

# Trustworthiness Perceptions of Social Media Resources Named after a Crisis Event

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People often create social media accounts and pages named after crisis events. We call such accounts and pages Crisis Named Resources (CNRs). CNRs share information about crisis events and are followed by many. Yet, they also appear suddenly (at crisis onset) and in most cases, the owners are unknown. Thus, it can be challenging for audiences in particular to know whether to trust (or not trust) these CNRs and the information they provide. In this study, we conducted surveys and interviews with members of the public and experts in crisis informatics, emergency response, and communication studies to evaluate the trustworthiness of CNRs named after the 2017 Hurricane Irma. Findings showed that participants evaluated trustworthiness based on their perceptions of a CNR's content, information source, profile, and owner. Findings also show that if people perceive that a CNR owner has prior experience in crisis response, can help the public to respond to the event, understands the situation, has the best interests of affected individuals in mind, or will correct misinformation, they tend to trust that CNR. Participant demographics and expertise showed no effect on perceptions of trustworthiness.

CCS Concepts: • **Human-centered computing** ~ **Human computer interaction (HCI)** ~ **Empirical studies in HCI**

**KEYWORDS:** Crisis Informatics; Trust; Social Media.

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## 1 INTRODUCTION

People often use social media during crisis events to exchange information, to ask for and offer help, and to show solidarity [1, 28, 39]. One way that people facilitate information exchange through social media is by creating Crisis Named Resources (or CNRs). CNRs are social media pages and accounts named after a crisis event. Prior work referred to these resources as Event Based Resources [10]. Though the concept remains the same, we have changed the name to CNRs because we find this name more accurate. They are easily identifiable and visible due to their names and they share information, as well as support and help crisis affected individuals [10]. In most cases, the owners of these resources are unknown. Yet, CNRs are often followed and liked by a large number of people [11], which can be an indicator of broader social influence and lead to more amplification of its content [4]. This could be problematic in the case of CNRs, where information often comes from an unknown source, making it hard to evaluate a CNR's trustworthiness.

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While social media can be effective communication tools for managing and responding to crisis events [9, 24], at times, they can also contribute to misinformation (sometimes referred to as “fake news”) or false rumors [34, 51]. It is critical that the information sources people find on social media are credible and the information is accurate because unreliable and inaccurate information can have adverse consequences for crisis-affected individuals [27]. Therefore, it is important to identify who contributes to online crisis information, what they contribute, and how people evaluate the trustworthiness of these contributions.

This paper determines whether people trust CNRs and the factors that influence these trustworthiness evaluations. CNRs present a unique case study because they are created quickly after an event occurs, thus their credibility cannot be evaluated based on previous posts and past engagements like other types of social media. Moreover, CNRs are often the first resources found when searching online because they are named after the event, which means they tend to attract more attention than other social media sources. Crisis events create a need for immediate and accurate information and require sensemaking from both disaster-affected people and decision makers [43]. This research aids sensemaking by identifying the factors that make a crisis-information provider seem trustworthy. We investigate the following two research questions:

- RQ1: Do people (specifically experts and members of the public) trust CNRs?
- RQ2: Which factors influence the trustworthiness of CNRs?

To answer these research questions, we conducted 105 surveys and 17 semi-structured interviews with members of the public and experts in crisis informatics, communication studies, and emergency response. In both studies, participants were shown 2017 Hurricane Irma CNRs and were asked to evaluate the trustworthiness of these resources. Our analyses reveal that people evaluate the trustworthiness of CNRs based on their perceptions of CNR content, information source, profile, and owner. Though the findings of this study are based on the evaluation of 2017 Hurricane Irma CNRs, they have implications for the broader consumption of social media data, specifically in the identification and reduction of misinformation. Findings can also be useful in developing educational materials to help social media users evaluate online information before acting on or sharing it.

## 2 BACKGROUND

Social media have changed the information landscape for participation in crisis response and recovery activities [38, 39, 42, 50], and they have been used for crisis response during a variety of crisis events worldwide [8, 12, 21, 47, 56]. For example, Latonero and Shklovski reported on the use of social media by emergency response organizations to communicate with the public and to collect valuable information using the public as a source of information on the ground [26]. Dufty also showed how social media have the potential to assist in building community disaster resilience [13]. More recently, Simon and colleagues reported on how Twitter became a crucial channel of communication between the government, emergency responders, and the public during the Westgate Mall Terror Attack in Kenya [49].

False rumors and misinformation, however, also spread intentionally or unintentionally through social media during crisis events [22, 52, 59]. Gupta and colleagues, for instance, identified 10,350 unique tweets containing fake images during the 2012 Hurricane Sandy [18]. Starbird and colleagues also investigated three rumors spread through social media, which were later found to be false, in the aftermath of the 2013 Boston Marathon Bombings [51]. False rumors and misinformation, could at times, be damaging. Additionally, both official and

unofficial sources use social media to share information which increases noise, and thus also increases uncertainty and difficulty in identifying trustworthy sources of information [20].

There are two primary streams of research that investigate false rumors and misinformation in social media. One stream is concerned with detecting and eliminating false rumor and misinformation [29, 30, 44, 46]. For example, Ma and colleagues proposed a rumor detection approach for microblogging websites, which explores variations in the number of social context features over time [31]. The other stream of research is concerned with understanding how social media are used and evaluated so that we can improve the quality of interactions on social media during a crisis event. Flintham and colleagues, recently conducted a survey and a think-aloud study to understand how people engage with news on social media [17]. In their study, they asked participants to look through a Facebook page and find the fake news. Their findings showed that people evaluated news based on source reliability and information content. They also found that when a story seemed to be of no or little interest to participants, they were not interested in figuring out whether it was true or not.

Our contribution in this space is to better understand how people determine the trustworthiness of CNRs. CNRs play diverse roles in crisis response, such as, raising money, expressing support and personal opinions and experiences, and providing information and help for crisis-affected individuals [11]. Yet, in most cases, the owners of these resources and their motivations are unknown [10, 11]. Thus, it is challenging to categorize these resources as trustworthy or untrustworthy sources of information.

## 2.1 Online Trust

A major focus of our study is on online trust. Online trust has been defined differently depending on the context. Most existing literature on online trust is grounded in e-business, particularly online shopping [5, 6, 45, 55]. Trust has also been studied around crisis events. For instance, Hagar [19] conducted interviews with farmers on their information seeking and use during the UK foot and mouth disease crisis and found that information from local sources (except local government) was generally trusted, while information from central government was not trusted. Endsley and colleagues [14] also examined the factors that affect perception of credibility of crisis information about natural disasters. Their study showed that people's perceptions of the credibility of crisis information are based on the source of information. They found that people consider the printed news to be the most credible source of information. Another study by Plotnick and colleagues [42] explored people's practices when assessing trustworthiness of social media posts. Their findings demonstrated that the trustworthiness of the sender is deemed to be the strongest indicator of trustworthiness of social media posts. All the above-mentioned studies find that the trustworthiness of information depends on who shares it, which has interesting implications for CNRs, as in most cases, we do not know who is sharing the information and why [10, 11].

Our definition of trust aligns most with Pee and Lee [40], who defined trust as "the extent to which one feels secure and comfortable about relying on the information on social media." In addition, we also build on the work of Mayer and colleagues [33], who showed ability, benevolence, and integrity to be the three main characteristics of a trustee (a trusted party). They defined ability as the group of skills, competencies, and characteristics that make a party influential in a specific domain, benevolence as the extent to which a trustee is believed to work in the trustor's interests, and integrity as the extent to which a trustee adheres to principles acceptable by the trustor. We used these two theories to construct our interview and survey questions.

