Case Study Series

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Humanitarian Aid 2.0: Social Media Analytics and Stakeholder Engagement at the International Committee of the Red Cross

Abstract

This case study shows how social media analytics impact the way that the International Committee of the Red Cross (ICRC) engages with its stakeholders in humanitarian crises. Referring to the organization's mission in one African context, the case illustrates the role that social media analytics played in detecting an unexpected stakeholder constellation and in strengthening the ICRC's presence as protection provider.

Through the case study, students learn what "managing stakeholders" means for an international humanitarian nonprofit organization that helps and protects victims of humanitarian crises. The case also shows the significance of social media analytics as a complementary decision-making tool to clarify stakeholder constellations, understand interests of key actors, and engage with them. Analyzing this case should enable students to evaluate the role of social media analytics for a humanitarian organization's mission, understand the challenges of such tools, and to develop strategic communication approaches to make insights from social media analyses actionable.

A surprising Discovery

"You need to have a look at this, it's astonishing!" Valérie, the Head of Analysis & Knowledge at the International Committee of the Red Cross, said while entering Charlotte's office. She walked straight to the desk of her boss and handed her the results of the Twitter analysis that her team had just conducted.

The results were surprising and potentially brought significant implications for the ICRC's humanitarian mission in this African context. Due to her long experience as Director of Communications & Information Management, Charlotte immediately realized the impact of these insights: "You are right, this militia group *is* relevant, they are a critical stakeholder for us," she said after having analyzed the results Valérie had brought to her. It became clear to them that they should inform their delegation on-site even though the analysis had just been initiated to test a concept.

Since the ICRC's on-site delegation had been aiming at strengthening awareness of its programs for protection (as opposed to assistance) with the various local communities, it had asked Charlotte and her team for advice and support in their regional communication efforts. Even though the delegation had tried to engage in a dialogue with the local communities on protection-related issues, it hadn't been able to fully establish itself within this debate. Thus, the delegation needed to gain a better understanding of who really were the most influential voices and how to engage them. *They needed to understand the issues and the concerns expressed by those in need of protection – and those in power.* Yet, Charlotte, who happened to be visiting the delegation at the time, thought that this would be a good opportunity to test the potential of social media analytics for such a challenge. As the ICRC did not have the internal tools to do this in 2014, Charlotte and her team decided to outsource part of the analysis to a company that was said to use cutting-edge stakeholder analyses and mapping tools.

Based on its analytics, the company had identified a cluster of stakeholders having an impact on protection related issues in this particular African context. Interestingly, their results had shown that a particular group hadn't been a part of this cluster. The company had concluded that this group was not important and could therefore be ignored. It was only by curiosity (and a bit of instinct) that Charlotte and Valérie wanted to follow-up on that initial analysis. Subsequently, Valérie and her team had set up a *Twitter analysis* to check who was tweeting on local protection issues in the context, and who (and how many) retweeted those messages.

They did not anticipate what they would find: the stakeholder group previously labeled as irrelevant turned out to be one of the most influential non-state armed groups in the context. And through their retweet analysis they made another discovery that provided a decisive hint on how to participate in the dialogue on protection-related issues, namely which journalists were writing on these issues and thus could be "influencers" to reach important stakeholders.

Given these stunning insights, Charlotte and Valérie wanted to first inform the headquarters team covering this region and then immediately inform the ICRC on-site delegation. Thus, they convened a team meeting for that very afternoon. While preparing the documents for the gathering, Charlotte thought about how social media analytics had already impacted their approach to identifying and understanding stakeholders.

The ICRC context: Protecting people in more than 80 countries

Initiating an issue tracking system at the ICRC 15 years ago, Charlotte had always believed in technology's potential to support humanitarian activities. This seemed ever more true with the advent of social media: potentially based on Twitter, Youtube, and Facebook analytics, the ICRC could

generate new insights and significantly improve its situational awareness and subsequent stakeholder management.

There was an enormous responsibility related to "managing" stakeholders in the context of humanitarian aid: nothing less than people's lives was at stake. Children losing their family in civil wars, armed groups isolating whole landscapes from food and medical supplies, or refugees risking their lives travelling – everywhere around the globe, there were humanitarian crises that required help. As a neutral, international humanitarian nonprofit organization, the ICRC's mission, mandated in international humanitarian law, is to help people affected by conflict and armed violence. The organization is based in Geneva and employs over 16,000 people in more than 80 countries.

To do its job and protect those that need it most, finding out who are the influential players in a region and understanding their position (also with regard to the Red Cross) has always been paramount. However, since the ICRC had to "dig for this information", the identification and the understanding of stakeholders could be described as a difficult process of "stakeholder mining". Like miners looking for gold, the ICRC had to gather insights on stakeholders that could influence or impact the humanitarian response. These insights no longer just came from one-to-one conversations, but also from virtual communities in social media.

