

The Wikipedia Contribution to Social Resilience During Terrorist Attacks

Sandrine Bubendorff

i3-SES, Telecom Paris, IP Paris, CNRS
sandrine.bubendorff@telecom-paristech.fr

Caroline Rizza

i3-SES, Telecom Paris, IP Paris, CNRS
caroline.rizza@telecom-paristech.fr

ABSTRACT

This paper aims at studying the role of Wikipedia in social resilience processes during terrorist attacks. It discusses how Wikipedia users' specific skills are mobilized in order to make sense of the event as it unfolds. We have conducted an ethnographic analysis of several Wikipedia's terrorist attacks pages as well as interviews with regular Wikipedia's contributors. We document how Wikipedia is used during crisis by readers and contributors. Doing so, we identify a specific pace of contributions which provides reliable information to readers. By discussing the conditions of their trustworthiness, we highlight how historical sources (i.e. traditional media and authorities) support this pace. Our analyses demonstrate that citizens are engaging very quickly in processes of resilience and should be, therefore, considered as relevant partners by authorities when engaging a response to the crisis.

Keywords

Wikipedia, Resilience Process, Terrorist Attacks, Social Media.

INTRODUCTION

Urban crises such as terrorist attacks impact heavily a community. According to R. Aron “an action of violence is labeled “terrorist” when its psychological effects are out of proportion to its purely physical result (Aron 2017 p. 170)”. Its range depends on the national community cohesion *i.e.* the community capacity to know what they can expect to each other. In that respect, terrorist attacks constitute “a test of social cohesion (Truc 2016)” whose discursive component is part of the resilience processes engaged as soon as an event occurs. As deep hardships for communities experiencing them, major attacks are constitutive of a collective memory, especially around dramatic events (Brice Mansencal et al. 2018; Clavandier 2004). Therefore, efforts made by communities struck by an attack to understand it as it happens are seen as a significant part of self-resilience. In this context, a community can be defined as a group of individuals having “good reasons” to feel affected by an event. G. Truc qualifies these communities as “mourning communities¹ (Truc 2016 p. 144)” and these “good reasons” multiple (e.g. geographical proximity, relationship with the victims, sense of moral duty, etc.). Feeling belonging of a community while an event unfolds can also be experienced by engaging in the understanding of this event. Thus, seeking information about an event fully contributes to this process (e.g. Heverin and Zach 2012; Jurgens and Helsloot 2018). In this matter, social media have become a main tool during crisis both for people directly impacted by the event and for the broader community feeling involved. Eismann, Passaga and Fischbach state that “sharing and obtaining factual information is the primary function on social media consistently across all disasters (Eismann et al. 2016 p. 7)”. According to Reuter & Kaufhold (2018) during a crisis social media is a place for citizens to exchange information and for authorities to alert the public and host institutional communication. It is also a means for authorities to include user-generated content into the crisis management processes. Information shared on social media is relevant for emergency agencies to have a more accurate situational awareness and for citizens to enable a collective and coherent approach of the event (e.g. Stieglitz et al. 2018). Following this second aspect, while understanding resilience as the “capacity of social groups and communities to recover from, or respond positively to, crises (Maguire and Hagan 2007 p. 15)”, user-generated content can be understood as a key element in the accomplishing of social resilience (e.g., Jurgens and Helsloot, 2018; Reuter and Spielhofer, 2017). Therefore, sharing and seeking information on social media “[helps] to build an overall picture of what [is] taking place (Heverin and Zack 2012 p. 44)”. This picture

¹ Translation from French by the authors.

is built by the witnesses of the events and the broader community. Consequently, step by step, an inventory of the event is being built on social media, gathering elements as various as expressions of affection for the victims, direct testimony, behavioral messages, etc. (Mendoza et al. 2010). Information gathering has been identified as an indicator to measure resilience of a community (Maguire and Hagan 2007 p. 20). Seeking and searching for information on social media is also identified by Yates and Partridge (Yates and Partridge 2015) as a way to cope with an on-going event. The authors link this search for information to an engagement in forms of resilience: exchanges and information hosted on social media, become a means of engaging in collective conversations related to a drama. These collective conversations are described as producing positive psychosocial effects. As an illustration, Sutton et al. point out that seeking and sharing information on social media during a major event “appeared to serve as a collective and networked space through which individuals coped with feelings of insecurity about the events surrounding them (Sutton et al. 2008 p. 5)”.

Similar patterns can be identified during the terrorist attacks that stroked France in recent years. Charlie Hebdo Attack in January 2015 has been followed by a tribute mobilization on social media using mainly #Jesuisccharlie, (for “IamCharlie”, see Thiault 2015). During the November 2015 Paris Attacks, social media has been filled with tribute, information about the event but also with organizational messages which aim was to protect individuals present at the scene of the attacks. These messages featured the hashtag #PortesOuvertes (for “OpenDoors”). Among the most common hashtags used during these events, the informative ones keep remaining the most used over time (Bubendorff et al. 2019). As pointed by Heverin & Zach, hashtags become tools allowing finding and building an overall picture of the event since there are filled by “numerous people contributing pieces of information to the collective conversation (Heverin and Zach 2012 p. 44)”. Collective sense-making on social media is also built through the participation of other users not directly affected but who speak about the event through identical hashtags on Twitter (ibid.)