## 2.2 Crisis Sensemaking

This study is also grounded in the crisis sensemaking literature, which analyzes how people use available information to make decisions during a crisis [58]. Past research reveals that as soon as people realize a crisis has occurred or receive initial information about a crisis, many of them search for further information or confirmation [54, 57]. This information seeking often leads people to reevaluate the danger. Our focus is on crisis sensemaking using social media. Stieglitz and colleagues analyzed tweets during the 2016 Brussels attack and identified sensemaking actors and their contributions to the sensemaking process [53]. More recently, Mirbabaie and Youn analyzed tweets during the 2016 Munich shooting and the 2016 Berlin terrorist attack. Their findings revealed that people perform different sensemaking activities at different stages of the crisis. Also, emergency services play a crucial role in sensemaking at an early stage of the crisis [35]. In this study, we seek to understand how people evaluate the information found on CNRs. However, we also acknowledge that we had people evaluate data from a crisis event post hoc and thus people might have responded differently than they would have during a live, ongoing crisis.

## 3 METHODS

We conducted an interview and survey study concurrently to better understand how people evaluate the trustworthiness of CNRs. The same questionnaire was used for both studies, however the interview questions were open-ended (participants were prompted to provide reasons for their evaluations) while the survey questions were closed-ended. Interviews allowed for an in-depth analysis of the factors that influence participants' perceptions of CNR trustworthiness, while surveys allowed for an in-breadth understanding.

### 3.1 Research Participants

Participants for both studies included members of the public and experts in crisis informatics, communication studies, and emergency response. We included these two types of participants because we wanted to see if they perceived trustworthiness differently. Members of the public were 18 years or older and had a profile on either Facebook or Twitter; presence on either of these sites provided some assurance of social media experience. Experts in crisis informatics and communication studies conducted research in these areas. Experts in emergency response had experience with crisis response (e.g., individuals from a fire or police department). We obtained Institutional Review Board approval for both studies.

### 3.2 Interview Recruitment and Demographics

We contacted interview participants via emails, Facebook, and Twitter. Members of the public were recruited using snowball sampling. Experts in crisis informatics and emergency response were recruited through prior research contacts, while experts in communication studies were identified and recruited through Google searches of top or near-by institutions. We conducted 17 interviews between March and June of 2018 (see Table 1). Of the 17 interviewees, 59% were female and 41% were male. About half of the participants (47%) belonged to the age group 35 – 44 and none were older than 55 years of age. More than half (70.5%) of the participants had a graduate degree, which is likely a result of the snowball sampling and recruitment of experts with advanced degrees. The majority (71%) of participants were members of the public because we intentionally recruited more members of the public than experts. Also, while half the

participants (53%) were extremely comfortable with Facebook, only 18% participants were extremely comfortable with Twitter.

### 3.3 Survey Recruitment and Demographics

We posted the survey on our Facebook and Twitter accounts and professional websites and requested people to share our post. We also designed a survey recruitment card to share in-person. We collected 148 survey responses (105 complete responses and 43 incomplete responses) between March and June of 2018. Table 1 contains the survey participants' demographic information for the 105 complete responses. Participants were 50% male and 50% female. Most participants (60%) belonged to the age group 18 – 34, which implies that the opinions expressed in this study may not fairly represent the opinions from all age groups. The majority (85%) of participants were members of the public. Also, while half of the participants (50%) were extremely comfortable with Facebook, only 21% participants were extremely comfortable with Twitter.

### 3.4 Interview and Survey Questionnaire

The same questionnaire was used for both studies and had two blocks. Questions in block I (Table 2) gathered information about trustworthiness perceptions of CNRs. These questions were based on the trust framework of Mayer et al. [33] and Pee & Lee [40] and were asked for each CNR. The first 6 questions in block I asked about the CNR owner's ability (Q1.1 and Q1.2), benevolence (Q1.3 and Q1.4), and integrity (Q1.5 and Q1.6), and required closed-ended responses on a 5-point Likert scale from 'extremely unlikely' to 'extremely likely.' Q1.7 asked participants whether they would trust information from a CNR and required an open-ended response. Questions in block II gathered participant demographics (reported in Table 1).

### 3.5 Study Context

To provide context during interviews and surveys, we asked participants to imagine they were in Florida and had been affected by Hurricane Irma. The 2017 Hurricane Irma served as a prompt for these studies because it was a recent major crisis event at the time of the study and the most intense Atlantic hurricane to strike the United States since Katrina in 2005 [25]. 5.6M people in Florida and 540K people on the Georgia coast were ordered to evacuate, making it one of the nation's largest evacuations [3]. Participants were then told that they were looking for information about how to respond to this event.

### 3.6 Differences between Interview and Survey Studies

Though the interview and survey studies used the same questionnaire and were conducted concurrently, there were differences in their design and execution. Survey participants evaluated 5 CNRs using mostly closed-ended responses through an online survey tool (Qualtrics), while interviewees evaluated 10 CNRs using open-ended responses either in-person or over Skype. We asked interviewees to think aloud while they were evaluating the CNRs. Survey sessions lasted 15 – 20 minutes, while interview sessions lasted 45 – 60 minutes. Finally, the incentive for the two studies differed. Each interviewee was given a \$20 Amazon Gift Card. For the survey, participants could enter a drawing where one won a \$50 Amazon Gift Card.

Table 1: Survey and Interview Participants Demographics

Demographic	Response Options	Interviewees (N = 17)	Survey Participants (N = 105)
Gender	Male	7 (41.1%)	53 (50.4%)
	Female	10 (58.8%)	52 (49.5%)
Age	18 – 24	2 (11.7%)	32 (30.4%)
	25 – 34	3 (17.6%)	31 (29.5%)
	35 – 44	8 (47.0%)	16 (15.2%)
	45 – 54	4 (23.5%)	11 (10.4%)
	55 – 64	-	13 (12.3%)
	65 – 74	-	2 (1.9%)
Highest Level of Education Completed	High school graduate	-	4 (3.8%)
	Some college	2 (11.7%)	19 (18.0%)
	2-year degree	-	7 (6.6%)
	4-year degree	3 (17.6%)	38 (36.1%)
	Master’s degree	7 (41.1%)	24 (22.8%)
Expert	Doctorate	5 (29.4%)	13 (12.3%)
	Yes	5 (29.4%)	17 (16.1%)
Comfort Level Using Facebook	No	12 (70.5%)	88 (84.7%)
	Extremely uncomfortable	-	7 (6.6%)
	Somewhat uncomfortable	2 (11.7%)	8 (7.6%)
	Neither uncomfortable nor comfortable	1 (5.8%)	9 (8.5%)
	Somewhat comfortable	5 (29.4%)	29 (27.6%)
Comfort Level Using Twitter	Extremely comfortable	9 (52.9%)	52 (49.5%)
	Extremely uncomfortable	-	15 (14.2%)
	Somewhat uncomfortable	4 (23.5%)	22 (20.9%)
	Neither uncomfortable nor comfortable	4 (23.5%)	22 (20.9%)
	Somewhat comfortable	6 (35.2%)	24 (22.8%)
	Extremely comfortable	3 (17.6%)	22 (20.9%)

Table 2: Survey and Interview Questionnaire.

