messages is so easy that many of them can be written (and even more be absorbed) within very short time. Communicative efforts are additionally minimized because exchanges occur in a completely de-ritualized manner: without formal greetings and polite gestures demanded in face-to-face encounters (Goffman 1971: 79). As Twitter does away with all such ritualistic overhead, messages are reduced to their "real content", without any introductions and conclusions (Geser 2010).

*"The point is you get quick updates. There are never more than two or three lines on my screen, so I can look at 10 or 20 updates at once. That's the novelty of it, that it's quick and easy." (informant in Stamatiou et. al. 2008: 6).*

Finally, participation is fundamentally facilitated by the fact that in contrast to Facebook and other Social Network Sites, there is no need to construct a personal identity, but just to describe one's current activities or thought.

*"Twitter is the first people's broadcast medium. You can do it now, it can go everywhere, and you don't have to sit with it. The best thing about Twitter is that it is not sticky the way things like Facebook are. I can throw out tweets without having to field a zillion emails or nurse some profile or deal with anything else. I can fling and not receive." (Douglas Rushkoff (media theorist) in Rushe 2011).*

In contrast to the phone and also to bilateral Email or Instant Messaging, Twitter messages intrude much less into the life of receiving individuals because they can easily be ignored and remain unanswered. The reason is that they are directed to many recipients: so that it is sufficient when few of them send an answer. (Osborne 2008).

*"Twitter, unlike, say IM or Facebook, doesn't let my friends know if I'm logged in or not. So there's no expectation that I'll respond to @ messages or DMs instantly. This is a real joy, because it lets me use Twitter at my own convenience without the pressure of feeling like I'm insulting someone because I haven't responded to their message. It also keeps the feeling going that Twitter is like an ongoing cocktail party or water cooler conversation that I can wander in and out of at will." (Wolk 2008).*



Given these potentials of spontaneity, it is not surprising that there is a strong preference for original content: e. g., for “authentic” personal expressions – even in cases of highest celebrities who use to mediate all other information about themselves by PR managers, lawyers, spin doctors and the like.

*“Tweets are original: 85% represent original content rather than re-tweets (re-broadcasted tweets from other users) and 28% of all tweets contain a link. Consumers are much more likely to pass along a link with their own commentary than to simply share it via a re-tweet. This underscores that Twitter, for the most part, is a tool consumers use to express themselves – rather than a means to simply pass on information that they have heard somewhere else.” (360i LLC 2010: 9)*

This same spontaneity is most clearly seen in cases of sudden catastrophic events when Twitter messages emitted by victims are the first public information available that (and where) it has occurred. Thus, news about the earthquake in China in Spring 2008 has spread on Twitter before it became known to the US Geological Service<sup>5</sup>; and the Mumbai terrorist attacks (in Nov 2008) as well as the airplane plunge into the Hudson River (Jan. 2009) were first publicized by victims and bystanders emitting Tweets, not by any conventional media reporting (Arthur 2008; Sander 2009). All these cases illustrate the trend that traditional formalized institutions and professional specialists (like reporters) lose their control over “breaking news” because they are outpaced by lay persons disposed to report with least delay and most authenticity: e. g. victims or accidental bystanders.

Whenever an event occurs which affects many people in different places simultaneously, Twitter is a means for gathering basic information and reaction from very different sources in very short time. Conventional “top down” information generated by professional journalists is outperformed by “bottom up” communications stemming from individuals who make their own observations and thoughts and who are personally affected and involved.

Thus, Twitter has the capacity to be the most primary source of unrefined and unedited news: focusing attention on something new and providing useful starting points for further search.

For journalists, therefore, Twitter has the capacity to become one of the very primary news sources that have to be watched permanently in order to remain in real-time contact with unfolding events. This is particularly important in cases of events that happen unpredictably and in remote places where no journalists, but only lay users are available for first-hand reporting.

Journalists reporting about ongoing events will be pressed to assume themselves a new role as “tweeters”. For instance, they may earn money by people who become their “followers”: paying fees for getting the reporters’ short messages just at the time they are watching the unfolding event (National Press Club 2008).