Social media analytics: From nice-to-have to essential

With regard to the ICRC's stakeholder mining, Charlotte considered the role of social media analytics. "Our approach is driven by what our staff in the field requires and not by what we think is good for them", she thought. Hence, their aim was to provide the delegations with useful, actionable insights – complementary to their own expertise – that enabled them to help victims of humanitarian crises.

Thus, gathering publicly available data on stakeholders and analyzing them had reached a whole new level with her team's social media analytics tool. Being able to examine huge amounts of public digital data such as tweets, videos, articles, comments, user behaviors on social media, and pictures was a major milestone in terms of ICRC's "stakeholder mining 2.0". It was amazing what the ICRC could find in open sources like Twitter, Instagram, or Youtube: the information gathered really helped Charlotte and her team to identify and understand stakeholders. Although some channels such as Facebook, had not made their data publicly available, there was a broad spectrum of variables that the ICRC could analyze: ranging from the *number of followers, political sentiments, and views regarding humanitarian aid, to any demonstration of violence against civilian population*. Based on these indicators, the ICRC then prioritized stakeholders according to their influence.

Despite the ICRC's innovative approach to use social media analytics for stakeholder mining, *collecting* information had remained the dominant way to gather data. Rather than *stimulating* stakeholders to make a contribution the ICRC mainly collected information already present on the web. Insofar the organization had not yet harnessed digitalization's full potential. However, this was due to the ICRC's strict data handling governance and protection standards. "We know that we have to be very careful when it comes to gathering data, especially in humanitarian crises. Often information can be individualized, so we always have to ask ourselves *what is the humanitarian purpose for which we are collecting data* and what are we intending to do with the data, particularly with regard to the granularity needed. Our approach is protection-driven and conservative because we work in insecure environments", Charlotte said to a younger colleague who wanted to move further ahead in the ICRC's use of social media. "Maybe that's one of the reasons why we are not so adventurous compared to other

organizations in terms of using different data gathering approaches. We strive first for 'do no harm'", she added.[1]

Still, when looking at the beginning of social media analytics at the ICRC, they had come a long way. Charlotte had long recognized the huge potential of these tools in terms of stakeholder mining. However, due to a lack of capacities and know-how, they hadn't had their own tool. So they had to rely on other companies and had outsourced social media analyses. This had not worked as well as she had hoped: none of the suppliers had managed to fulfil all the specific requirements of the humanitarian aid context and at a cost the ICRC could assume. Consequently, Charlotte and her team had decided to find a way to partner in order to develop their own tool tailored to the ICRC (through partnership with a specialized Information Systems Department at a large technical university near the ICRC headquarters). It was then, in the context of a civil war in the Middle East, that they had started to test research on big data analytics and develop a prototype of a tool for the first time. And since they had gathered valuable insights on how the media reported on humanitarian engagement in this context, they had felt encouraged to move further in this direction.

Starting to conduct their own analytics and partnering with academics had enabled Charlotte and her team to reduce the outsourcing of social media analyses. Having this capacity internally had also impacted their stakeholder mining, meaning more could be done by looking at large data sets rather than relying solely on traditional media monitoring tools.

Nevertheless, the development of the prototype of the tool was still an ongoing process: to advance their approach, and taking it to the next level, they – through their partner - were working on combining it with semantic features. Charlotte remembered Valérie explaining the rationale behind this idea in a recent meeting with the software developers: "We are looking for expressions of humanitarian needs and approaches to go out of our bubble. We have a certain terminology, a jargon. But when people are expressing needs, they are using other terms. We may speak about 'food assistance'. But perhaps the person will speak about meals, for instance." Moreover, Charlotte and her team were about to extend their tool's functionalities in terms of providing near real-time and multi-language analyses.

Letting her thoughts wander and thinking about their initial struggles, Charlotte had to smile. She was happy to see that the social media analytics had shifted from "nice-to-have" to essential. A few years ago, they conducted a Google search and had a good idea of what was happening online. Now, she and her team needed more sophisticated technological expertise. They needed the ability to cut through the "data noise" and track messages and their resonance. No doubt, applying social media analytics had become a profession, a fact that she also realized when learning about Nestlé's nearby social media center. But Charlotte also reflected on the maturity level of their own approach: "Despite our long-term efforts to draw on social media analytics – how far have we really come? Are we current with our stakeholder mining in terms of identifying and understanding our constituencies?", she wondered. Was there a way to be faster, more comprehensive, and more fine grained and more actionable in their analysis?

To answer these questions, she had to look at their stakeholder analytics from a broader, strategic perspective. Up to this point, the stakeholder mining process at the ICRC consisted of five steps: 1) the setup of the analysis, 2) the data gathering 3) the data analysis, 4) the interpretation (and preliminary sharing) of the results and 5) their wider communication to relevant internal audiences of findings in order to inform engagement strategies.

