

Checking Facts by a Bot

Crowdsourced Facts and Intergenerational Care in Posttruth Taiwan

Mei-chun Lee

From the discussion of “posttruth” in 2016 to the “infodemic” in 2020, online rumors seem to have become more rampant, harmful, and harder to be debunked. This article examines Cofacts, a Taiwan-based fact-checking service that combines a chatbot and a database of fact-checked responses provided by volunteers to help debunk rumors circulated on the messaging app LINE. I argue that Cofacts’s crowdsourcing approach joins what Donna Haraway calls embodied objectivity that insists on “the particularity and embodiment of all vision” to challenge the conventional fact-checking practice that presumes singularity, disembodied objectivity, and authority. Underpinning Cofacts’s fight against online rumors is the intergenerational conflicts that are ingrained in different life experiences, beliefs and values, and expectations of what a good life is. By taking up a technological solution that emphasizes openness, Cofacts opens a space for digital natives to contest what fact is and claim the power of speaking from their parents and the patriarchal society on the one hand and to forge new connections of care and reinitiate conversations that have been barred by the invisible walls of chat rooms and the widening gap of values and beliefs between generations on the other hand.

“Fake news killed a diplomat!” said one news headline. On September 14, 2018, just two months before Taiwan’s midterm elections were to take place, diplomat Su Chii-cherng took his own life in his Osaka residence following criticism he received online and in the media for his handling of an incident at Kansai International Airport, where Taiwanese passengers were stranded because of damage caused by Super Typhoon Jebi. According to a popular social media post on PTT—Taiwan’s largest native bulletin board system with an online culture similar to that of Reddit—Su did nothing to help Taiwanese passengers, who were forced to board buses arranged by the Chinese consulate instead. Many Taiwanese felt insulted, as this touched a nerve related to the political tension between Taiwan and China as a result of the Cold War rivalry as well as the rising Taiwanese identity over a Chinese one on the island after the turn of the century. Taiwan’s mainstream media outlets, which often take user posts from PTT to fill up 24-hour cable news broadcasts or fuel online engagement, soon picked up the story and made sensational headlines. Comments and criticism flooded social media, slamming the Osaka office diplomats and the ruling Democratic Progressive Party (DPP) government for failing to rescue their fellow citizens. Political pressure also came from inside the DPP, as candidates worried that this might have a negative impact on the upcoming elections. Stress and desperation finally led Su to take his life. One day after Su’s suicide, a fact-checked report was released by Taiwan FactCheck Center to rebut the Chinese rescue story. “Fake news!” people cried. But this correction was too late to save his life.

Local representatives were not the only ones on the ballot in November 2018. Several national referendums, including proposals for same-sex marriage, gender equality education,

and nuclear power plants, were also taking place on the same day. Political parties and candidates, religious groups, media outlets, influencers, and even cyber armies from China all came to join this massive race of “discursive engineering” (Graan, Hodges, and Stalcup 2020). The stranded Taiwanese at Kansai Airport, unfortunately, provided the material for political struggle. Sensational clickbait, misleading images, propaganda, rumors, memes, and trolling flooded the digital space, especially on Facebook, the most popular social media platform in Taiwan, and LINE, a popular messaging app similar to WhatsApp. Since the mid-2010s, Taiwan, like many other places in the world, has suffered greatly from an unprecedented condition of information disorder (Wardle and Derakhshan 2017) caused by the overabundance of false and misleading information running rampant in digital spaces, a state that was marked by Oxford University Press’s Word of the Year as “post-truth.” This posttruth condition reached its height in 2018 with the race for local representatives and national referendums heating up and disinformation from both within Taiwan and beyond meddling in public conversations. According to research by the V-Dem Institute (2019), Taiwan suffered the most from foreign online disinformation campaigns, mainly from China, among 202 countries in 2018. In many ways, Taiwan in 2018 was much like the United States in 2016—political struggle, war of words, a polarized public, and, most importantly, the pervasiveness of “fake news.”