Evidently, Twitter can stimulate a “molecular journalism” that doesn’t manifest itself any more by well-elaborated articles synthesizing carefully the impressions and details of a past event, but by a constant flow of short-breathed tweets conveying immediate observations and reflections, as well

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<sup>5</sup> Twittering the China Earthquake.Webs@Work May 14, 2008  
<http://blogswork.wordpress.com/2008/05/14/twittering-about-the-china-quake/>

as to micro-conversations with external partners going on while the events (e. g., court sessions) are still unfolding. (Rozenberg 2011).

Because of its simplicity and unobtrusiveness, the emission and reception of tweets is most compatible with almost any role activities and situational conditions: so that it can penetrate even highly formalized and controlled institutional settings where no outbound communication has hitherto been allowed. Thus, the top judge in England and Wales ruled in December 2010 that there is no ban on observers in the courtroom using Twitter to communicate with the outside world.

*“The Lord Chief Justice decreed that requests from the media to tweet would be decided on a case-by-case basis. Judges have to consider whether the tweeting would ‘interfere with the proper administration of justice,’ he said. But the Lord Chief Justice noted that Twitter could ‘enable the media to produce fair and accurate reports from the proceedings.’ It was a somewhat surprising ruling, since smart phones and laptops have generally been prohibited for people in the audience.” (Cohen 2010).*

For similar reasons, Twitter can be used by outside agencies to communicate directly with people under tight social and political control as in the case American Government “infiltrating” dissident protest groups within Iran:

*“After watching Facebook and other social media help grass-roots movements toss repressive regimes in Tunisia and Egypt, the State Department is turning to Twitter to encourage opposition groups in Iran, The State Department began tweeting messages in Farsi on Sunday on two Twitter accounts. ‘There is a real, vibrant and compelling conversation going on now around the globe. It is a conversation increasingly taking place on the Internet, and America wants to be a part of it,’ says Judith McHale, undersecretary of State for public diplomacy and public affairs. ‘We are keen to reach out to people where they spend their time online to listen, to present U.S. views and values...’” (Strauss/Hall 2011).*

Finally, the same features makes Twitter apt to be used as a subversive “whispering channel” among highly marginalized and repressed individuals who lack any other, more sophisticated channels of communication: as in the case of Saudi women who rely considerably on Twitter for articulating (for the first time) their collective dissatisfaction about the status of women in their country by posting and forwarding for instance the following tweets:

*“the role of women in Saudi Arabia is not, as was its role in the era of the companions and the Prophet.”*

*“WE will make a change, and I mean by " WE" this generation”*

*“The process of the emancipation of women is essentially the process of liberation of man from the outdated concepts!”*

*“Why don't we hear the British or American governments condemning these appalling infringements of basic human rights?”*

*„At Twitter #saudiwomenrevolution has considerable following and more tweets in support and sometimes against the women's demands are added every day. It represents an important step in*

*bringing out concerns of Saudi women out in the open and is contributing to the lively discussion on democracy and gender equality in the Arab Muslim world.” (Ghimire 2011)*

On a very general level, Twitter has the potential of expanding the total range of human communication and for generating “bridging social capital” by facilitating exchanges between actors with very weak social ties.

Thus, Twitter enables TV watchers or radio listeners to change from a passive “couch potatoe” existence to a much more active co-participatory role: by feeding back their spontaneous reactions to the emission studio as well to many other (known or unknown) recipients on a Real-Time basis.

*“It’s definitely the case that network TV people like Twitter because it gives them feedback, like they’re in the theater watching how the shows play out. When [the TV show] Glee starts, tweets per second for Glee shoot up and stay up 100 times that level until the show ends, then they drop.”<sup>6</sup>*

Such opportunities for social exchanges may motivate TV users again to look programs in Real Time, not as delayed video recordings.