Of course, "human intelligence" still played a major role in all of this, as Charlotte and her team would never rely on social media analytics alone. In a first step, they always consulted with their delegations on-site to get an idea of whom they considered a meaningful stakeholder and which information they

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[1] See here for the relevance of personal data protection: https://youtu.be/zudjklgBFus or icrc.org

needed. They also worked closely with the delegations to understand the local terminology. Based on this, Charlotte and her team would set up the parameters of an analysis (step 1). They also depended on their colleagues to make sense of the results gathered from social media analyses (step 4), since their tool was not yet able to contextualize and interpret findings. Hence, improving the prototype would also mean improving the analytical functions of the algorithm. This could mean providing an approach that efficiently (and iteratively) integrated human knowledge into the automated mining process. In addition, the ICRC would need to improve the capacity to analyze images and particularly emotions or sentiments. Nonetheless, the ICRC's initial investment in big data and social media analytics had proven to be a potential game changer.

When online presence makes a difference on the ground

Later that day, after all team members had gathered for their meeting, Charlotte briefly outlined the situation and then let Valérie present her findings. Spreading her graphics and charts on the table, she explained what they had just found out on the non-state armed group in the African context. They all hung on Valérie's words when she was presenting the results: indeed, as the external company had indicated, the non-state armed group did not participate in the virtual dialogue on protection related issues. Accordingly, the company had assumed that this group was not a relevant stakeholder. However, what the company hadn't seen was even more surprising: first, this stakeholder was a very influential non-state armed group. And second, this community had tried to enter the conversation on protection but had always been pushed aside by other stakeholders. Although they had retweeted the influential stakeholders within the main cluster, those players hadn't retweeted the non-state armed group. Furthermore, as Valérie explained, the debates revolved around topics such as detention, arrests, bombings, and other terms linked to protection in war.

"As you can see in the graphs, there are some bridges between this non-state armed group and the influencers within the cluster", Valérie revealed. "And these bridges are local journalists and activists. Apparently, they are well-connected and have relationships on all sides since they are retweeted by the non-state armed group as well as by the other stakeholders", she concluded.

Charlotte and her team immediately realized the implications of these findings: they provided an important suggestion on who to consider to participate in the virtual dialogue on protection-related issues in the region. Thinking one step ahead, the insights could be very useful in terms of ICRC's humanitarian engagement on the ground. Philipp, a skilled communication specialist, therefore outlined how the insights from the social media analysis might impact and strengthen the ICRC's physical presence in the field: "It could be very interesting then to engage with these local journalists and activists, for instance, if we have a message to pass". Instead of broadcasting or holding a press conference, the delegation might directly address these local journalists and activists and subsequently communicate in a more targeted way.

Given these unexpected findings, Charlotte was very interested in her team's reflections on the potential of social media analytics at the ICRC. She wanted everyone to think about "stakeholder mining 2.0" as a means to identify and understand their constituencies more strategically. However, as the meeting had been quite intensive, they decided to have a coffee break. Sipping from the steaming mug in her hands, Charlotte thought about the wider implications and benefits of social media analyses in terms of identifying and understanding stakeholders.

The strategic importance of social media analytics

Social media analytics offered new perspectives on stakeholder constellations in humanitarian conflicts. In this context, a recent incident came to Charlotte's mind. When the ICRC had participated at a humanitarian summit, they had tracked the public discussions around the event. However, based on a Twitter analysis, they had realized that they had overlooked an important stakeholder: an ethnic minority, located at the periphery of the issue cluster. This community had raised its voice against the ICRC and had heavily criticized them. By attending the conference, the ICRC was perceived by them as having endorsed the national government's oppression against members of their minority – this was the group's position and interpretation. "It was a strong signal for us. If we had picked it up beforehand, we would have engaged with that group in order to explain why we were there, and why it was important to be at the table. So, the next time such an event takes place in that country, we know that there's a key group to reach out to. That's the learning", Charlotte thought.

But social media analytics not only helped them to detect unexpected stakeholder concerns. It also enabled the ICRC to identify formerly unknown stakeholders. "If we are blind to a specific group, that's where social media analytics come in. The tool even allows us to anticipate a stakeholders' impact in a predictive sense", Charlotte was telling a colleague of hers during the coffee break.

In addition, the strengths of social media analyses also showed in other contexts. In particular, the ICRC's prototype tool turned out to be a potential game changer in terms of geolocalizing needs expressed by beneficiaries. Knowing whether people in a specific region struggle with food supply or medical care gave the ICRC a certain time advantage and an overview of the situation. Based on their analyses, they were able to get a clear understanding of the most urgent problems in a geographic area. Thus, using social media analytics for stakeholder mining purposes could potentially enable the ICRC to help people in crises more efficiently and in a more targeted manner.