Wikipedia is a free online encyclopedia, created and edited by volunteers around the world and hosted by the Wikimedia Foundation². Available in different languages it constitutes an original way of participation into building knowledge from user-generated-content. Numerous researches have been questioning social media’s role during crisis regarding resilience building. Nevertheless, Wikipedia has been undervalued in social media categorization (Reuter and Kaufhold 2018 p. 41), even if the concern of its contributors for seriousness and information veracity on the encyclopedia have been demonstrated (Amanda L. Hughes and Leysia Palen 2009; Bubendorff et al. submitted, forthcoming). With a clear preference for Facebook or Twitter, only a few researches focus on this specific tool. As a result, its role in resilience processes has not been documented. Most of the time, analyses provided by literature about the use of Wikipedia during a crisis look at its collaborative function. Some analyses focus on other wiki applications like Palen and Liu’s studies about wiki uses after 9.11 (Palen and Liu 2007).

Following social media characteristics established by Chan, we consider that Wikipedia fulfills the functions of “information dissemination and gathering (Chan 2014 p. 10)” just as the most common observed social media, Twitter or Facebook. While the main part of the literature focuses on such social media platforms when analyzing information dissemination during a crisis, in our opinion Wikipedia also constitutes a relevant place to understand how information is aggregated and legitimized during a major event (Keegan et al. 2013).

In this paper we formulate the hypothesis that, by creating and contributing to a Wikipedia page related to an ongoing event such as a terrorist attack, Wikipedia contributors facilitate to understanding and making sense of the event and support the resilience of the impacted community. We aim at demonstrating how Wikipedia is used by citizens in order to make sense of the ongoing event. In order to understand this process, we focus on several terrorist attacks, mainly November 2015 Paris Attacks. In addition to their magnitude in terms of victims (130 victims and more than 350 injured), these attacks have particularly affected French people, who described them as the most significant terrorist attacks of this century in France (Brice Mansencal et al. 2018).

In this paper, we address the two following research questions:

- RQ1: How does Wikipedia play a role into the information dissemination during an ongoing crisis?
- RQ2: How do Wikipedia contributor’s skills participate to resilience during a major event?

² See also the Wikipedia “about us” page: <https://en.wikipedia.org/wiki/Wikipedia:About> [last visit 14/02/2020]

METHODOLOGY

Data Collection

In order to do so, we mobilize a research methodology based on qualitative approaches. Two types of investigations have been conducted. First, we have proceeded with an online ethnography of Wikipedia consisting in gathering information and news from Wikipedia. By defining and following specific protocols (see below), we have observed and collected what was published on this social media at the time of a crisis. We have sampled a number of events which had an impact on the French community in recent years (see Table 1). We mainly focused on terrorist attacks but also looked at a natural hazard in order to identify if each type of crisis presents a specificity on Wikipedia.

Table 1. List of analyzed articles

Article	English written related article	Event	Date of the event	Page creation ³	No of contributors (on Jan 20) ³
Attentats contre Charlie Hebdo	Charlie Hebdo Shooting	Shooting in press offices weekly newspaper "Charlie Hebdo"	Jan 7 2015	7 Jan 2015, 12:19 am	674
Attaques du 23 mars à Trèbes et Carcassonne	Carcassonne and Trèbes attacks	Shooting and hostage taking in South of France	Mar 23 2015	23 Mar 2015, 3:03 pm	139
Attentats du 13 Novembre 2015 à Paris	November 2015 Paris attacks	Hostage taken in Bataclan, mass shooting in several cafés	Nov 13 2015	13 Nov 2015, 10 pm	926
Attentats du 14 juillet 2016 à Nice	Nonexistent	Truck ramming during Bastille celebration day in Nice	Jul 14 2016	14 Jul 2016, 10:52 pm	391
Ouragan Irma	Irma (Hurricane)	Categorie 5 Hurricane which struck Caribbean island, Cuba and Florida.	Sept. 2017	5 Sep 2017, 5:31 pm	260

For each selected article of the Table 1, we used the services provided by the Wikimedia foundation (Xtools⁴) to access several information such as:

- The history of the pages: date and time of creation, main periods of contributions, type of contributions.
- The list of contributors: we have extracted the complete list of contributors in order to compare several events (i.e. terrorist attacks, natural hazards, etc.) and to emphasize potential patterns of contributions on the encyclopedia. We have also looked at other contributions made by these "wikipedians" in order to eventually elaborate categories of contributors.

In addition, we conducted ethnographic observations directly on the articles pages. In particular, these observations allowed us to identify structure and referencing models used by their contributors. It should be noted that Wikipedia present the specificity of proposing all versions of an article online. It is thus possible to read all the versions that lead to an article currently online. Along with these observations, we have systematically studied Wikipedia's pages related to the article.

Wikipedia collaborative aspects are embodied by other pages related to an article, namely the 'talk pages' and 'village pump' section of the specific days of the event. A talk page is available alongside the main article and is used to bring together discussions between contributors. This forum is mainly used to resolve conflicts, minor problems such as the structure of the article, the title, the level of grammar or spelling, and to discuss the information to be included in the article. In our study, these pages were systematically analyzed for all the articles mentioned in Table 1. When an event is important and focusing the contributions, discussions on the village pump can be linked to it. When such pages were available for the event, they were also considered. Data were screenshots for further analyzes.

³ Regarding the French-version-articles.

⁴ A suite of statistics tools available at: <https://xtools.wmflabs.org/>.

In order to explore these observations in greater depth, we have conducted three semi-structured interviews with Wikipedia contributors to the major-event-related pages. The guidelines for the interviews were developed based on the different categories used to make the observations. The interviews focused on how individuals perceive the construction of information on Wikipedia as well as the particular times of breaking news. The interviews were enhanced by online ethnographic observations. For example, some of their contributions to the breaking news articles were presented to contributors as a starting point for an exchange. Table 2 gathers biographical elements and presents their related major-event-contributions. Respondents were contacted directly via the messaging service offered by Wikipedia, we must point out a very low response rate. While interviews can shed additional light on ethnographic analysis, their small number limits the possibility of generalizing the elements of analysis emanating solely from the interviews. They do, however, support several research directions developed from the ethnographic material.