As a consequence, Twitter catalyzes the rapid crystallization of public judgments about TV or radio broadcasts as well as about public theatre or concert performances or new movies:

*“People can talk about a movie. I mean word of mouth now happens so fast and you know it can work to the advantage of a movie and it can work to the disadvantage of a movie as well,”<sup>7</sup>*

Due to such accelerated processes of public opinion formation, producers have to operate under conditions of intensified social control: because public judgments that emerge immediately after release may be fatally decisive for commercial success or failure.

*“I think people that make movies like film studios and stuff are more scared of instant technology but I see it as a push to make sure you’re movie is actually good, because people are going to know instantaneously because of Twitter, so it just makes you want to make better movies,”<sup>8</sup>*

For analogous reasons, Twitter can also glue together centrifugal social aggregates as they emerge at large local gatherings (e. g. in conferences or vacation resorts).

*“How many times have you met some folks at a conference but forgot to get their number and couldn’t find them later when you wanted to grab a beer? If you hooked in with them on a Twitter a single message can tap everyone you’ve met making it easy to find one another. Meeting up with your friends would also be easier since you could simply Twitter your location or where you are heading and all of your friends will get the message.” (Olson 2007)*

Thus, Twitter may well be a substitute for highly urban environments which hitherto had the function of facilitating such interactions.

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<sup>6</sup> Twitter CEO Dick Costolo in: <http://www.mobilemarketingwatch.com/mobile-tweets-account-for-40-of-all-twitter-posts-12505/>

<sup>7</sup> Actor Kevin Spacey in: The Oscars and Social media. WABC Los Angeles Febr. 23 2011).

<sup>8</sup> Actor Jonah Hill in The Oscars and Social media. WABC Los Angeles Febr. 23 2011).

*"I love Twitter. I'm an artist, but I tremble at the thought of striking up a conversation with a stranger, even though part of the reason I moved to Portland was to take advantage of the community of artists that this city has to offer. Twitter makes it much easier to approach other artists, to express my admiration, to ask a question, or to share my excitement over a new discovery. For the first time in a long time, I feel like I'm part of a community, and the virtual community has encouraged me to get out and explore my actual community as well."<sup>9</sup>*

Finally commercial businesses see Twitter as a lowest-threshold channel for cultivating reciprocal relationships with customers and clients. In particular, it may be efficient to motivate many customers (who would never to express themselves on any other channels like phone, FAX, Email or traditional letters), to articulate dissatisfactions about a commercial product or service instead of just turning to competitor: thus substituting "exit" by "voice"<sup>10</sup>. This has the threefold advantage that customers feel satisfied to to be heard by their firm, that firms keep their customers, and that producers get valuable information about the causes of dissatisfaction (instead of just losing customers without knowing why; Ojeda-Zapata 2008).

Stupendous "many-to-many" potentials can be realized in larger groups and organizations where Twitter may offer the only – or at least the far most efficient way - to realize 100% reciprocal connectivity even when the number of members is rather large: in the sense that every member regularly posts messages to all the others. Thus, Twitter can help larger collectivities to function similar to much smaller groupings: by maintaining densely knit webs of mutual cognizance and interaction. Therefore, even larger groupings get the potential to schedule very short term gatherings and micro-events ("tweetups"; Stamatiou et. al. 2008) and organize quick collective responses to ongoing events or developments (e. g. in the case of demonstrators who respond to police actions by immediate tactical countermoves).

While Twitter may be weak in building viable organization, it is nevertheless useful for establishing ad hoc densely knit horizontal communication networks that may catalyze widespread horizontal coordinations, and for securing that such networks achieve a high visibility in the international public sphere. Thus, there are sound reasons to assume that Twitter played a role in the Iranian uprising in 2009 (as well as in the successful revolutions in Tunisia and Egypt in early 2011).