A few days after the incident, on a Wednesday evening, I sat with Cofacts’s developers in their weekly meeting as they discussed Su’s suicide in relation to “online rumor” (*wǎnglù yáo yán*)—a term the Cofacts team used to replace “fake news” as they avoided a simple true-false binary—that spread from

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than appeals to emotion and personal belief.” The fear that emotion and belief override reason and science has led many to ask when and how facts have lost their valence. Yet, as Dominic Boyer (2018) argues, what is at stake is not about “the death of belief in fact or the absence of truth but rather the appearance of competing parallel spheres of veridiction in which ideological engines of truth-making radiate facts from normative institutional centers all the way into conspiratorial fringe speculation on both ends of the political spectrum” (85). In other words, it is not that fakeness beats truth but that “truthiness”—“something truthish or truthy, unburdened by the factual” (Zimmer 2010)—prevails and disrupts our relationship with facts.

Acknowledging this posttruth condition we are facing while not falling into the binary of true and false, I follow Cofacts in using “online rumors” in this article. While there are not many anthropological studies (with the exceptions of Malykhina 2018; McGranahan 2017; Stalcup 2020; Taylor-Neu 2020) taking up posttruth or fact-checking as their ethnographic inquiries, anthropology does have a long tradition of studying rumors. Reading rumors as social facts (Durkheim 1982:52), anthropologists have shown that rumors tell nuanced stories about racial conflicts, colonial and postcolonial trauma, ethnic tension, and so on when facts cannot be simply put forth under social constraints (see Fassin 2021; Feldman-Savelsberg, Ndonko, and Schmidt-Ehry 2000; Paz 2009; Stewart and Strathern 2004; Wong 2017). However, seeing rumors as social facts does not mean that we should never challenge their claims and ask ethical questions. Quoting Hannah Arendt’s (1967) discussion on “factual truth,” Karen Ho and Jillian R. Cavanaugh (2019) call our attention to how power and politics invade facts and silence other voices with new sociotechnological tactics. Although factual truth is stubborn to change, “modern manipulation of facts” through mass media, in Arendt’s time, and social media, in our time, may “require the bending of the very social and historical context to fit the lie, thus upturning the larger historical and factual fabric, in which factual truths are situated, rendering it difficult to make the necessary distinctions between lies and facts, between opinions and larger historical records and social contexts” (Ho and Cavanaugh 2019:162).

The causes of posttruth are multifaceted, complicated by technological advancements, data and platform economy, political struggles, social polarization, and geopolitical relations and confrontation. On the one hand, the Internet has greatly changed people’s information consumption habits from a one-way broadcasting mode to a two-way interactive mode, where expert knowledge is diluted and even challenged by lay voices. On the other hand, algorithms are turning social media into “the hype machine” that feeds “the attention economy” (Aral 2020:55–56) with fabrication, manipulation, advertising, trolling, and propaganda. Information manipulators further take advantage of social algorithms (Howard 2016) and technologies of data surveillance to “target the weak points where groups and individuals are most vulnerable to strategic influence,” producing what Nadler, Crain, and Donovan (2018:6) call the

“digital influence machine.” Online rumors are produced in transnational agglomerations that operate at the local and, oftentimes, interpersonal level. They are coproduced by profit-oriented mainstream media and the frantic competition of click-through rate, data-exploiting social networking sites and their black box algorithms, data brokers, trolls and cyber armies, influencers, and, last but not least, split publics (Graan, Hodges, and Stalcup 2020) in which sensational stories and conspiracy theories easily hijack people’s attention and erode their trust in professionals.

In Taiwan we can identify a few domestic and transnational actors who take an active part in shaping the media and social environment where posttruth takes root. As social media has become one of the main sources of information and a new political battleground, government agencies, political parties, and politicians compete to win engagement by simplifying policies as memes, implanting advertorials on social media, or covertly funding online groups and accounts to spread favorable information. Intense party competition leads to fake political mobilization, or “paid supporters” (*zǒulù gōng*), in both physical rallies and online spaces, and politicians accuse each other of hiring cyber armies (*wáng jūn*) to manipulate public opinions (*dài fēngxiàng*). Meanwhile, taking advantage of Taiwan’s press freedom, China interferes with Taiwan’s democracy using advertisements and propaganda through pro-China media as well as coordinated information manipulation with local collaborators such as gangs and influencers (Shen et al. 2020). Online commentators paid by the Chinese authorities to spread pro-China narratives (colloquially known as the “50 cents party” or *wǔmáo dǎng*) and young Chinese nationalists who voluntarily fight online battles for patriotic propaganda (also known as “little pink” or *xiǎo fēnhóng*) troll and spam the social media accounts of Taiwanese officials, celebrities, or media outlets to “distract the public and change the subject” from a discussion that might pose threats to Beijing (King, Pan, and Roberts 2017; Monaco 2017). Transnational content farms also attract “Internet entrepreneurs” to generate tons of posts and videos, including false and misleading information, for click-through rates and advertising share (Liu, Hsu, and Ko 2020). But perhaps the most active and crucial players in this “rumor-scape,” appropriating Arjun Appadurai’s (1996) term, are social media and messaging app users, who easily share and forward information that is fragmented, emotionally arousing (Martel, Pennycook, and Rand 2020), and often unverified.