Table 2. Sociology of the interviewees

Id number	Interview Modality	Gender	Age	Profession	Amount of contributions	Contributor since	Contribution to page of			
							Nice Attack	C. and T. Attacks	Charlie Hebdo Shooting	November 2015 Paris Attacks
1	phone call	M	22	student	13028	unknow	yes	no	yes	yes
2	video call	M	55	journalist	40954	10 years or more	no	yes	yes	yes
3	face-to-face meeting	M	65	IT engineer	35218	10 years or more	yes	yes	yes	yes

Data Analyzes

Using Excel and Atlas.ti software, we have gathered a timeline of page construction, and manually coded all the data according to research themes we have identified.

RESULTS

Wikipedia uses during crises

The collaborative encyclopedia is particularly used in the case of a crisis, both from the perspective of readers and contributors.

Readers

As well documented in the literature (i.e. Jullien 2012), Wikipedia is a very used website in everyday life to seeking both information or encyclopedic knowledge. More specifically, each year the most viewed pages are related to recent events. For example, on the French-language edition of Wikipedia the most viewed pages over the year and related to events are: for 2019, the fire at Notre-Dame de Paris⁵, and for 2015 the Charlie Hebdo page consultation is ranked number 5 and its attack 145. The number of views of Wikipedia tends to increase rapidly each time a “breaking-news” event occurs (Keegan et al. 2013). The same pattern can be observed regarding the crises of our sample. Moreover, our observation highlights an increase in page views⁶ regarding similar events when a crisis occurs. During a specific terrorist attack, not only its page does have a large number of views, but other pages dealing with events of the same nature also present high hits. Lastly, as shown in Figure 1, the anniversary periods of major past crises are also characterized by an increase and high number of views.

Despite the significant amount of researches conducted on Wikipedia, few have been focused on its readers (e.g. Jullien 2012, 2016; Singer et al. 2017). Their motivations (as well as their consultation processes) are therefore poorly documented, and especially in times of crises. Our analyses allow us to formulate hypotheses about the way Wikipedia’s consultations are distributed.

⁵ Numbers provided by: https://fr.wikiscan.org/pages_vues, access 02.05.2020

⁶NB: the available data are expressed in single view, it is the frequency of visits that can be estimated and not the number of individuals who constitute this consultation.

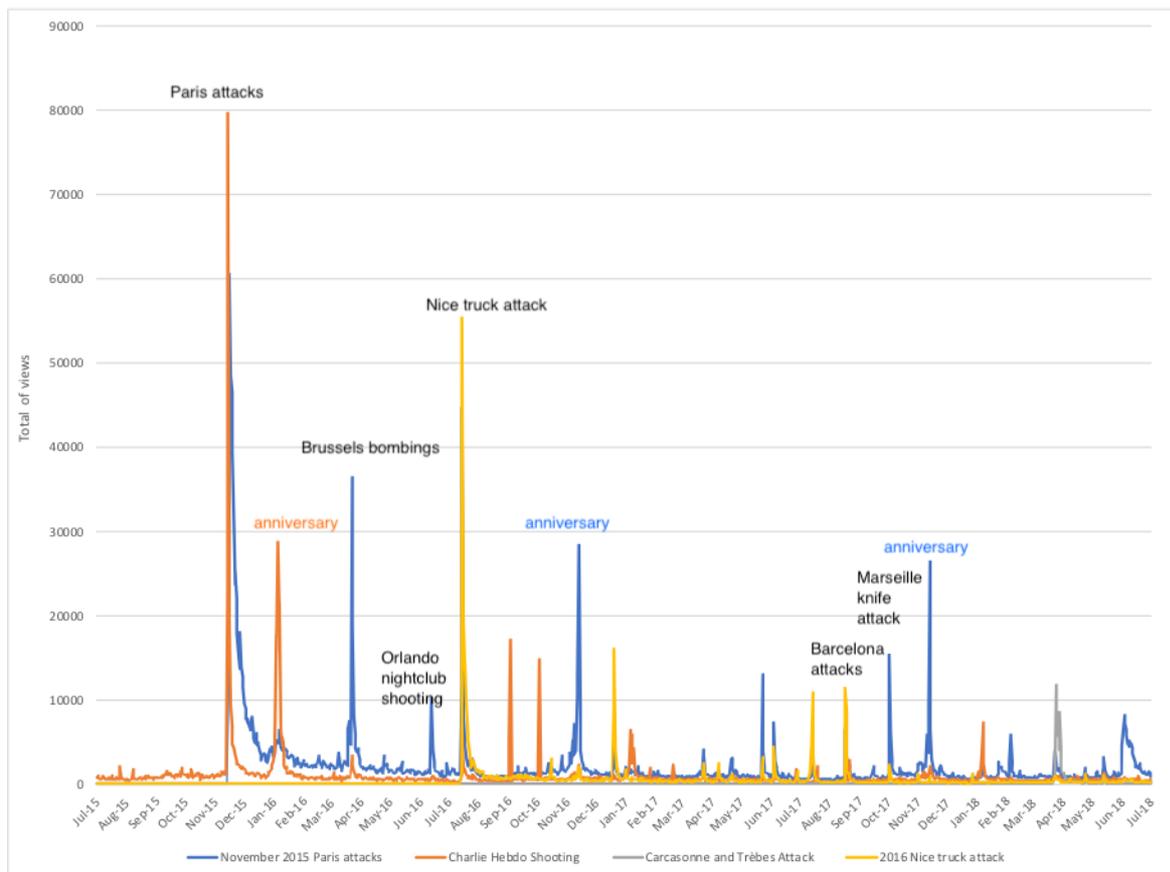


Figure 1. Timeline of views, French Wikipedia

First of all, the quick increase of the number of views can be understood as a public testimony of their trust into the website when providing trustworthy information about an ongoing event. Furthermore, *Wikipedia* pages are very highly ranked in search engine results (Waller 2011). Such ranking can also explain, in part, large audiences during major events: assuming people try to know more about the event, they will be led by search engines into Wikipedia. In this sense, Wikipedia has become a place where people go in order to find reliable information during an event. The number of views during anniversary periods or when a similar event occurs tend to confirm this understanding, as the reader seems to trust the information given by Wikipedia as a knowledge built on a historic event as well as relevant news information.