Block I: Perception on Trustworthiness of Crisis Named Resources
Q1.1: Do you feel that the owner of this Twitter account (or Facebook page) has prior experience in crisis response?
Q1.2: Do you feel that the owner of this Twitter account (or Facebook page) is capable of helping you respond to Hurricane Irma?
Q1.3: Do you feel that the owner of this Twitter account (or Facebook page) has your best interests in mind?
Q1.4: Do you feel that the owner of this Twitter account (or Facebook page) understands your situation?
Q1.5: Do you feel that the owner of this Twitter account (or Facebook page) will provide misleading information intentionally?
Q1.6: Do you feel that the owner of this Twitter account (or Facebook page) will make efforts to correct any false rumor or misinformation as soon as it comes to his/her notice?
Q1.7: Would you trust the information on this Twitter account (or Facebook page)? Trust is defined as the extent to which you feel secure and comfortable relying on the information.
Yes, because: _____
Maybe, because: _____
No, because: _____

Table 3: CNRs' Name, Description, and Followers.

CNR Name and Description	CNR Follows/ Followers
CNR 1 (Twitter account) – Tweets were written in the first person, as if Hurricane Irma herself had created the account. All tweets were either sarcastic or humorous with frequent political references.	3
CNR 2 (Facebook page) – This page was created by the editor and proprietor of a news media outlet in Florida because she had difficulty finding news and information specific to Key West and the Lower Keys where she had family. The Page owner provided her phone number, email address, and the website and shared many hurricane-related posts, photos, and videos.	13,209
CNR 3 (Facebook page) – This page provided a link to a fundraiser site without stating who owns this page and who is raising the funds, why, and how. It shared many hurricane-related posts and pictures.	4,116
CNR 4 (Facebook page) – This page claimed to be the official page for Hurricane Irma memes, and indeed all posts were memes. Page claimed to be 'just for fun' and it provided a link to a shop that sells hemp wick.	899
CNR 5 (Twitter account) – This account tweeted actively about hurricane-related information during the storm. The account bio showed the owner's location as Florida and provided a link to their Instagram account. It followed the city mayor and people from news stations. CNR 5 also had 8 lists, all related to news stations and weather channels.	167
CNR 6 (Facebook page) ☒ This page claimed to be the official page for the Hurricane Irma Rescue Dispatch Operations. All posts were hurricane-related. The page owners, however, cautioned people that it is not monitored by emergency services and people should call 9-1-1 in a life-threatening emergency.	260
CNR 7 (Twitter account) ☒ This account was created by self-proclaimed weather nerds in Tampa Florida who were tracking Irma 24/7. This account shared photos and videos of the path of Hurricane Irma and its bio provided a link to <a href="http://nhc.noaa.gov">nhc.noaa.gov</a> . It also followed many accounts, most of which were verified accounts and belonged to weather professionals and organizations.	28,591
CNR 8 (Facebook page) – This page shared many hurricane-related posts, photos, and live camera feeds. The owners mentioned that it is not the official page for Hurricane Irma, instead it is a page is to let everyone know the safe points and news regarding the Hurricane.	7,917
CNR 9 (Facebook page) ☒ Despite being named after Hurricane Irma, this page's user handle was named after Hurricane Sandy and it was created in 2012. The page claimed to be the official page of Hurricane Irma and it provided a lot of information about the event.	37,338
CNR 10 (Twitter account) – This account was created in September 2017, but it had no profile picture, no cover picture, no bio, and no location.	7

### 3.7 Selection of CNRs

We identified CNRs by searching for pages and accounts that had “Hurricane Irma” in their name on Facebook and Twitter, a month following Irma’s US landfall. In total, we found 32 Hurricane Irma CNRs: 20 Facebook pages and 12 Twitter accounts. To pick a reasonable number of CNRs that could demonstrate variation in content and still be manageable, we selected 5 Hurricane Irma CNRs (CNRs 1 through 5) for the survey and 10 (CNRs 1 through 10) for the interviews. We varied the CNRs along several dimensions (see Table 3): social media platform, purpose, number of follows or followers, completeness of profile, and account activity. We chose

these variations to ensure that study participants were shown the different kinds of CNRs that are created around events.

When retrieving these CNRs, we captured screenshots of these resources as opposed to the actual on-line pages, so that all interviewees and survey participants would see the same information. Otherwise, participants would see different content depending on how these resources change over time and findings may not be comparable. The downside of static screenshots was that participants were restricted in their ability to click on links and photos, which they could have done on actual on-line pages. Table 3 summarizes the selected CNRs. The number of account followers (Twitter) and page follows (Facebook) for these CNRs are as of December 20, 2017. All CNR names and descriptions have been anonymized.

## 4 DATA ANALYSIS

For qualitative analysis, we used affinity diagrams [7]. We first read all the interview transcriptions and open-ended survey responses. We identified common themes and assigned codes to them. These codes were then merged into categories. The codebook was consolidated and calibrated through weekly discussions and deliberation. Once the codebook was finalized, we applied it to the participant interviews and open-ended survey responses and resolved all disagreements to reach consensus on our code applications. In some cases, multiple codes were applied to an excerpt.

For quantitative analysis, we first exported the responses from Qualtrics and cleaned the data by removing unnecessary columns, redundant information, and rows with incomplete responses. We next coded the survey responses. For instance, if a participant selected that he or she did not trust a CNR, we coded it as 0. Similarly, “maybe trust” and “trust” responses were coded as 1 and 2 respectively. We also coded “extremely unlikely,” “somewhat unlikely,” “neither unlikely nor likely,” “somewhat likely”, and “extremely likely” responses as 0, 1, 2, 3, and 4 respectively. Next, we analyzed interview and survey closed-ended responses on the CNRs. Finally, we determined correlations between the participants demographics and trustworthiness of each CNR.

## 5 FINDINGS

We organize our findings in three subsections: 1) trustworthiness of the selected CNRs, 2) factors that influence the trustworthiness of CNRs, and 3) participant demographics and trustworthiness of CNRs.

### 5.1 Trustworthiness of CNRs

We started our analysis by analyzing how each CNR was evaluated on trustworthiness by participants. Our findings (Figure 1 and Figure 2) show that most participants did not trust CNRs 1, 3, 4, 9, and 10, while most participants trusted CNRs 5 and 7. CNRs 2, 6, and 8 received mixed reactions from participants. We further explore these findings by reporting on the perceived trustworthiness of each CNR.

#### 5.1.1 CNRs That Most Participants Did Not Trust

CNR 1. This CNR was a Twitter account, where tweets were written in the first person, as if Hurricane Irma herself had created the account. It had 13 tweets; all tweets were either sarcastic or humorous with frequent political references. It had only three followers and one of the reasons participants did not trust this account was its low popularity and lack of engagement. This CNR appears to be an account that tried to gain attention through humor but failed to gain

virality. Many participants felt the content was not relevant. They also doubted that the owner was trying to help crisis-affected individuals and questioned the identity and intentions of the owner:

“The account author is more interested in pushing a political agenda than providing any real information.” (S<sup>1</sup> 25)