Fact-checking is one of the solutions proposed to cope with online rumors. As a journalistic practice emerged in the early 2000s in the United States, early fact-checkers sought to “revitalize the ‘truth-seeking’ tradition in journalism by holding public figures to account for the things they said” (Graves 2016:27). Since 2016, various fact-checking organizations and tools have mushroomed globally, aimed not solely at public figures but also at online rumors whose sources of origin are mostly unknown. While professional journalists and fact-checkers still do the job (Graves 2016; Lowrey 2017), automatic technologies (Babakar and Moy 2016; Graves 2018; Hassan

growth. Hot money kept flowing in. As the popular saying goes, “black-hands become bosses” (Shieh 1992); if one kept silent on politics and worked hard, one would be rewarded with a well-off life. In contrast, *yàn shìdài* were born into a democratic and wealthy Taiwan. A new Taiwanese identity across ethnic lines soared over a Chinese identity, and they no longer saw mainland China as “the lost homeland.”⁴ Most of them held a college-equivalent degree, yet they were still working poor, spinning around long working hours and contract jobs. When they were ready to develop a career, two waves of regional and global financial crises in 1997 and 2008 hit the country. Low salaries and rising living costs put them under heavy pressure (Lin 2015). Working hard no longer promised a good life. Like the term *yan* describes, they were desperate and angry.

Many baby boomers are parents of *yàn shìdài*, so their conflicts often take place in domestic settings around expectations about what a good life is. In general, for baby boomers, men and women have distinct social roles. Men should work hard, buy a house, marry a wife, and raise a family. Women can get an education and work, but only marriage and children complete their life. However, for *yàn shìdài*, house, marriage, and babies are all heavy burdens. *Yàn shìdài* receives good education; more than 70% of them (female more than male) receive college-equivalent or above degrees.⁵ High education delays their time on the job market and consequently marriage and reproduction. Expensive houses and career development further discourage pregnancy. In Taiwan, people see owning a house as the first step toward independence and life security. However, houses are expensive, especially in cities. According to the property prices index made by Numbeo, Taiwan’s house-price-to-income ratio is 23.63, ranked 11 among 109 countries in 2021, much higher than any European or North American country.⁶ Young couples often face a 30-year loan just to buy a small apartment in an outskirt area. Instead of buying a house and living indebted for a lifetime, some, who are called “the moonlight clan” (*yuè guāng zú*, which literally means “spending up the monthly income”), choose to live paycheck to paycheck. Unaffordable houses are deemed the main reason why young people hesitate to get married and have babies in Taiwan. According to the World Factbook by the CIA, Taiwan has the lowest birth rate in the world, only 1.07 births per woman in 2021.⁷ Low salary, low birth rate, and long-lived

parents are what they are faced with. When baby boomers criticize *yàn shìdài* for being “strawberry”—spoiled, vulnerable, and sluggish—*yàn shìdài* blame baby boomers for controlling resources and being paternalistic.