A further advantage could be seen in terms of identifying and understanding influence patterns. In more and more conflicts, there were important stakeholders coming from outside the zone of conflict. That meant even though certain stakeholders were not located within the conflict region, they still could exert a considerable influence. If in the Middle East conflict for instance, clusters of comments were coming from the neighboring or regional countries, the ICRC could then inform the delegations in the related countries and draw their attention to those stakeholders.

In addition, social media had become an effective tool to build stakeholder relationships. As a study on the American Red Cross showed, social media were vital to interacting with a broad spectrum of publics ranging from volunteers to the media, and the community.[2] By conducting a two-way dialogue through Twitter, Facebook or Blogs, the Red Cross was able to provide faster service for the community, increase media coverage, and receive insightful feedback for organizational decision-making. However, when engaging with these audiences, a thorough analysis was indispensable to understand their needs and to communicate in a targeted way. Social media analytics were therefore of crucial relevance.

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When everyone had taken their seats again after the coffee break, Charlotte initiated the discussion on the future of social media analytics at the ICRC. Considering their experiences so far, the team felt that the significance of the 'virtual voices' had shifted over the last years. Since more and more people were connected online, the virtual presence increasingly determined people's offline presence, Charlotte remarked. Thus, not participating in the virtual dialogue could affect the ability to have an impact on

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[2] Briones, R. L., Kuch, B., Fisher Liu, B., & Jin, Y. (2011). Keeping up with the digital age: How the American Red Cross uses social media to build relationships. *Public Relations Review, 37* (1), 37–43.

the ground. Being able to quickly respond to those online conversations, however, required tools to rapidly process data and read trends in uncertain environments. Subsequently, real time analyses would become vital as an additional and supportive decision-making tool, the team was convinced.

Valérie mentioned another interesting aspect. According to her, mastering the huge amount of data and "cutting out the noise" in terms of separating the unimportant from the important information become paramount. "Sometimes, it's like finding the needle in the haystack", she joked. Telling by the way everyone in the room was nodding their heads, Valérie's metaphor hit the point. They all had made similar experiences when it came to handling the information gathered through public sources. Subsequently, there was a broad consensus within the team that dealing with such amounts of data would simply exceed human capacities.

Moreover, as people all around the globe were now able to voice their concerns and get in touch with each other, their social behavior had also changed. As some of Charlotte's team members had observed, a shift regarding who people trusted had also spread to the humanitarian sector. Philipp mentioned an interesting study that the ICRC had recently conducted: Based on a survey among beneficiaries, the organization had examined the use of communication channels in a certain region. It turned out that the great majority of the participants were listening to a local radio station. However, when these individuals had been asked about the information sources that they trust, the ICRC made an unexpected finding: the beneficiaries primarily trusted in the local priest and their neighbors. The radio came last in the credibility ranking. "Hence, we could pass information through this radio and reach many people, but nonetheless, the people wouldn't believe our messages", Philipp concluded. "This is due to the fact that people increasingly trust in people like themselves according to research on this field". So, instead of trusting "experts", governments, or NGOs the beneficiaries rather believe in what their peers are saying. "As a consequence, literally everyone can become an influential player nowadays. They can suddenly pop up in the humanitarian ecosystem", Charlotte added. Hence, as influence was not necessarily linked to popularity anymore, social media analytics would most likely gain importance for the ICRC to quickly detect new, formerly unknown players.

Ewan, Head of Public Relations at the ICRC, brought in another interesting aspect regarding communication. Due to his long-term experience in this area, he stated that generating resonance increasingly required identifying channels with a high credibility among particular stakeholder groups. Stakeholder-oriented message framing seemed to become more and more important. Or as Ewan put it in a nutshelll: "If we want to build long-term relationships and attain our operational goals, we need to hit exactly those words that resonate with and that have a certain significance for our stakeholders. And of course, we assess those words in advance to make sure that we shape our language accordingly." Given these developments, the relevance of social media analytics would most likely increase as a means to identify the "trusted" channels and to validate the communication vocabulary.

In the last few years, the ICRC had undergone a significant change in terms of stakeholder communication – most notably in the way they engaged with beneficiaries – often victims of war. Being responsible for empowering beneficiaries with lifesaving information, Philipp knew exactly what he was talking about. In his view, their approach had shifted from *program-driven to stakeholder-driven communication*.