Contributors

While the number of Wikipedia readers increase at the time of a crisis, Wikipedia breaking news articles are created quickly during or after an event, underlining the interest of the users of Wikipedia for crises. Hence, Keegan, Gergle and Contractor underline that articles related to breaking news are increasing in number and that “since 2003 the top 25 Wikipedia articles with the most contributors every month consist nearly exclusively of articles pertinent to current events (Keegan et al. 2013 p. 596)”. The November 2015 Paris Attacks articles have been created nearly simultaneously to the events themselves (9:23 pm for English version and 11:00 pm for French one, while the first shooting occurred at 9:17 pm). Articles on breaking news are built from a much larger number of collaborations very quickly after the creation of a page (Keegan et al. 2013). In contrast, articles on less major events take at least one year to reach this same level of participation.

Figure 2 illustrates contributors’ appetite for major event articles. In the case of the November 2015 Paris Attack, the French Wikipedia page counts 6172 contributions by 860 Internet users, and 238 French speaking Wikipedians are still “watchers” of this page (i.e. changes made to the page are reported to them).

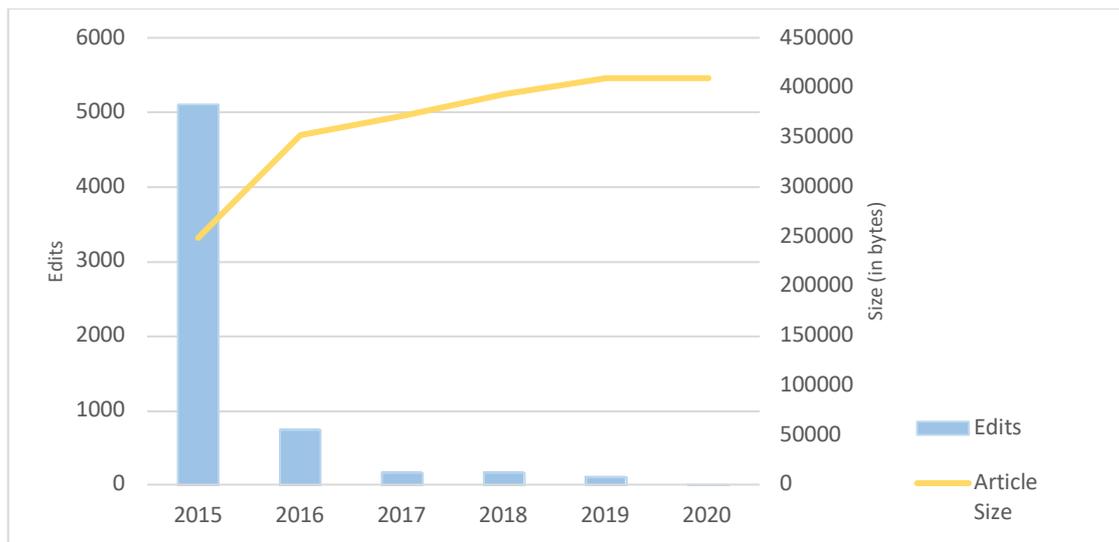


Figure 2. Timeline of contribution; French page November 2015 Paris Attacks

In order to compare the distribution of contributions during crisis and during regular times, we propose to observe articles which are not controversial, as articles proposing a comparison of models. As an illustration, the article on the number Pi gathered all these criteria. Figure 3 presents the dispersion of the contributions for this article.

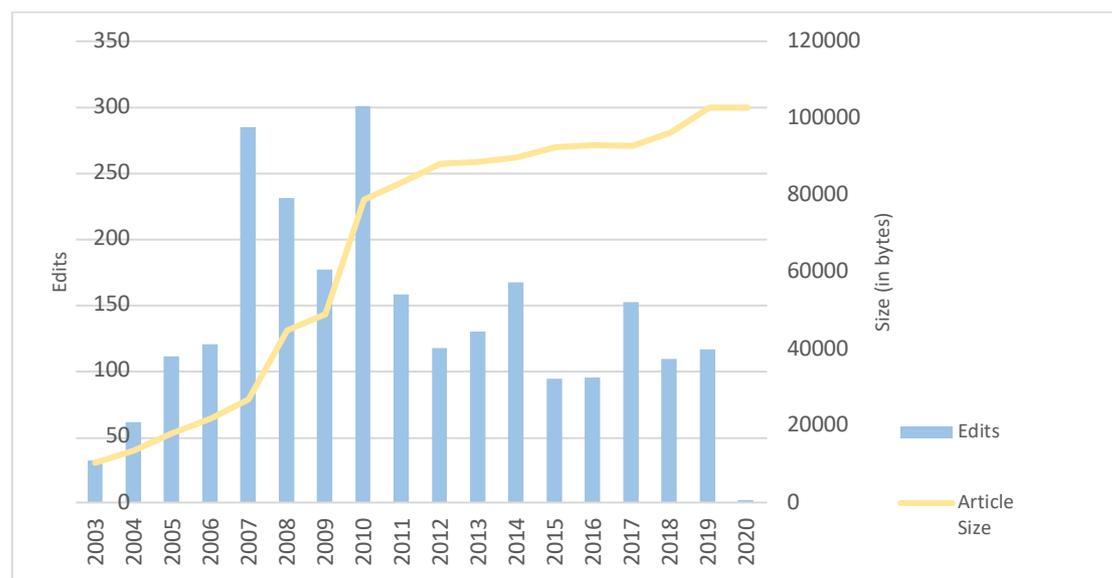


Figure 3. Timeline of contribution; French page "pi"