Intergenerational conflicts broke out alongside political events in the past decade. Young protesters occupied the Legislative Yuan (Taiwan’s parliament) in the 2014 Sunflower Movement to resist the signing of the Cross-Strait Service Trade Agreement with China. By saying no to a stronger economic tie with China, the protesters challenged KMT’s “economy first” path that, for *yàn shìdài*, had only benefited capitalists. They no longer believed that economic growth would bring wealth equally to everyone like what their parents had experienced. Meanwhile, the movement also witnessed a rising Taiwanese identity among *yàn shìdài* in contrast to their parents’ Chinese identity. Talking about Taiwanese independence was no longer taboo. The movement was also a war between “old” media and “new” media, with their respective audience of different generations. While the old media, such as television and newspapers, took a negative or even ignorant attitude toward the occupation in the beginning, young protesters held their mobile devices and turned themselves into “guerrilla broadcasters” to “show the world what mainstream media failed to cover.” When SNG cars finally came to the occupied site, protesters put stickers on the vehicles, saying “Where is the truth?” or “Thank you for making fake news for my dad and mom” (Lee 2015).

Intergenerational conflicts did not end with KMT stepping down and DPP’s leader Tsai In-wen being elected as the president in 2016. A few new policies, including pension reform, transitional justice, and same-sex marriage, by President Tsai became the center of the debate. Escalating tension between generations reached a peak in the 2018 local elections and referendums. Alongside party competition, the campaigns were also staged as the senior versus the young. For example, KMT’s candidate Han Kuo-yu, who ran for Kaohsiung mayor, stirred a “Han wave” among seniors across Taiwan as he summoned the memory of the “good” virtues in the “old” time as well as the glory of being a Chinese. Also, the referendum on same-sex marriage split many families. Many baby boomers worried same-sex marriage would corrupt traditional familial values, while *yàn shìdài* argued that marriage is about love and individual choice. Rumors like “gays want to demolish the law against child molestation” or “legalizing same-sex marriage will attract gays around the world to come to Taiwan for cheap national health insurance and free AIDS medicines” circulated in social media and messaging apps. It was against this background of intense elections and social debates that the Jebi incident, where this article began, took place.

Cofacts and Its Chatbot

Cofacts was built by participants from g0v (pronounced gov-zero), a Taiwan-based civic tech community founded in 2012 that advocates civic engagement through open data and digital technologies. Embracing the open ethos from the free and

4. “Changing Identities in Taiwan (June 1992 to December 2021),” a survey by the Election Study Center, National Chengchi University, <https://esc.nccu.edu.tw/PageDoc/Detail?fid=7804&rid=6960> (accessed January 10, 2022).

5. “Population with Higher Education,” a statistical report by the Ministry of the Interior, Republic of China (Taiwan), <https://www.moi.gov.tw/cl.aspx?n=13331> (released April 17, 2021; accessed January 10, 2022).

6. “Property Prices Index by Country 2021,” Numbeo, https://www.numbeo.com/property-investment/rankings_by_country.jsp?title=2021&displayColumn=-1 (accessed January 10, 2022).

7. “Total Fertility Rate by Country 2021,” World Factbook, <https://www.cia.gov/the-world-factbook/field/total-fertility-rate/country-comparison> (accessed January 10, 2022).



Figure 1. Screenshots from a conversation with Cofacts's chatbot.

Cofacts's chatbot is designed in a way that users are not only recipients but also contributors. Users are the main source of Cofacts's database. Without these users, Cofacts could not gather rumors circulating in LINE's private chat rooms. Importantly, as we can see from the above conversation, the chatbot carefully avoids speaking like an authority and refuses to act as one unified voice. Fact-checking editors do not hide backstage. They are made present as "a kind person" or "volunteer editors" in the conversation. By training its users to think critically and actively contribute, Cofacts makes fact-checking not just about producing another piece of content in a sea of rumors but a collaborative practice to combat rumors.

Editor Meetups

The Cofacts's chatbot is the digital persona of "the wisdom of the crowd" (Surowiecki 2005). Both the database of rumors and fact-

checked responses are generated through crowdsourcing technologies and a collaborative mode of organization, inspired by the FOSS movement. Yochai Benkler (2006) discusses collaboration as the core of commons-based peer production in FOSS, a mode of organization that is "radically decentralized, collaborative, and not proprietary; sharing resources and outputs among widely distributed, loosely connected individuals who cooperate without relying on market signals or managerial commands" (60). This mode of commons-based peer production depends on autonomous participation and what Clay Shirky (2008) calls "spontaneous division of labor" (118). Embracing such a participatory culture, FOSS has given birth to a great number of social collectives around software projects, including famous examples like Linux, Mozilla, and Wikipedia. FOSS also inspires open movements in other social fields, such as open science, open access, and open government. As Christopher Kelty (2008) points out, FOSS projects gather around themselves