For a long time, the ICRC's communication had been attached to a specific mission program. While building infrastructure in a village, the ICRC had provided information on how to wash hands to prevent diseases or how to use sanitary facilities. Yet, in terms of improving their accountability, The ICRC wanted to go beyond this program-driven information dissemination. It wanted to be more responsive towards beneficiaries' needs and that required to get "closer" to them and to better understand their concerns, interests, and demands. Hence, the ICRC's delegation in Yemen, for instance, had used *WhatsApp as a hotline for beneficiaries to report incidents or request assistance*. Receiving those reports, Charlotte's team at the headquarters then clustered the most frequent and recurring messages

and shared it with the delegation on-site. The most urgent messages, such as requests for lifesaving assistance, however, were immediately redirected to the field. Additionally, the ICRC was using a broad range of further social platforms such as Twitter to learn about beneficiaries' concerns. "But sometimes, of course, it's difficult to meet all these expectations and to answer all the questions posed. What would you suggest to someone who asks you how to return back home? Or what would you advise a migrant who's worried whether his kids get access to education. In such cases, we may refer to other humanitarian organizations that are specialized in these fields", Philipp explained. Listening to his explanations, the team became aware of how hard it would be to handle all the needs expressed by beneficiaries without the help of social media analytics.

Figure 1: The ICRC in Yemen used WhatsApp as a hotline for beneficiaries[3]

Another aspect worth noticing was the media's role in humanitarian crises. In this context, there was a trend that deeply worried Ewan. On the one hand, learning about conflicts – like the intensification of the Syrian civil war in Aleppo – were increasingly media-driven. At the same time however, the media were more and more absent from the frontline. Colleagues from delegations all around the globe portrayed the same picture: journalists were no longer on the ground in many of these areas. "As a consequence, they rely on information coming from the field and being transmitted in real-time, e.g. via social media", Ewan explained to his colleagues. Since the media were increasingly absent from the frontline, social media had become their primary information source. Hence, social media analytics would gain importance as it enabled the ICRC to track debates and strengthen its position as a communicator.

Reflecting on all these strategic issues, Charlotte and her team became aware of how important social media analytics would be in the future. Only by being technologically up-to-date, would they be able

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[3] ICRC, The Engine Room, & Block Party (2017). Humanitarian Futures for Messaging Apps, p. 51.

to cope with these developments in the humanitarian ecosystem. The discussion had been interesting and insightful, but there were also operational issues to address. Their meeting time was almost up and they needed to come to an end and define who would inform the delegation about the social media findings. Valérie promised to immediately submit the report to her colleagues in the field.

After the meeting was finished, the room quickly emptied as everyone was heading back to their desks. Charlotte, however, stood up and decided to go for a brief walk outside. Many thoughts ran through her mind and she wanted to clear her mind before picking up her work again. Mulling over the inputs from her team, she thought about the challenges that their social media based stakeholder mining had to tackle. What worried her was the actionability of the insights gathered through social media analytics. Oftentimes, she and her team had experienced that applying those findings had been trickier than they thought – especially when it came to integrating this knowledge into the various humanitarian programs. There were still some boundaries between stakeholder mining and engagement. Charlotte wondered: "Why are we sometimes still struggling with making social media based insights actionable? What adaptions would be necessary to better support our delegations and to help them cutting down their daily work load? To answer these questions, Charlotte perhaps had to rethink the ICRC's entire stakeholder management process.

Measuring stakeholder engagement and resonance

Engaging with stakeholders and measuring the performance of the ICRC's communication was a different challenge from just identifying stakeholders. Charlotte knew this and thought about both issues more in-depth now. By interacting with their stakeholders, the ICRC sought to fulfil its mission and position itself as an impartial humanitarian organization. The ICRC often needed to respond to conflicts whenever they arose: reacting to *upcoming crises and incidents was crucial to render their humanitarian aid visibl*e. This also manifested in the Syrian civil war. The ICRC's media monitoring showed that the ICRC was the most mentioned humanitarian organization during the culmination of the civil war crisis in Aleppo in December 2016.

Yet, the ICRC's communication team also strived for a more *proactive, strategic approach*. The "Ramadan message of peace"[4] illustrated this well: Some time ago, the ICRC's president, Peter Maurer, had publicly addressed the parties in the armed conflicts in the Middle East, calling upon them to respect the law of war. To make sure that the communication would reach its audiences, the ICRC had targeted its communication to specific media and digital channels whom it believed were likely to be followed by these armed parties. Moreover, Charlotte and her team defined a list of key contacts and key themes where the ICRC wanted to be present. Thus, on the whole, proactive and reactive communication were not two separate or completely opposite strands of engaging with stakeholders, but rather two sides of the same coin.

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[4] See here for "Ramadan message of peace": https://avarchives.icrc.org/Film/19183

TRAK. ICRC Visibility Dashboard. W13 - 27 March to 2 April 2017

The visibility in traditional media was driven by Colombia with four new handovers of underage fighters by the FARC. The ICRC's st
the hunger crisis appeal were still quoted in several media outlets, especially regarding Yemen. South Sudan was another context w
positioned with the food distribution, as well as RFL through a CBS report.