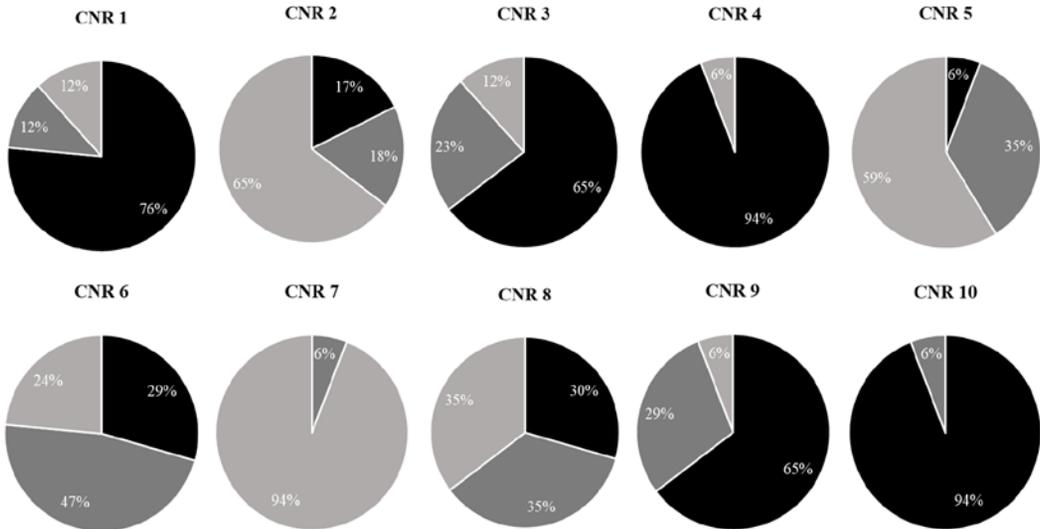


Figure 1: Interview Participants' Perceptions of Trustworthiness of CNRs (Black, dark Grey and light Grey color represent no, maybe, and yes respectively).

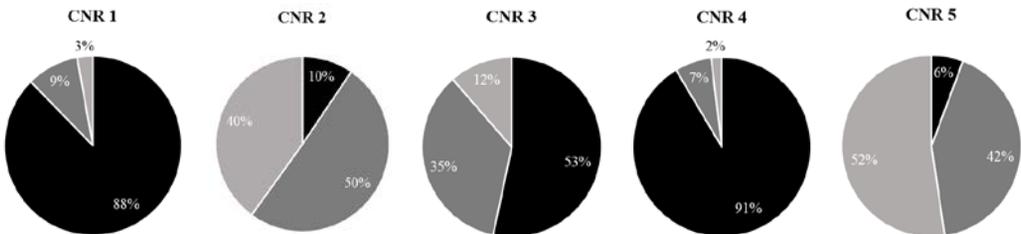


Figure 2: Survey Participants' Perceptions of Trustworthiness of CNRs (Black, dark Grey and light Grey color represent no, maybe, and yes respectively).

CNR 3. This Facebook page provided a link to a fundraiser site without stating who owned the page or who was raising the funds, why, and how. Many participants questioned the intentions of the owners and expressed concern that the owners did not share information about themselves. Finally, many interviewees found the content not useful and poor quality:

<sup>1</sup> S 25 indicates Survey Participant 25.

“They don’t provide any sources, the names of the charities and pages are excessively long, I would want verification of how the funds are planned to be used. This looks like it could be someone taking advantage of the situation.” (S 57)

CNR 4. This Facebook page claimed to be the official page for Hurricane Irma memes, and indeed all posts were memes. Similar to CNR 1, many participants found the content not useful for responding to a crisis. This is likely because as the owners describe, the page was created ‘just for fun.’ This leads us to ask a bigger question: Is creating a CNR for fun unacceptable? Humor can be a way that people cope with a stressful or difficult event. Is it then wise to dismiss humor or satire as untrustworthy? There were also concerns that the owners did not disclose their identity.

“This site is making jokes and memes about the hurricane, not intending to help or disseminate information.” (S 11)

CNR 9. Despite being named after Hurricane Irma, this Facebook page’s user handle was named after Hurricane Sandy and it was created in 2012. The page claimed to be the official page of Hurricane Irma and it provided a lot of information about the event. This CNR was shown only to interviewees. Many interviewees questioned the intentions of the owners, found the content unhelpful, or felt that the profile lacked professionalism.

“I would, very quickly, pass this page up because there is no helpful information, there is nothing here for me that’s useful, so I feel like I would be wasting my time if I stay on this page.” (I<sup>2</sup> 03)

Table 4: Interview and Survey Participants’ Average Perceptions of Factors that Influence the Trustworthiness of CNRs (“Did not Trust” Perception range 0 (Extremely Unlikely) – 4 (Extremely Likely)).

CNRs	CNR Owners’ Ability		CNR Owners’ Benevolence		CNR Owners’ Integrity	
	Have Prior Experience	Are Able to Help	Have Best Interest	Understand Situation	Will Provide Misinformation	Will Correct Misinformation
CNR 1 (I <sup>3</sup> )	0.54	0.23	0.62	0.54	2.69	0.62
CNR 1 (S <sup>4</sup> )	0.34	0.32	0.70	0.55	2.61	0.77
CNR 3 (I)	1.00	0.42	1.08	1.75	2.50	0.92
CNR 3 (S)	0.84	0.61	0.98	1.16	2.29	1.21
CNR 4 (I)	0.19	0.25	0.56	0.56	2.50	0.50
CNR 4 (S)	0.25	0.16	0.66	0.48	2.59	0.52
CNR 9 (I)	2.00	1.36	1.64	1.45	1.73	0.73
CNR 10 (I)	0.50	0.19	0.50	0.31	1.94	1.00

CNR 10. This Twitter account had no profile picture, cover picture, bio, or location. Like CNR 9, this CNR was shown only to interviewees. Most interviewees did not trust it because the owner did not post or disclose their identity. This account had only seven followers, which is likely because its owners’ neither completed their profile nor posted anything. CNR 10 is

<sup>2</sup> I 03 indicates Interview Participant 03.

<sup>3</sup> I indicates Interview Study.

<sup>4</sup> S indicates Survey Study.

different from CNR 1; while CNR 1 seems to be a failed attempt for virality, reasons for creating CNR 10 and not using it are unknown.

“There is nothing there that would create the credibility I would need to trust it. It is not clear what is it about, or what is it trying to do. It doesn’t have followers. It doesn’t even have a picture, nothing that would help create a sense of what it is trying to do, and why I might be inclined to trust it. Given that..., I tend not to trust it.” (I 15).

We further analyzed interview and survey responses on the CNRs that most participants did not trust. Table 4 shows participants’ average perceptions of factors that influence the trustworthiness of CNRs 1, 3, 4, 9, and 10. Lower averages ( $\leq 2$ ) were found for all categories except the “will provide misinformation” category, which trended a little higher (ranging from 1.73-2.69).

#### 5.1.2 CNRs That Most Participants Trusted.

CNR 5. This Twitter account tweeted actively about the hurricane. The account bio showed the owner’s location as Florida and provided a link to the owner’s Instagram account. It followed the city mayor and news stations and had eight lists, all related to news stations and weather channels. Most interviewees and survey participants trusted this CNR. Participants liked that the CNR appeared to provide relevant and useful information and that the owner was local. In addition, the CNR seemed more credible because it followed and linked to known, authoritative information sources.

“They are offering advice through other resources that are more reliable. They have a professional tone and offer information.” (S 38)

CNR 7. This Twitter account was created by self-proclaimed weather nerds in Tampa, Florida who were tracking Irma. This account shared photos and videos of the path of Hurricane Irma and its bio provided a link to [nhc.noaa.gov](http://nhc.noaa.gov). It also followed many accounts, most of which were verified accounts that belonged to weather professionals and organizations. Among all the CNRs, interviewees found it to be the most trustworthy CNR (94.1% interviewees trusted this CNR, see Figure 1). There was only one interviewee, an emergency response expert, who said she would maybe trust this account. She explained that she would trust only the content that the owners are getting from National Oceanic and Atmospheric Administration. Only interview participants saw this account. Many interviewees felt the information was highly relevant and they also felt the owner created it with the intent of helping crisis-affected individuals. Moreover, they noted that this CNR had a high number of followers (28,591). Finally, interviewees felt that the owners connected to and referred, recommended, or rebroadcasted the content from known, reliable information sources.