as personal experience, or something that needed expertise or domain knowledge to discern. Health-related rumors—which range from unverified food remedies to fake science studies—occupy a big chunk of the database. In the meetup, I constantly turned to my teammates who were medical students for advice. We made jokes but also searched for answers together. In the lonely and self-doubting process of fact-checking, working with a team was a comfort and an encouragement. After immersing ourselves deeply in rumors, we had lost track of time. The host announced the end of the contest. The winning team was honored in front of a screen that showed a big “123,” the number of total rumors we all together debunked in the meetup. Fried chicken arrived fresh and hot, and there was just enough for everyone to get a bite. The contest was never really meant for competition but only for fun. We convened as a huge group, chatting, eating, and exchanging thoughts about online rumors with new friends.

A Wikipedia of Online Rumors

Crowdsourced fact-checking is what makes Cofacts different from other fact-checking organizations, which usually hire journalists and researchers to debunk rumors. Cofacts refuses to be viewed as a third-party fact-checker and insists on acting as a platform of different viewpoints. Cofacts’s editors do not play the role of professional fact-checkers, who might do interviews, phone checks, or even field visits to find the truth, but they help discern “reliable” sources, including fact-checking reports from professional organizations, and curate online information to make fact-checked information more accessible. Johnson describes Cofacts as “a free market of speech” where everyone can express their ideas and hear different voices blocked by chat room bubbles. As its website states, “What you read on Cofacts is responses written by other users. Cofacts endeavors to collect diverse opinions for you to make the best judgment between the real and the fake. We do not believe in an omnipotent judge. We believe that we can only get close to the truth through the collaboration of citizens. On Cofacts, you can read the viewpoints of others and make your own judgment, and you can also share your thoughts on our platform.”¹⁰ Seeing itself as a platform rather than an organization, Cofacts does not want to play the role of “arbiter of truth.” Johnson explains, “Cofacts is not a place of absolute truth; instead, it is a platform to display various ‘facts,’ including fact-check reports made by other organizations. . . . We believe in the free market of speech. Our goal is to become a Wikipedia of online rumors.” Johnson’s statement resonates with Linus’s law, one of the FOSS doctrines—“given enough eyeballs all bugs are shallow.” The idea is that fact-checking by volunteers may be flawed, incomplete, or imperfect, but if there is a community of fact-checkers continually working on providing better responses, the quality of the database will improve. It is in this sense that Johnson refers to Cofacts as “a Wikipedia of online rumors.”

By calling on Wikipedia, Johnson also refers to its neutral point of view (NPOV) policy. On Wikipedia’s NPOV page, it states that “all encyclopedic content on Wikipedia must be written from a neutral point of view (NPOV), which means representing fairly, proportionately, and, as far as possible, without editorial bias, all the significant views that have been published by reliable sources on a topic.”¹¹ This position of neutrality is not a naive belief of objectivity. As tech scholar Joseph Michael Reagle (2010) points out, NPOV “recognizes the multitude of viewpoints and provides an epistemic stance in which they all can be recognized as instances of human knowledge—right or wrong. The NPOV policy seeks to achieve the ‘fair’ presentation of all sides of the dispute” (11). In a similar vein, Cofacts claims itself as a platform of different viewpoints rather than an authoritative voice of facts. What users receive from the chatbot is not a final report but multiple responses that form a growing conversation between different perspectives. Cofacts’s users can rate these responses or even add a new one. Cofacts’s collaborative design allows fact-checking to embrace an ethical, affective, bodily engagement in “practice of objectivity that privileges contestation, deconstruction, passionate construction, webbed connections, and hope for transformation of systems of knowledge and ways of seeing” (Haraway 1988:585). As one editor, Butterfly, says, “This is no longer an era where truth is confirmed by a single authority. The more people to help out, the better.”