🏷 colombie, soudan du sud, yémen, arme nucléaire, cicr, visibility

Informations supplémentaires

Nombre de pages   2 (please download before printing)

CIM_CORP_TRAK– ICRC Media Coverage

Dashboard: ICRC and priority contexts in the news[1]   Week 13: 27 March to 2 April 2017

	CONTEXTS & ISSUES (COM/PR Public com. strategy +new crises)			Last week	ICRC	
1	Syria	1696	➡	1746	Colombia. Peace process/Minors released (Field NRs)	13
2	Iraq	966	⬆	775	Yemen. Humanitarian crisis/Hunger/Access	10
3	Colombia	815	⬆	290	South Sudan. Food distribution; RFL	5
4	Ukraine	765	⬇	1017	Food crisis. Funding	2
5	Israel & OT	575	⬆	448	Ukraine. Detention; Civilians/Humanitarian aid	2
6	Afghanistan	314	⬇	353	Iraq. Mosul/Civilians	2

Figure 2: ICRC's internal dashboard provides an overview of the organization's visibility in traditional media

To keep the overview, the ICRC also monitored their stakeholder management. By considering a broad range of different sources, Charlotte's team was able to gather a rich picture of all global activities. Their reporting system entailed feedback from the field, quantitative data, such as the number of retweets or media clippings, and anecdotes. The latter referred to situations when, for example, an ambassador visited the ICRC and referred to media coverage that the ICRC had generated. Such moments revealed a direct dependence between what the ICRC had said publicly and what was discussed bilaterally. Thus, those talks served as important indicators showing that the ICRC's humanitarian public engagement was resonating with their stakeholders.

When thinking about the challenges to make social media insights actionable, one possible explanation, Charlotte thought, was also related to the *ICRC's organizational structure and the agility to react to incidents*. Since influential players were more and more coming from outside of the conflict zones, stakeholder networks increasingly extended beyond national boundaries. However, as the ICRC was structured in national and regional delegations, it could not always react quickly. Coordination was required among the delegations to elaborate an appropriate engagement strategy and align actions. Consequently, this could delay the implementation of insights gathered from social media analyses.

A further reason could lie in the current *visual practices* of the ICRC. Even though Charlotte's team had a sophisticated approach when it came to combining proactive and reactive communication, the ICRC did not use mapping tools to systematically visualize engagement strategies. "People were still overwhelmed with the massive amount of information generated through social media analyses. And therefore, we have to make this information very pertinent and very accessible", Charlotte thought. Thus, having a mapping tool would perhaps facilitate the application of findings from social media analyses. "Mappings could be particularly interesting when we don't have physical contact, when we're not physically present", Charlotte assumed. It would probably help them to get a more in-depth understanding of the stakeholder constellations and to derive a fitting engagement approach. So far

however, they had used mapping approaches more in ad-hoc manner, although at times even at the highest level, i.e. for briefing the ICRC president about a stakeholder constellation.

Last but not least, another aspect struck Charlotte: their *reporting system*. Although the ICRC considered different sources to measure their stakeholder management performance, they didn't have a system that integrated qualitative and quantitative information. Charlotte recalled that her colleague Philipp recently addressed this issue in a meeting: "We are trying to get more systematic, more scientific. We have a clear mission and objectives related to it. So we know why we communicate. But to improve our performance, we need to introduce a revised measuring system that links quantitative and qualitative impacts." He had been right, Charlotte concluded. As the ICRC was not yet able to fully measure the performance of social media based stakeholder mining, their tool probably remained a black box for many delegations. Maybe this could be changed by documenting the benefit of the tool more systematically.

Investing in the digital future

After her stroll around the ICRC campus, Charlotte's mind was made up: To use the full potential of social media analytics, she and her team needed to develop their infrastructure and improve the actionability of the gathered insights. Achieving these goals, however, would not only require their personal effort, but most likely also financial resources. They had to invest in their prototype tool to keep it cutting-edge and also to extend its capacity by using it in relation to more contexts.

Furthermore, to stay ahead of the technological developments shaping humanitarian aid in the 21st century, advancing social media analytics would not be enough in the long-run, Charlotte figured. Given the fact that stakeholders' interconnectedness had been increasing at an incredibly fast pace, the ICRC also needed to extend its expertise in handling big data. Thus, Charlotte was convinced that big data analytics would more and more gain strategic relevance in terms of providing the information necessary to manage the volatile environment characterizing the humanitarian sector. "In the future, the ICRC's mission fulfillment will, to a growing extent, depend on our data processing capabilities", she reasoned. Based on this insight, Charlotte realized that she needed a clear and thorough strategy to convince her organization to champion big data analytics. She hence sat down at her desk, switched on her laptop and started to write a proposal, outlining the rationale for an extension of ICRC's big data analytics capability to be able to use it more widely. Right at the next Directorate meeting she would hand it in, Charlotte decided.