“It links to a government site, has a lot of followers, and the information they are providing seems to be focused primarily on informing. So, yeah, I will be inclined to trust it.” (I 15)

We further analyzed interview and survey responses on the CNRs that most participants trusted. Table 5 shows participants’ average perceptions of factors that influence the trustworthiness of CNRs 5 and 7. Higher averages ( $\geq 3.10$ ) were found for all the categories except the “will provide misinformation” category which was low ( $\sim 0$ ). Also, none of our interview participants felt that CNRs 5 and 7 could share misinformation intentionally.

Table 5: Interview and Survey Participants' Average Perceptions of Factors that Influence the Trustworthiness of CNRs ("Trust" Perception range 0 (Extremely Unlikely) – 4 (Extremely Likely)).

CNRs	CNR Owners' Ability		CNR Owners' Benevolence		CNR Owners' Integrity	
	Have Prior Experience	Are Able to Help	Have Best Interest	Understand Situation	Will Provide Misinformation	Will Correct Misinformation
CNR 5 (I)	3.30	3.10	3.60	3.60	0.00	3.90
CNR 5 (S)	3.35	3.40	3.44	3.24	0.24	3.53
CNR 7 (I)	3.38	3.44	3.81	3.81	0.00	3.44

### 5.1.3 CNRs That Received Mixed Trustworthiness Evaluations.

CNR 6. This Facebook page claimed to be the official page for the Hurricane Irma Rescue Dispatch Operations. All posts were hurricane-related. The page owners also cautioned people that it was not monitored by emergency services and people should call 9-1-1 in a life-threatening emergency. It had 260 followers. This CNR was only shown to interview participants. About half (47%) of interviewees were unsure about whether they should trust this CNR and said that they would trust it to some extent. Many interviewees questioned if the content found on the CNR was relevant, useful, or was sufficient in quantity. They also often expressed their thoughts on the popularity and professionalism of this CNR.

"Hmm, you know, with such a small number of people liking it, there are only two reviews. It doesn't seem like a bad page, but it's one of those things where I need more sources to verify it." (I 09)

CNR 8. This Facebook page shared hurricane-related posts, photos, and live camera feeds. The owners of this page clearly mentioned that it is not the official page for Hurricane Irma, instead it is a page to let everyone know about shelters and news regarding the Hurricane. Again, this page was shown only to interview participants. While 35% of the interviewees said they would trust it, 35% said they would trust it only to some extent. Of the interviewees who said they would maybe trust this CNR, many felt that the content found on this CNR was not useful. They also expressed concerns about the authenticity of this CNR, particularly around a lack of references to other known information sources.

"Depending on the information that they are sharing, since it looks like, it's generally from different sources, but maybe not, maybe not sources that they do not explain from where they come from necessarily, some of the videos are being labelled. I think if they shared something that was from another source that seems reputable, then I would trust it, but otherwise I wouldn't be sure." (I 07)

Table 6: Interviewees' Average Perceptions of Factors that Influence the Trustworthiness of CNRs ("Maybe Trust" Perception range 0 (Extremely Unlikely) – 4 (Extremely Likely)).

CNRs	CNR Owners' Ability		CNR Owners' Benevolence		CNR Owners' Integrity	
	Have Prior Experience	Are Able to Help	Have Best Interest	Understand Situation	Will Provide Misinformation	Will Correct Misinformation
CNR 6	2.00	2.00	3.83	3.66	0.16	3.16
CNR 8	1.33	3.00	3.50	2.83	0.66	2.00

Overall, lower averages were found for CNRs 6 and 8 owners' prior experience in crisis response (see Table 6). For CNR 6, participants questioned its owner's prior experience in crisis

response and ability to help. For CNR 8, participants felt that its owners had little prior experience in crisis response and were less likely to correct misinformation.

#### 5.1.4 CNRs That Received Different Trustworthiness Evaluations between Interviewees and Survey Participants.

CNR 2. This Facebook page was created by the editor and proprietor of a news media outlet in Florida because she had difficulty finding news and information specific to areas where she had family. The owner provided her phone number, email address, and a website and shared many hurricane-related posts, photos, and videos. She also mentioned that this page is public and should be used as a resource and a place to share information. CNR 2 was evaluated by both interview and survey participants, and it was the only CNR that received different reactions from the two different studies. While the majority (64.7%) of interviewees trusted this CNR, the majority (50.4%) of survey participants said they would maybe trust this CNR.

When investigating why half the survey participants were unsure about the trustworthiness of this CNR, we found that many participants were uncertain about the intentions of the CNR's owner. Moreover, they did not like that the page owner emphasized that the page was public and was intended both as a resource and a place to share information.

“It is intended as a share point where anybody can post info about the event. So, depending on the primary source of the posted info, I'll be willing to trust it or not.” (S 88)

To understand the differences between the opinions of interview and survey participants, we looked at their average responses to the interview/survey questions, when they selected they would definitely trust this CNR. We found that though there were only minor differences between interview and survey responses on CNR 2 (see Table 7), 64.7% interviewees and only 40% survey participants trusted it (see Figures 1 and 2).

Table 7: Participants' Average Perceptions of Factors that Influence the Trustworthiness of CNR 2 (“Trust” Perception range 0 (Extremely Unlikely) – 4 (Extremely Likely)).

Study	CNR Owners' Ability		CNR Owners' Benevolence		CNR Owners' Integrity		
	Have Prior Experience	Are Able to Help	Have Best Interest	Understand Situation	Will Provide Misinformation	Will Correct Misinformation	
Interview	2.00	3.27	3.81	3.90	0.45	3.54	
Survey	2.59	3.02	3.61	3.19	0.42	3.38	

Table 8: Factors that Influence the Trustworthiness of CNRs.

Primary Codes	Interview Excerpt Count	Average # of Excerpts per Interview	Survey Excerpt Count	Average # of Excerpts per Survey
Information Source	175	10.29	92	0.87
Profile	408	24.00	298	2.83
Owner	1053	61.94	169	1.60
Content	517	30.41	214	2.03

## 5.2 Factors that Influence the Trustworthiness of CNRs

Findings from our analysis of the open-ended interview and survey data reveal that participants evaluated the trustworthiness of a CNR based on their perceptions of its content, information source, profile, and owner. Table 8 shows the number of interviews and survey excerpts coded in

each of these categories. To compare the interviews to the surveys, we determined the average number of excerpts per interview and survey. This average gives an indication of the frequency with which each category appeared. However, the average number of excerpts in the interview data is much higher than in the survey data, because the interviews were more in-depth and generated more data. We now explain each of the codes in detail.

### 5.2.1 Content.

This category captures participants' perceptions of the content found on a CNR and is further classified into seven subcategories: accurate, useful, timely, relevant, sufficient in quantity, sufficient in quality, or contains media. Figure 3 shows the number of survey and interview excerpts coded for each category.

**Accurate.** When evaluating the trustworthiness of CNRs, participants often discussed how they tended to trust a CNR if they perceived its content to be accurate.

**Useful.** Participants often shared their perceptions of whether

a CNR's content could be used (or not used) to respond to Hurricane Irma. Participants tended to trust a CNR that shared useful information and vice-versa. Participants' perceptions of whether a CNR's content is useful appeared much more often in the interview data. This is likely because each interview was about 45-60 minutes, where interviewees provided open-ended responses to each of the questions.