By comparing Figures 1 and 2, the article on the November 2015 Paris Attacks has a higher number of contributions than the "regular" page about Pi shortly after their creations. The page is created while the events occur; the contributions are mostly made in a period very close to the event: here in 2015. The page has been stabilized very quickly: after one month, modifications have become less numerous and only a few minor additions have been made (since mid-2016). In comparison, for an article not related to a crisis situation like the article about Pi (Figure 3), it has taken nearly seven years to the article to have been stabilized.

Figure 4 presents the dynamic of contributions for the French article related to the 9.11 Attacks in New York, a crisis which occurred before Wikipedia became massively used by the French-speaking community: despite the major dimension of the event, while the creation of the page is not simultaneous with the event, the contributions are spread over time as for a "regular" article published on Wikipedia (e.g. "Pi").

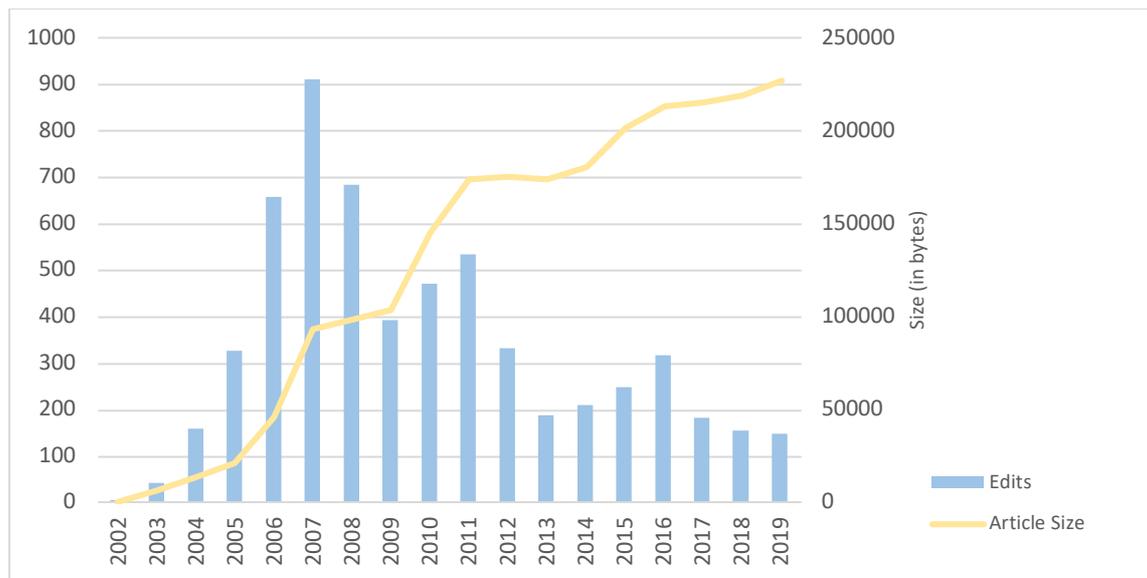


Figure 4. Timeline of contributions; French page of September 11 Attacks

Our observation confirms Keegan’s analyses which demonstrate that breaking news articles have their own pattern of collaboration and editing during the first moment of a crisis (Keegan 2015). Focusing on the users’ trajectories and their contributions on articles related to major events, Keegan shows that their dynamic is more concentrated than on usual non-breaking-news-articles: in terms of velocity and in terms of concentration of the number of edits and corrections in a short-time-period. The contribution rhythm progressively slows down, becoming more similar to non-breaking articles.

Nevertheless, according to Keegan, there is no crisis specialization on Wikipedia while our study shows that, regarding contributions, same editors can be found on each crisis articles we examined. Looking at the 100th first contributors of three major crises in France articles on Wikipedia, nearly 46% of them contributes at least to two articles (31% edited all of three articles). These contributors also participate to other articles and are not only specialized into crisis. However, they develop expertise in writing crisis article than benefits the community. We consider that, doing so, they become actors of the resilience process at work here. The interest they show in crisis articles on Wikipedia clearly demonstrates its prominent place in current events. We will now focus on two main characteristics sustaining this view.

Patience as urgency

The rhythm induced by experimented Wikipedia contributors tends to provide quality to information which can support the resilience process.

Hence, despite this haste in creating new content, the interviews we led with experimented French crisis contributors underline that, overall, this practice is highly discussed. One of the interviewees explains:

“Let’s say I wouldn’t be the one creating a page after looking at BFM TV [French news channel] the 11.13 at 10 pm. But neither would I ask immediately for its suppression. I would rather go online the next day or the one after, looking at ... where we are”
(interviewee 1)

The same debate occurs on the English version of Wikipedia as the user who has created the Paris Attacks 2015 page explains⁷:

“I’m going to be bold here and make this article, because there has been a discussion on the Charlie Hebdo shooting “talk” page for days and it needs to get done. The latest consensus is for a separate page on all the attacks”. (ethnography)

Discussion between contributors during different crises have reached a consensus about creating such pages. Nevertheless, tone to be used and information to be mentioned are still discussed among its contributors.

⁷ Source: https://en.wikipedia.org/w/index.php?title=January_2015_%C3%8ELe-de-France_attacks&dir=prev&action=history, accessed 13 may 2018.