*"...while Twitter failed as an organizational tool, the Green movement remains the first major world event broadcast worldwide almost entirely via social media. Given the extent of the Iranian regime of repression, the amount of information publicized real-time through social networks allowed the international community an unprecedented peek into the turmoil afflicting Iran. For the Greens, the international reaction to the post-election violence gave the movement critical international visibility. The Green revolution was a Twitter revolution. Iran's post-election unrest was the micro-blogging service's baptism by fire as a means to observe, report, and record, real-time, the unfolding of a crisis." (Keller 2010).*

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<sup>9</sup> Entry posted by Stephanie B. in Life after Twitter. Rainypixels. A collection of selected works by Nishant Corany. March 2 2011. <http://rainypixels.com/writings/journal/life-after-twitter/>

<sup>10</sup> In the sense these terms of Hirschmann 1970.

Twitter may well increase the likelihood that under any condition where many people wish to engage in a collective action, such an action is also realized: because every single user can easily become an organizer, even without any conventional skills of leadership and administration, and because so little time and effort is needed to be a "follower": i. e. a co-participant in a collective campaign.

This low need for organization and centralized leadership has been highlighted by the American "don't go" movement in Summer 2008,, when Twitter was flooded by posts from users seeking to force a vote on new oil drilling during the House's recess in August (Breslow 2008).

## 5. Bottom up leadership-follower patterns

**wilson713: RT @Lord\_Voldemort7:  
#beforetwitter: "stalking was illegal, not encouraged."**

In contrast to the horizontal, egalitarian friendship networks that arise in Social Network Sites like MySpace, Facebook or LinkedIn, Twitter gives rise highly asymmetric leader-follower patterns (Niles 2009). Thus, much influence concentrates on the two percent "leaders" able to accumulate 1000 followers or more (Sysomos 2010). By looking upwards to the same leaders, followers usually show no tendencies to form horizontal networks among themselves, because they usually have too different reasons for following and no useful information to exchange.

Given its bottom-up nature, twitter leadership patterns may well be seen as a new, particularly potent mode of "opinion leadership" as it has been discussed since Elihud Katz's seminal work in the 1950ies (Katz 1957).

*"Users choose who they follow, so there is not any kind of preferred distribution that leader could acquire. Leadership is unofficial and it comes in the form of followers. These leaders don't have any real power, just the comfort of being listened and the ability to reach a larger audience. Leadership comes in the form of credibility, not authority." (Stamantiou et. al. 2008: 15).*

Effective Twitter leadership may well be based on offline factors: e. g. on the incumbency of a high political office or on a charismatic celebrity reputation acquired in sports or entertainment.<sup>11</sup>

Conforming to the classical "two-step model" (Katz 1957), Twitter leaders can potentially be "co-opted" by conventional media or advertizing businesses for amplifying their conventional one-to-many communications:

*"Although celebrities make up a very small portion of the population on Twitter, their reach is far greater than that of the average consumer, making them a small but very influential*

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<sup>11</sup> A vivid example of the latter case is Shaquille O'Neal ("Shaq") who contributed much to make Twitter popular during 2008: to the extent that his reduced Twitter activity in (in Dec 08/Jan 09) gave rise to concerns that Twitter's success may become endangered when stars like "Shaq" withdraw their commitment (Frommer 2009).

*audience. While the average consumer has 300 followers, a top 500 celebrity has 300,000 followers or more. This means that by activating just one celebrity on Twitter, a marketer can reach 1000x more eyeballs than he or she can with the average consumer.” (i360 LLC 2009: 5).*

As followers flock around a person (or a collectivity like a sports team), not around a specific topic, such followerships may be mobilized for various purposes: depending on the generalized charisma of the followed figures. Thus, NFL players like Troy Polamalu were able to mobilize the 106 000 followers of their club (“Steelers safety”) for collecting money for support of military veterans and their families (Zlatos 2011).

As the number of followers is so visible, Twitter is disposed to give rise to a new, highly visible and objectively measurable scale of public reputation - even more than in the case of Social Network Sites where the list of "friends" does often not reflect the currently existing network of active social relations. Especially in political election campaigns, the number of followers of a candidate can easily be taken as a very visible and rather reliable indicator of his or her popularity. In the U. S. presidential election, the fact that Obama had more than 100 000 followers (and McCain less than 2000) was so thoroughly communicated in the media that it may itself have boosted Obamas popularity further.