**Timely.** Participants' perceptions of whether a CNR's content is up-to-date (or not up-to-date) were coded as timely. CNRs that shared timely content seemed trustworthy to many participants. Again, this appeared more frequently in the interview data, most likely because interviews were more in-depth.

**Relevant.** An important factor in determining whether a CNR was trustworthy was whether the content was related to Hurricane Irma. The frequent appearance of this code (see Figure 3) implies that for a CNR to be perceived as trustworthy, it is critical that the content it provides is relevant to the crisis it was created for.

**Sufficient in Quantity.** When evaluating the trustworthiness of CNRs, participants often discussed whether the CNR provided enough content for decision making. If participants perceived that a CNR shared an adequate amount of content, they were likely to trust it. This is especially applicable in the context of crisis, where there is an increased need for information. Figure 3 shows, that this code appeared much more frequently in the interview data. Most participants stated that they needed more crisis-related information on a CNR to assess whether it is capable of helping during Hurricane Irma.

**Sufficient in Quality.** Participants' perceptions of the quality of CNR content were coded as sufficient in quality. If a CNR's content was seen as having high quality, it tended to increase its trustworthiness and vice-versa.

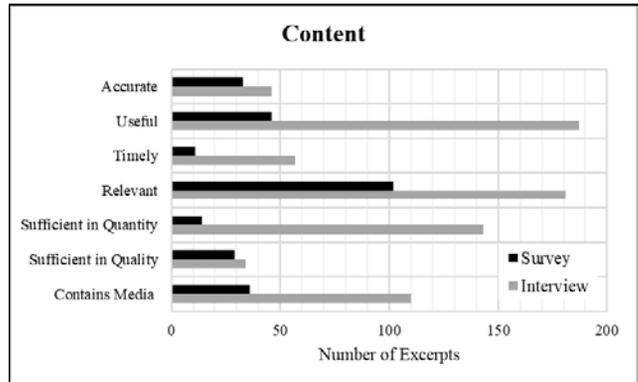


Figure 3. Number of Excerpts in Each Content Category by Survey and Interview Study.

**Contains Media.** Excerpts coded for contains media included participants' perceptions of whether a CNR shared (or did not shared) multimedia content, such as photos, videos, or maps. Participants found CNRs that shared more media (such as photos and videos) to be more trustworthy, whereas a lack of media content tended to make CNRs less trustworthy. This code appeared much more frequently in the interview data as the interview participants often described the presence of maps and videos showing the path of the hurricane to be useful for making decisions.

“She describes what is happening and provides information with pictures.” (S4, CNR 2)

### 5.2.2 Information Source.

Participants often examined the source of the information found on a CNR when evaluating its trustworthiness. We classified the information source category into four sub-categories (see Figure 4): Cites Others, Known, Local, and Connected.

**Cites Others.** This code was applied to the data when participants mentioned if a CNR cites, recommends, or rebroadcasts information from reliable or familiar information sources. When participants notice that the CNR owners cite other reliable information sources (such as the National Weather Service), they were more likely to also trust the resource.

**Known.** Instances where participants thought information was coming (or not coming) from known or trusted sources, were coded as known. Findings show that participants tend not to trust information if they were unable to identify its source.

**Local.** This code was applied to the excerpts that contained participants perceptions of whether the information was coming from Florida, the disaster-affected area. This code suggests that participants believed the information coming from people-on-the-ground was more trustworthy.

**Connected.** Participants' perceptions of whether a CNR follows, links to, or is associated with reliable or familiar information sources were coded as connected. Figure 4 shows that Connected is the most frequent occurring code in the information sources category in both the survey and the interview data. This suggests that being connected was a more important indicator of trustworthiness in an information source.

“It subscribed to news anchors and followed various weather stations.” (S 31, CNR 5.)

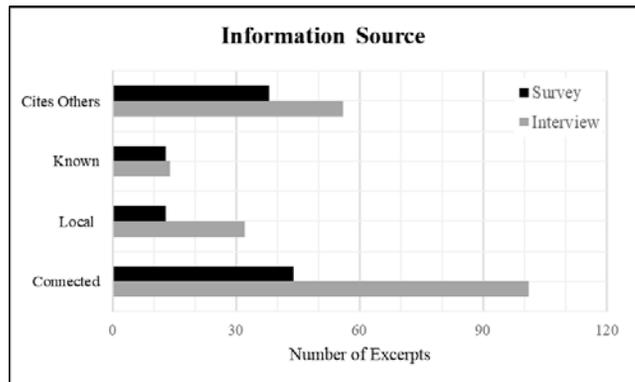


Figure 4. Number of Excerpts in Each Information Source Category by Survey and Interview Study.

### 5.2.3 Profile.

This category includes participants perceptions of a CNR profile and includes five sub-categories (see Figure 5): identifies oneself, crisis-related purpose, professional, popular, and authentic.

**Identifies Oneself.** This code applied when participants mentioned whether a CNR administrator disclosed his/her identity and/or intentions. Frequent occurrence of this code (see Figure 5) suggests that participants trusted CNRs when they knew who was behind them. This was the most frequently used code in the interview data. Interviewees often mentioned that it is difficult to trust the content of the CNR without knowing who created it.

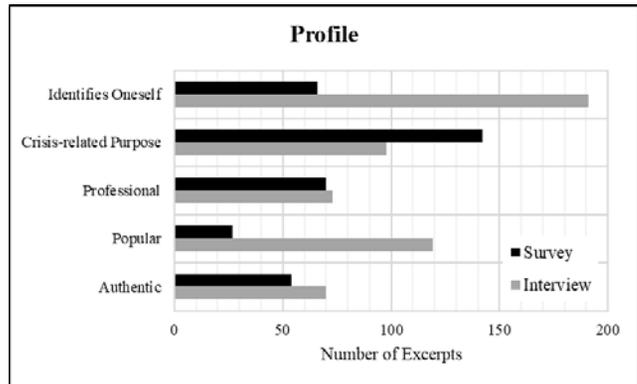


Figure 5. Number of Excerpts in Each Profile Category by Survey and Interview Study.

“The owner gives a name and 3 ways to contact. Owner said she will moderate postings.” (S 24, CNR 2.)

**Crisis-related Purpose.** When evaluating the trustworthiness of CNRs, participants often discussed whether or not the CNR’s purpose was to help crisis affected individuals. This code appeared frequently in the interview data and was the most used code in the survey data (see Figure 5). Findings show that participants tended to trust CNRs that seemed to be created in the interests of hurricane-affected people and vice-versa.

“It seems to be a genuine spot for community to share information with each other.” (S 12, CNR 2)

**Professional.** Participants’ perceptions of a CNR’s look and feel were coded as professional. Participants in our study, when evaluating the trustworthiness of a CNR paid much attention to whether it was well organized and had content with correct grammar and spelling. They also preferred CNRs with meaningful names.

**Popular.** Participants when evaluating the trustworthiness of CNRs, often looked at how well a CNR was received by others. Participants tended to trust CNRs with a significant number of followers or good reviews. Figure 5 shows that this code appeared much more frequently in the interview data. This is due to a few interview participants, who often made their decisions of trustworthiness of a CNR based on the number of followers a CNR had.

**Authentic.** Participants sometimes talked about whether a CNR seemed legitimate or not. We found that participants trusted a CNR if it seemed authentic to them and vice-versa.

### 5.2.4 Owner.

This category includes data about participant perceptions of the CNR owner. It was the most frequently used code in the interview data (see Table 10). This category is further classified into three sub-categories- intent, identity, and ability (see Figure 6).