To better achieve NPOV, Cofacts designs four categories of rumors in a way that does not fall into the true-false dichotomy and allows room for different voices. Editors can mark a message mixed with facts and lies as “contains true information” or “contains misinformation” according to their sources of references and judgments. The Cofacts team does not review editors’ responses. Nevertheless, as the team told me, in their observation, editors tend to be strict and mark messages as “contains true information” only when they cannot find any factual error. Another important feature that also resonates with NPOV is the category of “contains personal opinions.” This is a new category added in August 2017 because of the increasing numbers of forwarded messages that are more about personal opinions or experiences that are impossible for editors to mark as true or false. “New editors might feel frustrated if most of the unchecked rumors are all personal opinions,” Johnson explains, “so we think if it’s impossible to ask editors to ignore them, why not allow editors’ viewpoints to be expressed so that people can exchange different ideas and users can make more informed judgments?” (Johnson 2017). Unlike the other categories, marking a message as a personal opinion means that the editors do not need to provide any “evidence.” Instead, editors are encouraged to mark “which part of the message in question contains personal opinion” and include references of different “viewpoints.” Most of these messages relate to highly controversial topics in Taiwan such as same-sex marriage or political conspiracies. Hence, by

10. Cofacts’s website, <https://cofacts.tw/> (accessed January 10, 2022).

11. See Wikipedia: Neutral Point of View, https://en.wikipedia.org/w/index.php?title=Wikipedia:Neutral_point_of_view&oldid=1028265652.

space. Ironically, the generosity of care precipitates the spread of online rumors.

Whether it is true that baby boomers are more prone to forward and spread rumors needs more empirical studies to prove, which is beyond this paper's goal, we can see how this rhetoric serves *yàn shìdài* in the struggle against their parents and patriarchal society over theories of truth, belief, and knowledge. The bot is not any sort of authority; it is collective and decentralized, coproduced by loosely connected young people who take faith in the power of open collaboration. By pointing out what is true and what is false through the collaborative effort of fact-checking and the mediation of the chatbot, the bot becomes the agent of *yàn shìdài* to challenge the patriarchal hierarchy at home and in society. Indeed, crowdsourced fact-checking is both a political and epistemological reconfiguration of what fact is and who has the right to produce it.

However, what propels many young people to participate in Cofacts is not just an attempt to challenge the patriarchal mode of knowledge production but, most importantly, the desire to "help" seniors in navigating the digital space through the sea of rumors. By introducing Cofacts's fact-checked responses or even teaching senior family members how to use the chatbot, these young editors and users avoid harming family harmony while providing more accurate information and a self-help tool. As one of the editors told me, "I was troubled by all the rumors forwarded by my parents to our family group. But now, with Cofacts, I can send back the right information and correct them without hurting their feelings. I don't need to say they're wrong. I only need to forward what the bot says." Indeed, the chatbot is not simply a tool for fact-checking but also an attempt of *yàn shìdài* to reconnect with baby boomers and reinitiate conversations that have been barred by the invisible walls of chat rooms and the widening gap of values and beliefs. It offers a buffer zone that prevents confrontation and reorients care from forwarding misinformation to forwarding fact-checking responses. It is intergenerational care instead of intergenerational struggle that motivates this crowdsourced fact-checking project.

Although the chatbot works better on health-related rumors compared with rumors about highly controversial social issues or political disinformation because the latter are more susceptible to confirmation bias, the introduction of the chatbot does raise people's awareness of misinformation and make people more cautious when sharing unverified messages. But even corrections by a chatbot can sometimes be uncomfortable. Beginning in 2019, with funds from platform companies including Facebook and Google, Cofacts and other fact-checking services started to work with community colleges, senior service centers, and local libraries to teach seniors media literacy and how to discern online rumors using fact-checking chatbots and tools. In these classes, young instructors avoid addressing senior students as rumor forwarders and use themselves as an example of how harmful rumors can be. They also encourage senior students to become fact-checkers in their chat rooms by forwarding unverified rumors to the chatbots to get fact-checked responses. These offline classes remediate the chatbot,

making it both the agent of fact and the agent of care that connects, even partially, different ideologies, worldviews, values, and beliefs in posttruth Taiwan. As María Puig de la Bellacasa (2017) says, care is "a critically disruptive doing that can open to 'as well as possible' reconfigurations engaged with troubled presents" (12). Even though Cofacts's crowdsourced fact-checking can never catch up with the production and dissemination of online rumors, its chatbot, editors, and all of the classes and services surrounding this system will continue to connect, to care, and to "stay with the trouble" (Haraway 2016).