CASE QUESTIONS

1. **After taking a quick coffee break, Charlotte met the ICRC's President in the elevator. "What are you working on?", he asked her. Charlotte replied that she was building up the ICRC's social media capabilities. "Sounds interesting, tell me more about it", the President said.**

   You have 30 seconds time: tell the ICRC President about the most important developments of social media analytics at the ICRC and explain what your goals are.

2. **Reflect on the relevance of building up social media analytics capabilities in-house: Argue why social media analytics should not be left as an outsourced service.**

3. **When examining big data, we can differentiate between three types of data: user-related data (e.g. personal characteristics, preferences, level of activity), content-related data (e.g. topics, ideas, length & style of a contribution), and metadata (e.g. resonance of a contribution in terms of likes, comments, retweets, feedback)[5]. With regard to the ICRC's mission, mention for each of these three types of data which information could be useful to gain a better understanding of humanitarian crises?**

4. **Put yourself in Charlotte's place and convince the ICRC's Directorate of big data analytics' <u>strategic</u> relevance. Argue why the ICRC needs to advance big data analytics and use it more widely. In other words, make a compelling business case for the strategic importance of analytics. More specifically:**
   a) Delineate *why* the ICRC should extend big data analytics for stakeholder mining purposes (identifying and understanding stakeholders).
   b) Explain to what extent big data analytics could be *used* to drive stakeholder mapping and engagement.
   c) Describe the ICRC's most important *challenges* regarding the use of big data analytics and explain how you want to overcome them.
   d) Outline the potential of social media analytics by describing "*secondary uses*": which other purposes could social media analytics in general be used at the ICRC?
   e) Provide an outlook on the development of social media analytics at the ICRC presenting a "maturity model" of different attainment levels. Describe different *maturity levels* of stakeholder mining and the related tools used to identify & understand stakeholders at each stage.

5. **How could the ICRC convince the delegations in the field of the benefits of big data analytics? How could the headquarters communicate the value added for delegations' activities?**

6. **How could the ICRC ensure the actionability of insights generated through big data analytics?**

7. **What organizational changes could be helpful to increase ICRC's agility?**

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[5] Blohm, I., Leimeister, J. M., & Krcmar, H. (2013). Crowdsourcing: How to benefit from (too) many great ideas. *MIS Quarterly Executive*, *12*(4), 199–211.

8. **Which indicators should be part of the communication team's stakeholder dashboard? Define and explain 3-4 such indicators for crisis and non-crisis contexts and show how they could be visualized.**

9. **To what extent could visualizations be helpful to break down complexity and make the insights from social media analytics more accessible? What models of stakeholder mapping could be used?**

10. **Can you research the latest developments in social media analytics and show how they could (positively or negatively) affect the ICRC's efforts in stakeholder mining and management?**

Social Media and Twitter Analytics

Closely related to the increasing proliferation of Internet access, social media have shown a rapid growth of user accounts. Social media can be defined as Internet-based applications that enable users to create, access, and exchange content. Given the fact that these networks allow for a vast spectrum of communication forms, ranging from commenting, liking, following, sharing, downloading, or rating, social media data are characterized by their high volume and their variety. Social media analytics provide tools to support effective decision-making by aggregating and analyzing these varied contributions. This involves the automated collection, analysis, and interpretation of data. Depending on the respective goals or research questions, social media analytics can be performed at the following seven levels: texts, actions, networks, hyperlinks, apps, search engines, and location data(Khan, 2015, p. 94)(Khan, 2015, p. 94)(Khan, 2015, p. 94)(Khan, 2015, p. 94)(Khan, 2015, p. 94)(Khan, 2015, p. 94).