**Intent.** This category includes perceptions of the CNR owner's intentions behind creating a CNR. Participants tended to trust CNRs that seemed to be owned by people with good intentions.

“They have the sole interests of spreading information about the hurricane.” (S 62, CNR 5.)

**Identity.** This included excerpts that contained perceptions about a CNR owner's identity, for example, observations about his/her age, profession, personality traits, and nature (human or bot). This code appeared most frequently in the interview data (see Figure 6). CNR owner's perceived identity seemed to influence the trustworthiness of the CNR.

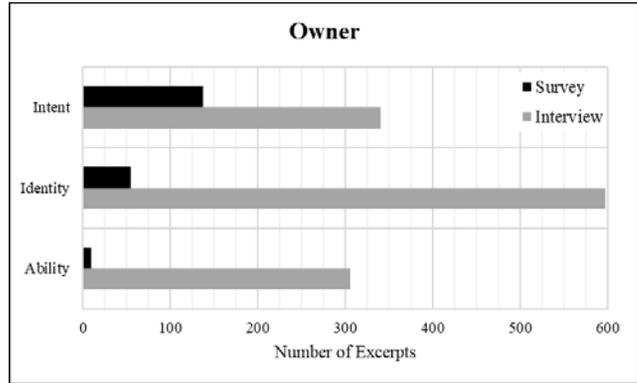


Figure 6. Number of Excerpts in Each Owner Category by Survey and Interview Study.

“They are either there or are in contact with people who are there, because they have some good pictures of what the situation was.” (I 03, CNR 8.)

**Ability.** This category applied when the participants mentioned their perceptions of the CNR owners' ability. More specifically, this included if the CNR owner had prior experience in crisis response, was capable of helping the hurricane-affected public, or could manage the CNR he or she created. When evaluating the trustworthiness of a CNR, participants usually considered its owners' ability to help in crisis response.

“They state that they are weather nerds tracking Irma. So, they have some prior experience with weather and then some of the resources that are posted, and government resources and they talk about preparedness.” (I 16, CNR 7.)

### 5.3 Participant Demographic and Trustworthiness of CNRs

To see if there was a correlation between participant demographics and their perceptions of trustworthiness, we calculated Spearman correlations among these parameters. Since there were only 17 interview participants, we did not determine correlations for the interview study. When calculating correlations for the survey study, we did not find significant correlations between participants' demographics and their trustworthiness of resources. We also found no correlations between a participant's comfort level with Facebook or Twitter and his/her perceptions of the trustworthiness of the shown Facebook pages (CNR 2, CNR 3, and CNR 4) or Twitter accounts (CNR 1 and CNR 5). We state these observations with caution as our survey data comprises only 105 survey responses, a sample size that does not allow for robust generalization. Additionally, our dataset was skewed in many cases (for example, a significant number of participants were highly educated, members of the public, and younger than the age of 55 years) making it insufficient for causal relationships and generalizations.

Since we specifically recruited two types of participants, experts and members of the public, we were interested in determining if there was a correlation between a participant's perceptions of trustworthiness of a CNR and the participant's expertise. Our calculations indicated no

significant correlations between these two factors. We suspect this may be caused by a skewed dataset, where the number of members of the public were much more than the number of experts. Further studies that include more experts are needed to see if this lack of correlation holds.

Next, we compared expert and public opinions on the trustworthiness of CNRs 1- 5 (see Figure 7). We noticed that overall, more members of the public did not trust CNR 1 and more experts trusted CNR 2.

We also compared the qualitative data of members of the public and experts (see Figure 8). We first determined the total number of excerpts for each category in both studies. Next, we added the total number of excerpts in each category for both studies. Finally, we divided the total excerpts by the total number of interview and survey participants. Our findings show that experts paid much more attention to- (1) how well a CNR owner connects to authoritative sources, (2) the purpose of a CNR, and (3) the ability and intentions of the CNR owner.

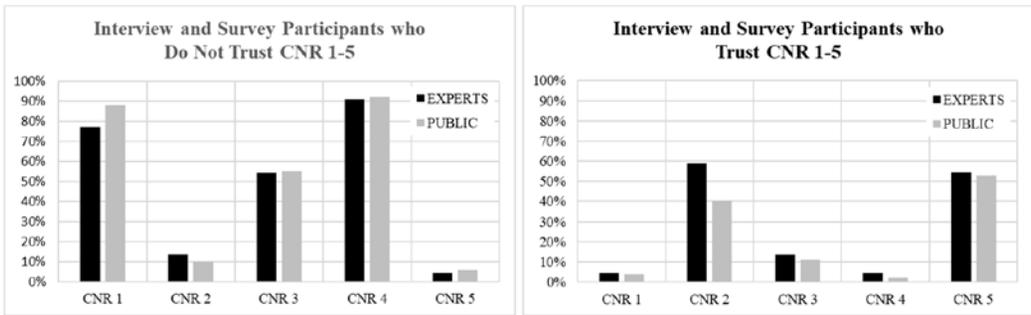


Figure 7. Interview and Survey Participants who “Do not Trust” and “Trust” CNR 1-5 respectively.

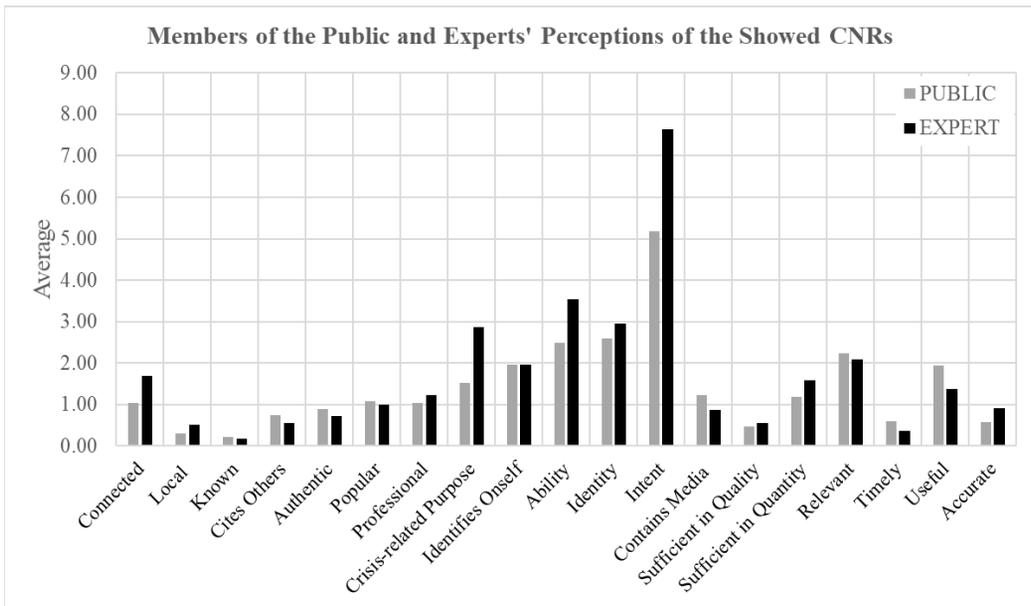


Figure 8. Average Number of Codes Applied to Interview and Study Data by Members of the Public and Experts.

## 6 DISCUSSION

This research determined the factors that experts and members of the public considered when judging the trustworthiness of a group of CNRs. The methods used in this research include interviews and surveys with members of the public and experts. Our data analysis revealed that factors that influence the perceived trustworthiness of a CNR are CNR content, information source, profile, and owner.