Conclusion

On September 23, 2020, the World Health Organization (2020) published a statement on "managing the COVID-19 infodemic," in which it raised a warning that "an infodemic"—an overabundance of information that "undermines the global response and jeopardizes measures to control the pandemic"—has taken place alongside the COVID-19 pandemic. From posttruth to the infodemic, online rumors seem to have become more rampant, harmful, and harder to debunk. All sorts of conspiracy theories circulate alongside rising COVID-19 cases, some of them leading to racial discrimination and even hate crimes against Asians in North America. Among these stories, the story that COVID-19 was leaked from a Chinese laboratory was disputed by scientists and the liberal press. Social media platforms also banned any post related to this theory. However, after a year, in May 2021, President Joe Biden ordered a renewed investigation into the origin of the novel coronavirus and indicated that the lab leak theory remains one possibility. Facebook soon announced a change of policy that it would no longer take down posts claiming COVID-19 is man-made. Members of the scientific community, the press, and government officials—those who used to be the speakers of facts—are no longer firm and steady. This capricious state of facts is where we are now.

Crowdsourced fact-checking is to accept this indecisive, easily changing, and vulnerable condition of facts and to provide an alternative way to reconstruct facts without resorting to authorities. In this article, I argue that Cofacts's crowdsourced fact-checking joins what Haraway (1988) calls embodied objectivity that insists on "the particularity and embodiment of all vision" (582) to challenge the fact-checking practice that presumes singularity, disembodied objectivity, and authority. Underpinning Cofacts's fight against online rumors is the intergenerational conflicts between *yàn shìdài* (roughly age 20–40) and baby boomers (roughly age 60–80) that are ingrained in different life experiences, beliefs and values, and expectations of what a good life is and that have grown intense in the recent elections and in social debates such as same-sex marriage and pension reform. By taking up a technological solution that emphasizes openness, Cofacts appeals to *yàn shìdài* in their fight against the black box production and chatroom-to-chatroom transmission of online rumors, which they believe have harmed their family harmony and posed a great threat to Taiwan's democracy. As its name indicates, Cofacts recognizes subjective

liberal ideology (e.g., the equity of capitalist society, the possibility of endless economic growth) or do not inspire actions that constitute direct challenges to liberal hegemony. My friends who grew up in state socialist East Germany remarked on this often. “In the GDR the wrong words could get you thrown into jail, because ideas had value to them. Here,” they said speaking of liberal democratic unified Germany, “you can talk about anything you want, but since talk is cheap, nothing ever changes.” Liberals are constantly astounded when fascists and socialists not only believe their words but seek freedom through their realization.

Anthropology at its best offers intimate glimpses into worlds that resonate with other worlds. Lee seems to understand that there is something ironic or perhaps even slightly comic about Cofacts’s do-it-yourself efforts to harness chatbots and search engines to remedy rumor. It did remind me of the old *Parks and Rec* joke about Ask Jeeves, that it is like asking “a fake butler to google things for you.” But as noted above, I found this ethnographic portrait touching in Cofacts’s sincere efforts to stay with multiple troubles and foster digital care in the careless context of late-stage Taiwanese neoliberalism. It makes one wonder and anticipate what kinds of relations might emerge in a post-neoliberal digital world.

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Mei-chun Lee’s article, “Checking Facts by a Bot: Crowdsourced Facts and Intergenerational Care in Posttruth Taiwan,” offers a rich, ethnographically grounded exploration about how facts are coproduced by humans and machines in the so-called posttruth era. While this is a global question, a look at how cybernetic fact-checking plays out in sociotechnical cultures different from the Euro-American standard is a welcome move, especially when it comes to a world region—Asia—that has quickly become a leading player in global tech.

The article invites approaching collaborative facts—as Lee’s subjects call them—as one possible manifestation of what Noortje Marres deems experimental facts. Experimental facts denote those ever-emergent, highly iterative modes of fact production attuned to the “total test environments” (Marres and Stark 2020) online platforms create. No longer reliant on authoritative forms of fact production prevalent in the Fordist era, experimental facts reflect how new cybernetic media are rearranging epistemology in ways that blur established forms of boundary making between fact and fiction, objectivity and subjectivity, human and nonhuman agency.