Experienced users feel committed in organizing the related pieces of information, as an interviewee expresses:

“[...] when news are really recent [...] the article initially tends to come from and be built from a somewhat chaotic trend... it's quite interesting to see, and so at this level, exchanges become essential to give a structure... to the article, to sort information especially. And it seems to me that yes, exchanges are quite important in this type of article for this reason.” (interviewee 3)

Our results highlight that patience is stated as an urgent necessity for experimented contributors. As already stressed out by Keegan, our observations of major event articles confirm that the numbers of contributors increase on this specific type of article as a crisis unfolds. This phenomenon tends to exacerbate discussions, debates and more generally complicates the editing of the article. Therefore, experimented contributors act as moderator, following a slow pace. One of the interviewees specifies:

“But it depends a lot on the activity itself, and it also depends on how the article is created, that's to say that if it is an article about an attack... there is information coming out and then... waiting until you have a little distance to be able to process information during two or three days.” (interviewee 2)

Despite the hurry of Wikipedia's contributors in creating a major-event-related article, Wikipedia is the place where the event and its related information are discussed through several processes such as source comparison, significant editing work and moderation activity. This last process is ensured by experimented contributors who put an effort toward encouraging the numerous contributors to publish verified information. Keegan (2015) shows that Wikipedia sets on a high tempo during a crisis. The author demonstrates that the specific broad activity tends to significantly reduce the time required to correct inaccuracy, rumors, or lies. Our observations show that the rapidity of contributions is not the only mechanism at work. During these periods, contributors pay particular attention to verifying sources of information. Some of them delay their contributions waiting for verified information to become available. As highlighted by Chan, information gathering participates to a form of resilience: “provid[ing] reliable information quickly to the public enables them to better prepare for and respond to crises (Chan 2014)”. We consider that the specific rhythm set by experimented contributors of Wikipedia supports this aspect as it provides a place where information is synthesized while the event is occurring.

Reflexive process is engaged despite the emergency and the new contributors who can be unfamiliar with the Wikipedia rules⁸. Users take part in the construction of knowledge regarding the event rather than updating the newest live-events like mainstream media. As new events occur (namely terrorist attacks), Wikipedia contributors formalize procedures through debating, negotiating and looking for consensus inherent to Wikipedia (see e.g. Auray et al. 2009). These results support Hansen et al. (Hansen et al. 2009) approach who sees Wikipedia as an embodiment of the communicative discourse that Habermas defends as a means to achieve forms of personal and social emancipation. Here, communicative actions described by Habermas as emancipatory can be observed in the discussion among contributors. The Wikipedia structure allows and supports this aim “to achieve a level of mutual understanding between actors (Fier-Blaess 2011 p. 137)”. As shown by Hansen et al., Wikipedia is not free from other forms of interactions, but its structure tends to make possible and value communicative discourse. During times of crises, when uncertainty is most critical, the consciously pursue a “cooperative search for the truth (Habermas 1984)” among contributors tend to reinforce the role that Wikipedia plays in resilience processes at work from the beginning of the crisis that has a widespread impact on a community.

Meaning of this specific pace for sources uses on Wikipedia

Primacy of official media

The information verification methods implemented by experienced contributors through this fast pace support their usefulness within resilience processes. The information on Wikipedia is verifiable and of high quality, readers can rely on this website to understand the event and start responding to it.

First of all, the current practices on Wikipedia are to warn the reader of the instability of pages concerning current events. As explained on the “Help” Wikipedia section guiding contributors, the banner mentioning "current event" appears on the top of these articles in order to "warn readers about the fast-changing or

⁸ These newbies can be identified by the fact that they are not registered as user. Their contributions are then signed with their IP number rather than a chosen username

speculative nature of the article". It tends to create the conditions for resilience processes insofar as Internet users (readers and contributors) are called upon to use critical thinking and patience regarding the information they are likely to find on this kind of page. Doing so, they can be included in the events, and in the process of sense making around it.

Furthermore, regarding "current events", Wikipedia users tend to renegotiate rules established by everyday uses. On Wikipedia, a cold distinction between primary and secondary sources helps contributors in distinguishing reliable information. In order to be valid, a piece of information has to come from a so-called secondary source: i.e. media, books, academic publications. As we mentioned before, Wikipedia is well known for its verification process (Cardon and Levrel 2009; Forte and Lampe 2013; Sahut 2016). On Wikipedia, sorting through several references and indicating which sources are reliable are an important part of the contributor's work and expertise (Sahut 2014). The citation rules are well known by regular contributors. Serious events, or breaking news events in general, bring these rules into question. As the article is developed gradually as the event unfolds, traditional media become the main reference in this process. On the contrary, in regularly times, although the media can be a source, scientific books or articles are mainly used. The main national news media remains standard for reliability, this is confirmed by one of our interviewees regarding how consensus between contributors is established about sources:

"Le Monde [a major French newspaper] for instance, it's Gospel Truth."(interviewee 2)

Unlike information commonly referred to as "user-generated-content" information on social media during crises, first-hand evidence (e.g. a photo taken by an individual present on the scene) cannot be considered reliable on Wikipedia. User-generated content performed by contributors here is rather the treatment of the information available in real time.

Political authorities as sources

Furthermore, information from official authorities play a main role into the construction of the events on Wikipedia. In addition to the major national and international media, information from official sources is expected and allows Internet users to provide readers with reliable information, thus contributing to the ability to understand the event and initiate processes of resilience. Like all information quoted on Wikipedia, it must be taken over by a third party to be validated. An important difference in the consideration of the statements provided by the authorities is worth noting here.

On Wikipedia, authorities are considered trustworthy insofar as their statements address the protection and integrity of citizens rather than managing a political crisis. We see this in our interviews but also in the observation of the articles. Here, for example, two contributors discuss in November 2015 Paris Attacks French Talk page to decide whether or not the press conference held by the state prosecutor deserves to appear in the article.