Our research, in many ways, is consistent with existing literature. For instance, our findings showed that content that seems relevant, timely, and from local or known sources are perceived as trustworthy. These findings offer support for the hypothesis of Hughes and Chauhan [23], who offered ‘supply timely and relevant information’, ‘serve as a local authority for information in your domain’, and ‘cite others for information outside your domain’ as recommendations for building trust on social media with members of the public for emergency responders. Some of this consistency can likely be attributed to the fact that both of these studies used Mayer and colleagues [33] trust framework. Similarly, our findings showed that participants trusted CNRs whose owners disclosed their identity and intentions (Identifies Oneself). These findings are consistent with Ma and colleagues [32] who also used Mayer et al., trust framework and discovered that guests trusted the Airbnb hosts who disclosed more assessment signals (ones that can be verified easily) than conventional signals (ones that cannot be verified easily). Additionally, we found that participants trusted information coming from locals. This finding is consistent with Hagar [19] who found that farmers during the UK foot and mouth disease crisis trusted information from local sources (except local government) and information from central government was not trusted. One of our findings also suggests that participants, in general, trusted CNRs that had appropriate usernames, page descriptions and account bios, and that shared content with correct grammar and spelling (professional). This finding aligns with Morris and colleagues [36], who studied users’ perceptions of tweet credibility and found that use of non-standard grammar damaged credibility more than any other factor in their survey.

### 6.1 Recommendations for Increased Perceived Trustworthiness

Based on our findings, we recommend CNR owners take the following steps to increase the perceived trustworthiness of their CNRs:

1. Share crisis-related information frequently.
2. Subscribe to reliable or familiar information sources (for example, the National Weather Service or National Oceanic and Atmospheric Administration).
3. Cite sources of information.
4. Clearly state who you are, why you have created this CNR, and what your abilities are or how you can help people respond to the crisis.
5. Be professional in posts, tweets, and any other interactions.

We are, however, concerned that one can use the findings of this study to make a CNR appear more credible than it is. Also based on our findings, it appears that most people still continue to pay attention to the very basic features of a social media account or page (e.g., profile information, number of followers, etc.) when evaluating trustworthiness, all of which can be easily spoofed. For example, anyone can share relevant content, indicate that he or she is local to the crisis-affected area, buy followers, or use a fake identity. As people continue to place their trust in the assessment of the basic features of a CNR and its content, and there is no “online police” who can verify an account owners’ identity, it appears that designing trustworthy interfaces may only be part of a viable solution.

## 6.2 Implications for the Broader Consumption of Social Media Data

Though social media can be effective communication tools, they can also be a means to spread false rumors (sometimes referred to as “fake news”). People sometimes fall for fake news and believe reliable-looking fake websites and social media bots to be credible sources of information [2, 48], especially as the tactics to create such sites and bots become increasingly sophisticated. This is relevant to CNRs because we often do not know who administers CNRs and what their intentions are. Also, many of these CNRs claim to be “official” without disclosing their identity. These uncertainties make it difficult to assess credibility, as we saw in this research. We thus see a growing need for tools to better understand authorship and detect fake news from CNRs but also more general social media sources. Many social media platforms are taking steps in this direction [37, 41]. For example, after we conducted this research, Facebook added a ‘page transparency section’ to all of its pages [15]. This section includes information about when a page was created, the primary country where the page is managed, the page's previous name changes, the confirmed business or organization that has claimed ownership of the page, and other related information. Had this feature existed during the time of Hurricane Irma, it could have made the trust evaluations of our participants a bit easier or at least more informed and nuanced.

As we complete the final edits on this paper, the world is currently dealing with the COVID-19 Pandemic. This crisis event has seen an unprecedented level of social media activity because the event affects everyone globally and social distancing policies are making social media platforms one of the primary ways to socially connect. In initial investigations, we are seeing an abundance of CNRs appearing around COVID-19 on Twitter, Facebook, Instagram, and other platforms. Many of these CNRs seem to be helpful in sharing important information, while others could be seen as less helpful, such as those that share memes or offer controversial political commentary. Health officials and emergency responders have warned against the spread of false rumor and misinformation during this global crisis and have posted online resources to combat this spread [16]. While this event is still unfolding, it is clear that there is much still to learn about how people evaluate the trustworthiness of information they find online, and how these understandings will shape future use and features of social media platforms.

## 6.3 Limitations and Future Directions

This study has several limitations. Participants were asked to engage in sensemaking to make trust decisions based on a hypothetical situation, therefore they may or may not have been as critical in evaluating the trustworthiness of CNRs as they would have been if they were really affected. We also do not know if any of our participants were local to Hurricane Irma or if they had prior disaster experience, we did not ask for this information in our studies. To address these limitations, we plan to conduct semi-structured interviews with people in evacuation shelters or camps to study their sensemaking processes and to see if they trust these resources.

Participants were shown CNR screenshots and not real pages, which did not allow them to click and explore the CNRs, something they could have done in a real scenario. This insight has illuminated the need to design a ‘research snapshot platform’ for future Crisis Informatics research. This platform would emulate a specific event (post hoc) based on real data. It could also allow switching information between users and playing the data with different features (for instance, CNR content, profile, information source, and owner) to determine which features are more valuable for perceived trustworthiness.

Similar to past research, our findings also show that CNRs share crisis-related information and are followed and liked by a large number of people [10, 11]. However, we still don't know if these resources were used by crisis-affected individuals to respond to the crisis. This opens room for many interesting questions- do we need CNRs? If so, who should create them (experts, non-experts, or both)? What would the ideal CNRs look (should they have CNR owners' photo as a profile picture or a crisis-relevant profile picture)? What should be the purpose of these CNRs (should they only share news and updates about the crisis or is it okay if they share humor to relieve stress and anxiety)? How should crisis-affected individuals be notified about these ideal CNRs (should they be promoted through something like social media ads)? How will crisis-affected individuals evaluate the authenticity of ideal CNRs? Should CNRs be "verified?" What would be the parameters for this verification and since these CNRs are created soon after the crisis, how could they be verified quickly? Answers to many of these questions could be addressed in future participatory design workshops, where we ask both experts and non-experts to discuss these ideas and design an ideal CNR.

Finally, another direction of research would be to empower social media users with knowledge and tools to understand what is trustworthy on social media. In our future work, we plan to create educational materials, such as infographics, short videos, and games, especially for youth and senior adults, to help them understand what to look for when assessing the trustworthiness of an online resource.

## 7 CONCLUSIONS

This study showed that factors that influence the perceived trustworthiness of CNRs fall under the broad categories of CNR content, information source, profile, and owner. We found that participants tended to consider a CNR trustworthy if they perceive its content as relevant, of high quality, adequate in quantity, timely, useful, and accurate, and if it contained media. Participants also trusted CNRs that either linked to authoritative and/or local sources or mentioned their information sources. Additionally, participants considered a CNR trustworthy if they perceived it to be professional, popular, authentic, and with a crisis-related purpose. Lastly, participants tended to trust CNRs if they perceived that its owners could help or had good intentions for crisis-affected individuals. This research also determines how people assess the trustworthiness of CNRs. Findings of this research show that if people perceive that a CNR owner has prior experience in crisis response, can help crisis-affected public to respond to the event, understands the situation, has the best interests of affected individuals in mind, or will correct misinformation that comes into his/her notice, they tend to trust that CNR. In contrast, if people feel that a CNR owner might share misinformation intentionally, they tend not to trust that CNR. No significant correlation between participants perceptions on the trustworthiness of CNRs and their demographics was found.

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