## **6. The new immediacy of personal presence: empowerments and vulnerabilities**

*“It is easy to be racist or sexist or generally asinine in 140 characters. It is impossible to be sublime.” (Alexandra Petri, Washington Post)*

A major consequence of the Internet is to increase the permeability between private and public spheres: by enabling users to transport private diaries, photographs, videos or sound recordings directly into a worldwide public sphere: without printing and distribution costs and by circumventing all editing and filtering by any intervening agencies or institutions (Geser 2002).

In the case of personal websites, Facebook entries or Blog contributions, however, such expressions are usually delayed and reduced by various factors: e. g. by the effort it takes to write a coherent discussion statement, by the complex self-reflections necessary for defining the personal profile, or by the mere amount of work involved in designing outlay formats, colors and graphical features.

By doing away with all such overhead activities, Twitter offers the most immediate way to transfer information from the most personal realm to the most impersonal public sphere: highly authentic information likely to mirror current inner emotions and reflections as well as external observations and experiences on a Real-Time basis.

As a consequence, personal authenticity is expected, and any form of delegation is negatively sanctioned:

*“...electoral campaigns in particular need to be careful to distinguish between a candidate or officeholder’s Twitter feed and one updated by staff, since Twitter as a community tends to value*

*authenticity. If Twitterers find out that a 'candidate's voice' is not actually his own, the campaign's credibility can take a hit."* (Delany 2011).

As a consequence, there's no other channel - online or offline—where ordinary citizens have such direct access to the world's most famous celebrities.

*"So with something like Twitter, it's phenomenally powerful to feel you're one step away from that person. But they've also got to realize that all this is open and that anyone can see anything you're saying. It's a phenomenal culture change. Suddenly one person can connect to millions of people instantly without going through an editor or a brand manager or any other mediator."*( Gibson 2010).

While conventional "stars" cultivated their charismatic reputation by restricting public appearances to rare, well-planned occasions highly controlled by themselves and their managers or PR advisors, many current celebrities - like Stephen Fry - rely on a new variety of "everyday charisma"-by letting the public participate in Real Time in their various activities and thoughts in order to provide a full dynamic picture of their private and professional life.

*„In Twitter the preening polymath found his true calling, sending out an ever changing and oddly riveting mix of self-promotion and stream of consciousness as he tweeted his every thought and photo. His thoughts on Boyzone singer Stephen Gately, a picture of a parrot, a call for charity in Sri Lanka, Stephen in a balloon hat, all mixed in with his Wildean wit: 'Streets of London fantastically full of young people. Either it's half-term or truancy in this country is running wildly out of control.' Millions came to watch, millions more joined in. You may scoff but we are all Stephen Fry now."* (Rushe 2011)

By allowing to observe other human beings microscopically on the fine-grained level of their current actions and thoughts, Twitter differs extremely from Social Network Sites as well as Blogging platforms which oblige participants to define a personal profile and invite them to present themselves as particular personalities by making explicit their more generalized values and preferences, revealing their friendship network and displaying pictures or biographical accounts.

As a consequence, Twittering individuals expose themselves to all the risks associated with spontaneous behavior shaped by current moods and situational conditions.

For instance, journalists feel invited to express subjective opinions that are not compatible with their professional dedication to norms of objectivity. As a consequence, they are no longer seen as a disciplined professional (disallowing subjective opinions), but as "live persons" who emit a constant stream of spontaneous subjective emotions, thoughts and views. Thus, Twitter contributes heavily to blurring the boundaries between diffuse personalities and specific roles.

*"The reality is that social media forces journalists to confront the fact that while many of them pretend professionally to have no opinions — outside of the op-ed pages — reporters and editors have plenty of their own views on the issues they cover, and those views can color the journalism they produce. In the interests of full disclosure, I agree with TechCrunch editor Michael Arrington, who argues that allowing journalists to express their opinions is a positive thing, because then everyone knows where they stand, instead of suspecting hidden agendas."* (Ingram 2010).