Contributor A: "But I remember defending the fact of relying on the details and chronology of the public prosecutor in an article on a plane crash case and hearing myself said by a contributor" my point of view is that Wikipedia is not the spokesperson for either State, the BEA [French equivalent for NTSB] or the justice of a country"

Contributor B: The presentation of the prosecutor seems to me to be an objective document, complete, at least to a certain extent (...) and independent (the judiciary in France being theoretically independent of the political power), it seems to me to be a much more reliable source than media retakes, which will take up this release with the risk of making mistakes."⁹ (ethnography)

The State and its authorities become reliable when one finds oneself in a situation that cannot be confused with a "political" crisis. For the people we met, the political dimension of an event refers to the issues related to the various political parties on the French public scene, which are perceived as having other aims than the protection and integrity of its citizens. The exchange between these two contributors shows that information from the State is considered reliable when it is shared by institutions perceived as apolitical.

This perception may change according to the events. For example, according to one of the interviewed

⁹ Translated by the authors from https://fr.wikipedia.org/wiki/Discussion:Attentats_du_13_novembre_2015_en_France/archives_2015, accessed 10/12/2019.

contributors, the Paris Police Prefecture is perceived as reliable in the case of casualty reports for terrorist attacks but cannot be a sufficient source in the case of protests. In the view of this contributor, this source must be counterbalanced by another, which would not belong to the same “political side”. The classic comparison between union and police accounts is then highlighted and will be put forward by several interviewees:

"Generally it will be" according to the Ministry of Interior, there are x deaths" and we can't have any other sources. Journalists can't count the deaths, the only source is the Ministry of Interior, so well... we're still in a country where it's relatively credible. The day I write "there were 50,000 demonstrators", if I don't specify the source, Laughs is more delicate. The Ministry of the Interior in this case can say whatever it wants. Laughs.
(interviewee 3)

These Wikipedia contributors' particular skills are mobilized to support resilience processes in the event of crises, as they allow the reader to quickly access quality information. As such, several traditional French media¹⁰ have also referred to the construction of these pages as a significant step “in the writing of the history of 13 November¹¹”, acknowledging its contribution in the sense making of the event. Contributors we met unanimously defined the role of Wikipedia during a major event as a “place of serious synthesis of information”. By providing quickly an overview of the on-going event, Wikipedia can be seen as one of the tools used by individuals to access information, reduce the uncertainty associated with major events and consequently support resilience processes.

DISCUSSION AND CONCLUSION

This dsfpaper highlights the processes by which Wikipedia plays a role into resilience process. It discusses how Wikipedians' skills are mobilized and rearranged in order to support coping with to an ongoing event. We show how experimented contributors keep to a specific pace of contributions and, by doing so, they guarantee the information veracity on Wikipedia during a crisis. By mobilizing these specific skills (i.e. specific pace and checking of sources) they allow Wikipedia's readers to find trustful information about the event soon after its occurrence, consequently participating to the building of an overall picture (RQ1). Based on their own knowledge of Wikipedia's uses, experimented contributors catalyze the questions, uncertainties and emotions generated by an event into establishing a specific rhythm of contributions. This process supports forms of reflexivity that fuel resilience building (RQ2). Finally, we mobilize Habermas' communicative discourse as a pertinent theoretical framework to understand the Wikipedia contributors' motivations and actions. This approach supports a better understanding of how and why citizens, not directly involved in a major event, give their time, energy and skills to help others in accessing serious and verified information; thereby reinforcing the process of resilience.

In conclusion, we would like to discuss the place the Wikipedia contributors give to the content published on social media. In our opinion, this is quite “classical” in the sense that it does not differ from authorities' positons: On Wikipedia experienced contributors do not consider the voice of the citizens as reliable source of information. Therefore, this citizen-generated content does not fit into the synthesis of information that they aim to build during an on-going major event.

On a practical level, our results emphasize the importance of user-generated-content in order to understand how citizens make sense of an event. The ISCRAM community has shown on many occasions the relevance social media in crisis management. Nevertheless, in France, administrations are still cautious about the use of information coming from online social networks. They are even more so when it comes to interacting with citizens on these networks in a logic of horizontality specific to these tools. Looking at Wikipedia uses during crisis, our results insist on how citizens, even in times of destabilizing crisis such as a terrorist attack with a very high number of victims, are equipped with the capacity to produce, process information as well as to debate and exchange in order to create the most accurate and possible picture of the situation. This research shows that citizens on the Internet are engaging very quickly in processes of resilience. As such, we will argue that they may be considered as partners of interactions for authorities more than individuals to be (physically and emotionally) protected.

¹⁰ A radio report on France Culture, articles on Slate, mention of the page in several press article.

¹¹ Source : <http://www.slate.fr/story/110605/wikipedia-attentats-13-novembre>, translated by the authors.

ACKNOWLEDGMENTS

This paper presents the first results of an exploratory study, part of the project “MACIV” (ANR-17-CE39-0015) co-funded by the Defense and Security Area of the Paris Police Prefecture and the French National Research Agency; conducted from February to September 2018.