Besides other networks like Facebook or Youtube, Twitter is one of the most popular social media platforms. Being limited to 140 characters, tweets are comprised of various metadata such as usernames, timestamps, follower and following counts, geo-location coordinates, hashtags, retweets (users re-posting others' tweets), @mentions (communications between users), and hyperlinks. Combining the content of tweets with metadata provides a rich and insightful basis for analyses.
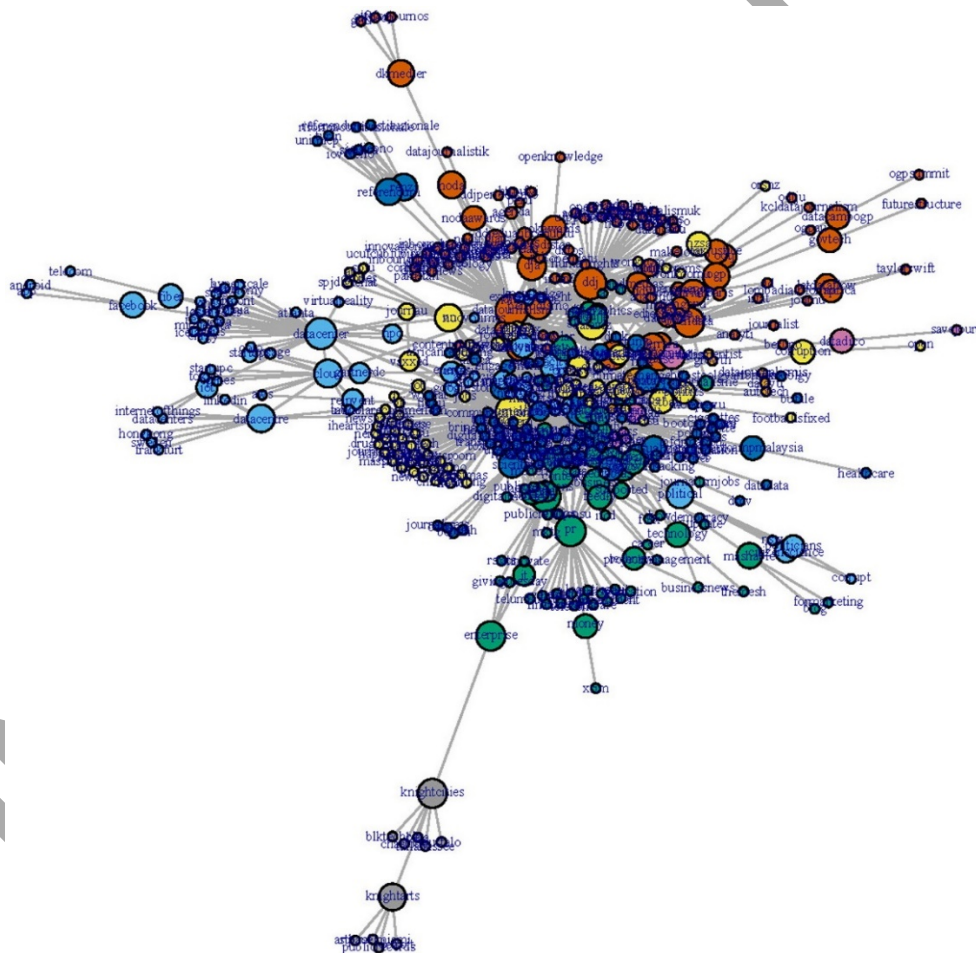

Figure 3: Example of a Twitter analysis (Hashtag Co-Occurence Network) (Zhang, 2017, p. 17)

Thereby, the broad variety of Twitter APIs (Application Programming Interfaces; i.e. technologies through which data can be accessed) is also mirrored in the growing number of tools and software used for analytics purposes. In order to classify the resulting multitude of approaches, Brooker, Barnett, and Cribbin provide a useful framework that differentiates between two dimensions: the *data collection strategy* and the *analytic mode*.

The former term refers to the way Twitter data are collected – either by conducting a query keyword search to capture the semantic content of an issue (semantically-driven strategy) or by tracking specific user groups to find out more about their concerns, interests, or behaviors (user-driven strategy). Thereby, when deploying semantically-driven strategies, sentiment analyses are particularly suited to examine perceptions of and connotations associated with a specific issue. Social network analysis, in turn, is considered a proper foundation for user-driven strategies since it allows to investigate actors' interconnectedness, influence patterns, and communication flows.

The second dimension of Brooker, Barnett, and Cribbin's framework denotes the way Twitter data are analyzed, that is, whether the gathered data are examined from a time-dependent, event-based perspective (temporal analysis) or a non-time-dependent, topic-based perspective (corpus analysis). When conducting temporal analyses, visualizations like timelines are often used to depict how particular incidents evolve over time. With regard to corpus analyses, in contrast, it is suggested to build thematic clusters in terms of grouping together words with the same or similar semantics. This enables to identify overarching concepts inherent to stakeholders' communication.

| | | Data analysis | |
		Temporal analysis (event based)	**Corpus analysis (topic based)**
Data capture	**Semantically driven (query keyword)**	How does a narrative about a semantic entity (i.e. word, hashtags, etc.) unfold over time?	How is talk around a semantic entity organised topically (and sub-topically)?
	User driven (User following)	How do users' language and tweeting practices change (or not) over time?	What topics are a specific group of users tweeting about (and how are they doing it)?

Figure 4: Combination of different strategies to collect and analyze Twitter data (Brooker, Barnett, & Cribbin, 2016, p. 5).

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