While too spontaneous journalists may lose their job, inadvertant tweeters in extreme Islamist and other intolerant environments may well lose their life, because publicly accessible short messages may be taken as sufficient proof for heresy or blasphemy:

*„The assassination of Salmaan Taseer, the governor of Punjab, had, in many ways, very modern trappings: he was killed, apparently, because of a position he defended a week ago on Twitter (‘I was under huge pressure sure 2 cow down b4 rightest pressure on blasphemy. Refused. Even if I’m the last man standing’); and it took almost no time for his killer, who was one of his security guards, to get a Facebook page with some pretty disconcerting comments on it.“ Davidson 2011).*

Many celebrities like Twitter as a tool for emancipating themselves from controlling supervisors, spin doctors and PR officials: especially in sports where they can communicate directly to their fans without being filtered by managers of their association.

*“Why wait for your official spokesperson to make a comment or until you get that TV time to say what you really feel about football?” (Castillo 2011).*

As a consequence, they often engage in highly informal and spontaneous communication that may have negative impacts on third others: e. h. on competitive players, on trainers etc. – the reason why Fabio Capello (English trainer) has imposed a Twitter ban on his players during the South Africa, World Cup in 2010.

*“First the Under-19 international Azeem Rafiq was banned for a month and fined £500 for describing John Abrahams, the ECB’s elite player development manager, as a ‘useless wanker’ after he was dropped as captain. The potentially damaging consequences were further demonstrated last week by the Australian Olympic swimming champion Stephanie Rice, who was dropped by her sponsor Jaguar after tweeting an apparently homophobic insult in the wake of a narrow Tri-Nations victory for the Wallabies over the Springboks. The slur – she tweeted “Suck on that faggots” – sparked a public debate and led to her losing not only her sponsorship deal but also her £60,000 car. Rice has apologized and insists she is not homophobic.“ Gibson 2010).*

In comparison with the period of conventional media, it is far more probable that any internal disagreements between organization members is communicated and get visible to the public: so that the authority of formal leaders is weakened and negotiation processes between organizations may be hampered or even aborted:

*“The N.F.L.’s labor negotiations are the first of a major sports league to be played out in the social media age, giving hundreds of players, dozens of agents, millions of fans and even a handful of owners the equivalent of a gigantic microphone to offer instant – sometimes frustrated – analysis of the once-cloaked minutiae of contentious negotiation.” (Battista 2011).*

Thus, in a publication called “NFLPA Guide to the Lockout”, the members of the players union were warned not to show any signs of disunity to the outside world (Battista 2011). On the other hand, manifestations of consensus among the membership may increase the impression of inter-



nal unity, because it is based on authentic articulations by many ordinary members, not by any leaders or boards who pretend to be “representative” of their members (Battista 2011).

## 7. Higher order communicative functions of orientation and guidance

*“Twitter is good for shouting “Lookee!”. It's not very good for discussing scientific papers.” (Rory Cellan-Jones 2011).*

While the sphere of digital communications is expanding without limits, human capacities for cognition and reflection are strictly limited for bio-psychological reasons. In fact, “conscious attention” is an extremely scarce good because it can only be directed toward one (or very few) targets at the same moment: so that more time has to be used for increasing the volume of reading, the consumption of videos or music the participation in multiple discussion for a or the absorption in computer games or “Second Lives”. As a consequence, individuals need more potent metainformational and metacommunicative instruments for helping them to decide to what targets they should focus their attention at any point of time.

Of course, a viable alternative is to turn to conventional “push media” (like newspapers, radio, TV or cinema movies) where such selection processes can be fully externalized because the producers themselves decide which contents shall be conveyed at what moment in what sequence.

In such media systems, the power to direct attention is usually highly centralized: accruing to potent advertisers who market their products or to major newspapers or TV stations able to influence politics by “agenda setting” (= by determining which issues should (or should not) be the topic of public perception, reflection and deliberation.