REFERENCES

- Amanda L. Hughes, and Leysia Palen. (2009). “Twitter adoption and use in mass convergence and emergency events.” *ISCRAM 2009 – 6th International Conference on Information Systems for Crisis Response and Management: Boundary Spanning Initiatives and New Perspectives*, S. J. J. Landgren, ed., Information Systems for Crisis Response and Management, ISCRAM, Gothenburg.
- Aron, R. (2017). *Peace and War: A Theory of International Relations*. Routledge.
- Auray, N., Hurault-Plantet, M., Poudat, C., and Jacquemin, B. (2009). “La négociation des points de vue, une cartographie sociale des conflits et des querelles dans le Wikipédia francophone.” *Réseaux*, (154), 15–50.
- Brice Mansencal, L., Hoibian, S., Prieur, V., Peschanski, D., and Eustache, F. (2018). “Les attentats du 13 novembre 2015, un marqueur de la mémoire collective.” *CREDOC, Consommation et modes de vie*, 302, 1–4.
- Bubendorff, S., Caroline, R., and Christophe, P. (2019). *Réseaux sociaux numériques et spatio-temporalité de l'information en gestion de crise*. report.
- Bubendorff, S., Rizza, C., and Prieur, C. (submitted, forthcoming). “Construction and dissemination of information veracity on French social media during crises: comparison of Twitter and Wikipédia.”
- Cardon, D., and Levrel, J. (2009). “La vigilance participative. Une interprétation de la gouvernance de Wikipédia.” *Réseaux*, 154(2).
- Chan, J. C. (2014). “The role of social media in crisis preparedness, response and recovery.” *citeseer*.
- Clavandier, G. (2004). *La mort collective: pour une sociologie des catastrophes*. CNRS éd., Paris, France.
- Eismann, K., Possega, O., and Fischbach, K. (2016). “Collective Behaviour, social media, and disasters: a systematic literature review.” Istanbul, Turkey.
- Firer-Blaess, S. (2011). “Wikipedia: Example for a future Electronic Democracy?: Decision, Discipline and Discourse in the Collaborative Encyclopaedia.” *Studies in Social and Political Thought*, 19, 131–154.
- Forte, A., and Lampe, C. (2013). “Defining, Understanding, and Supporting Open Collaboration: Lessons From the Literature.” *American Behavioral Scientist*, 57(5), 535–547.
- Habermas, J. (1984). *The theory of communicative action: reason and the rationalization of society. vol. 1*. Heineman, London, Royaume-Uni de Grande-Bretagne et d'Irlande du Nord.
- Hansen, S., Berente, N., and Lyytinen, K. (2009). “Wikipedia, Critical Social Theory, and the Possibility of Rational Discourse¹.” *The Information Society*, 25(1), 38–59.
- Heverin, T., and Zach, L. (2012). “Use of microblogging for collective sense-making during violent crises: A study of three campus shootings.” *Journal of the American Society for Information Science and Technology*, 63(1), 34–47.
- Jullien, N. (2012). “What We Know About Wikipedia: A Review of the Literature Analyzing the Project(s).” *SSRN Electronic Journal*.
- Jullien, N. (2016). *Présentation des répondants à l'enquête sur l'usage de Wikipédia*. Rapport intermédiaire d'analyse quantitative, enquête Wikipédia 2015.
- Keegan, B. C. (2015). “Emergent Social Roles in Wikipedia’s Breaking News Collaborations.” *Roles, Trust, and Reputation in Social Media Knowledge Markets: Theory and Methods*, Computational Social Sciences, E. Bertino and S. A. Matei, eds., Springer International Publishing, Cham, 57–79.
- Keegan, B., Gergle, D., and Contractor, N. (2013). “Hot off the wiki : structure and dynamics of wikipedia’s coverage of breaking news events.” *American Behavioral Scientist*, 57(5), 595–622.
- Maguire, B., and Hagan, P. (2007). “Disasters and communities: understanding social resilience.” *The Australian Journal of Emergency Management*, 22(2), 15–20.

- Mendoza, M., Poblete, B., and Castillo, C. (2010). "Twitter Under Crisis: Can We Trust What We RT?" *Proceedings of the First Workshop on Social Media Analytics, SOMA '10*, ACM, New York, NY, USA, 71–79.
- Palen, L., and Liu, S. B. (2007). "Citizen communications in crisis: anticipating a future of ICT-supported public participation." *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems - CHI '07*, ACM Press, San Jose, California, USA, 727–736.
- Reuter, C., and Kaufhold, M.-A. (2018). "Fifteen years of social media in emergencies: A retrospective review and future directions for crisis Informatics." *Journal of Contingencies and Crisis Management*, 26(1), 41–57.
- Sahut, G. (2014). "« Citez vos sources » : archéologie d'une règle au cœur du savoir wikipédien (2002-2008)." *Études de communication. langages, information, médiations*, (42), 97–110.
- Sahut, G. (2016). "L'autorité importée dans Wikipédia : la question de la qualité des sources citées." *Quaderni*, (91), 93–105.
- Singer, P., Lemmerich, F., West, R., Zia, L., Wulczyn, E., Strohmaier, M., and Leskovec, J. (2017). "Why We Read Wikipedia." *Proceedings of the 26th International Conference on World Wide Web - WWW '17*, ACM Press, Perth, Australia, 1591–1600.
- Stieglitz, S., Bunker, D., Mirbabaie, M., and Ehnis, C. (2018). "Sense-making in social media during extreme events." *Journal of Contingencies and Crisis Management*, 26(1), 4–15.
- Sutton, J., Palen, L., and Shklovski, I. (2008). "Backchannels on the front lines: emergent uses of social media in the 2007 Southern Californi Wildfires." *ISCRAM 2008 Conference Proceedings – 5th International Conference on Information Systems for Crisis Response and Management*, Washington.
- Thiault, F. (2015). "Le produsage des hashstags sur Twitter, une pratique affiliative." *Questions de communication*, (28), 65–79.
- Truc, G. (2016). *Sidérations: une sociologie des attentats*. France.
- Waller, V. (2011). "The search queries that took Australian Internet users to Wikipedia." *Information research*, 2(16).
- Yates, C., and Partridge, H. (2015). "Citizens and social media in times of natural disaster: exploring information experience." *Information research*, 20(1).