Compared with such conventional media systems, the Internet has heavily aggravated the problem of complexity reduction because it comes as a “pull medium” that burdens all users to make their own decisions about which alternatives they should choose. Certainly, many “secondary push mechanisms” have evolved for providing guidance: e. g. by setting bookmarks that are regularly visited, or by installing “alerts” which allow to keep pace with specific topics, developments or events. But most of these mechanisms have the heavy price that users “imprison” themselves in a customized digital world that insulates them from new, unanticipated sources or targets.

Seen in this perspective, a major function of Twitter is to decentralize such guidance functions in the same way as the production or primary contents; enabling potentially everybody to usurp the status of an opinion leader by collecting a large number of followers whose “eyeballs” can be directed to any topic, information source or web address at his (or her) personal will. Thus, the rise of Twitter highlights the democratization of “push advertizing” (and propaganda) that is a logical functional correlate of the decentralized WWW.

Considering the limited complexity of transmitted information, it is evident that Twitter tweets are highly disposed to be used in a metacommunicative sense: as signals with the purpose of alerting recipients to specific events, or of directing their attention to other media which convey richer sources of information.

*“In fact, perhaps the most common single use of Twitter is to spread links to blog posts, videos, news articles and other pieces of in-depth content, making the 140-character limit less*

*of an issue. Organizations and news publications in particular tend to use Twitter much like an RSS feed, simply listing each new piece of content as it comes out.” (Delany 2011).*

Thus, about 28% of all Tweets contain links to other *to other web addresses* (360i LLC 2010) “*shortened by services like [bit.ly](http://bit.ly) - which are the website's most powerful tool.” (Cellan-Jones 2011).*

Therefore, it is used by CNN, the New York Times, and other media as a "news ticker" with a link that invites them to visit the longer story on their Website. Recipients can be targeted rather efficiently in this way, because most of them are able to receive the messages anywhere and anytime (e. g. by mobile phone). Similarly, Bloggers can use Twitter as a device for informing their public that they have posted a new article – thus enhancing *the popularity and reach of their blogs.*” (Stamatiou et. al. 2008: 10)).

Thus, Twitter does not diminish the significance of traditional media or more conventional web channels (e.g. by competing with them or even substituting them), but to boost their ubiquity, usage and impact by propagating information about their contents:

*“We observe that social media behaves as a selective amplifier for the content generated by traditional media, with chains of retweets by many users leading to the observed trends. We find that a large portion of these authors are popular news sources such as CNN, the New York Times, and ESPN. This illustrates that social media, far from being an alternative source of news, functions more as a filter and an amplifier for interesting news from traditional media.” (Asur et. al. 2011).*

By combining highest speed with highest diversity of news sources and informants, Twitter enables users to be more selective in the reception of media content and to get a more multiperspectivist view on topics almost without efforts and within very short time.

*“Twitter helps people become more picky about what articles they read, teaching readers to be more discerning about their news sources. Especially for top stories, you will likely see tweets from a variety of people covering the issue or event. As a result, you not only get the choice of which article to read (which enticing link to click on), but also learn the lesson that no two news articles are the same. After looking at enough tweets and links about the same event, you will realize that the news is full of bias. Whether that makes you choose one source that you agree with and stick to that forever, or whether it makes you check out multiple sources to get the bigger picture, is up to you. In any case, you learn that all topics have multiple angles” (Gathright 2010)*

## 8. Conclusions

By continuing the unforeseen success story of short telephone messages (SMS), Twitter exemplifies the regularity that communication channels with minimal bandwidth can assume highest significance in social life, because given their low cost and ubiquitous accessibility, they can most easily be used in all circumstances and neatly be integrated into almost institutional settings and processes of social interaction.

By lowering the work load for encoding, sending and decoding written messages, Twitter contributes to the Real Time omnipresence of the Net even on the very lowest "molecular" levels of (hitherto private and covert) individual reflections and emotions and the most trivial everyday activities - thus increasing the reach of the public sphere which has already been enlarged so much by the conventional services like Email and the WWW.

On the other hand, because of its capacity to boost asymmetric leader-follower relationships, to facilitate spontaneous Real-Time utterances and to provide push signals for directing attention, Twitter is highly complementary to most other Internet applications that emphasize more symmetric communication, delayed asynchronous messages, primary content features and user driven "pull" capacities which all contribute more to the centrifugal complexity of the Net than to its centripetal integration. Thus, Twitter may survive and expand because there are so many followers looking out for guidance about what is important in the Real World and in the Net, and because there are so many leaders eager to acquire the most influential status to be gained in the Net: the status of an opinion leader whose Tweets cause thousands or even million of followers to direct their attention toward indicated events, issues, or information sources.

By combining the informality and flexibility of mobile phone short messages with the extensive multilaterality of the WWW, Twitter is particularly strong at the *two opposite levels of human communication*:

- 1) at the *most basic level* where humans articulate their immediate observations, thoughts and emotions in shorthand messages: feeding them into the ever more gigantic sphere of digital communication where they may be subject to any kind of diffusion or, processes and synthesization in more sophisticated channels;
- 2) at the *highest metacommunicative level* where tweets provide orientation and guidance the ever vaster and less transparent Cyberjungle: by informing about newly publicized contents on which users are suggested to focus their attention.

Unsurprisingly, both of these functions are not (and will never) be accomplished by the total universe (or at least a significant majority) of Net users, but by a broad "semi-elite" of particularly active and influential users.

Thus, studies show that Twitter users are the most influential online "activists" – 72 percent publish blog posts at least monthly, 70 percent comment on blogs, 61 percent write at least one product review monthly and 61 percent comment on news sites. *Daily* Tweet posters are even more outstanding; being six times more likely to publish articles, five times more likely to post blogs, seven times more likely to post to Wikis and three times more likely to post product reviews at least monthly compared to non-Twitter users (ExactTarget 2010).

The future development of Twitter is not easy to predict, because the extreme versatility and polyvalence of this medium makes it difficult to make forecasts about its future usage patterns: as everything depends on user preferences, and almost nothing on technological or organizational constraints.

Sysomos (a Canadian firm specialized on social media analytics) has found two impressive trends by analyzing more than a billion tweets generated by over 20 million Twitter users in 2010.

1) *Increasing personalization*

Twitter users tend to anchor themselves increasingly in the new medium: more and more of them establish a personal account and disclosing their full names, their location and biographical data (Sysomos 2010). Of course, such information makes Twitter a more valuable tool for marketing purposes.

2) *Increasing connectivity*

During 2010, the percentage of users who follow more than 100 friends as well as the percentage who are followed by more than 100 others have significantly increased (Sysomos 2010). This again makes Twitter ever more useful for broad spreading information.

Whatever developments may take place, Twitter will always be highly complementary to conventional Social Media Sites like Facebook: taking care of *diachronic processual* instead of the more enduring, *structural* aspects of individual life.

Thus, Facebook is primarily a medium for expressing things that are relatively stable: e. g. by displaying personal values and preferences, informing about personal biography and by accumulating "friendships" that are usually meant to remain constant over time. Whenever I make entries, I commit myself to this stability, and when I die, there is a risk that nobody is here to eliminate all surviving traces of my communications. Thus, Facebook sites are extremely valuable to get an impression of somebody's character and personality, his biography and experiences, and his social affiliations. Instead, *Twitter* is specialized on informing without delay about current events, fleeting relationships, transient moods and volatile reflections, thus providing a micro-optic for following somebody "from near": so that attention is zoomed on smaller short-term items, while no overall picture of the actor and his generalized traits and circumstances can be gained.. Thus, Asur et. al. have found in their extensive study (covering more than 16 Mio tweets on more than 33000 topics) that "*while there are few topics that last long times, most topics break fairly quickly, in the order of 20-40 minutes.*" (Asur et. al. 2011:2).

Like File Sharing, Crowdsourcing, Open Source Networks and Cloud Computing, Twitter exemplifies the trend toward ever more radicalized exploitations of the Net for purposes of most extensive and most flexible Real time transmission and interaction: facilitating the initiation and maintenance of minimal social bonds as well as the most rapid generation and diffusion of (sometimes highly consequential) molecular snippets of digital information.

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