In the case of Cofacts, these new mediations take the form of partly automated crowdsourcing of truth judgments by multiple actors. Crowdsourcing is a promising notion Lee takes from the “native” lexicon that would deserve further theoriza-

tion, in line with recent efforts at revamping crowd theory in anthropology and new media studies (Hayden 2021). This would prompt questions such as the following: Are all crowdsourcing processes the same? To what extent is the assumption of a “wisdom of the crowd” more than industry public relations? When is the wisdom of the crowd indeed wise, swarm intelligence indeed intelligent? Could they be, on the contrary, dysfunctional or even destructive?

Fascism, for instance, both in its analogue and digital versions, has been described in terms that approximate those of crowdsourcing. Hitler and Mussolini skillfully appropriated ideas and slogans from their followers while constantly testing the reception of their speeches among the crowds and adjusting them accordingly (Paxton 2007). More recently, Jair Bolsonaro’s aspirational fascism (Connolly 2017) has relied heavily on digital crowdsourcing from his followers, appropriating commonsensical notions already present in many segments of the Brazilian population such as a “good criminal is a dead criminal” (Cesarino 2022).

So what sets Cofacts’s chatbot apart as a democratic form of crowdsourcing rather than a fascist one? The absence of a clearly visible personal leader or guru may seem like a safe place to start, but then, this is also largely the case of digitally crowdsourced publics such as QAnon’s. Could it relate to Cofacts’s deliberate disavowal of the “God trick” (Haraway 1988) or to its limited reliance on market signals and attention economy metrics? Could it be that by encouraging its users to actively participate in fact-checking, the chatbot indirectly trains them into denaturalizing received information or even reverse engineering disinformation? What checks and balances, human and nonhuman, are in place to prevent crowdsourcing from escalating into extremist or conspiratorial dynamics? Are there safeguards in place to prevent Cofact’s chatbot from being hacked by disinformation entrepreneurs? Exploring these questions through ethnographic and comparative studies may help shed light on how to counter disinformation democratically without relying on claims to disembodied objectivity.

Finally, these questions may be further advanced through another of Lee’s interesting lines of argument, that the chatbot can act as “both an agent of fact and an agent of care.” If platforms have ushered our public spheres into an era of “affective facts” (Massumi 2010), then debunking disinformation must necessarily include an affective dimension and operate at the level of mediations rather than content. If people already know the factual truth in advance of online engagement, then relational dimensions may bear more weight in such epistemological negotiations. Lee’s account suggests that delegating truth telling to a chatbot could serve as justification for subjects to suspend their own hard-pressed truths in the name of repairing intergenerational affect without “losing face.” It would be interesting to follow up Lee’s findings through a more nuanced ethnographic exploration of how baby boomers respond to being fact-checked by bots and, conversely, how their children and grandchildren react in those instances where such stratagem fails.

Lee shows that the contemporary politics of truth is a matter not only of epistemology but also of ethics. She thus presents a profound reading of the problems of publicity in polarized societies, where conflicts between publics so often become lodged in conflicts between intimates. In articulating the promise of Cofacts, Lee provides an important glimmer of hope, namely, that the impasse of political polarization can be bridged without compromising one's convictions.

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This article is written from the perspective of anthropology and provides an in-depth analysis of Cofacts's contributions to fact-checking in Taiwan. Cofacts is one of the fact-checking organizations that emphasizes collaboration and crowdsourcing from the public to debunk mis/disinformation on the messaging app LINE. They have demonstrated how the audience engages with fact-checking to help them make sense of public narratives. This article also introduced that the core of Cofacts is volunteers who have backgrounds in computer science and who have organized g0v for digital transition and Cofacts for fact-checking in Taiwan.

In addition to the research method of ethnographic approach in this article, the qualitative research of anthropology has transited from field sites to websites in the digital age. Online ethnography (Hetland and Mørch 2016) is similar to traditional ethnography, so the researcher could conduct immersive observation on the Internet (Bengtsson 2014). It could provide researchers with in-depth observations on the digital footprint of users from social media and websites. Online and offline research methods could be converged to make greater contributions to future research.

Like other fact-checking organizations in Taiwan, Cofacts believes that the truth exists. In fact, a "posttruth" does not deny the existence of objective facts. More epistemologists have tried to make sense of the idea of correspondence to reality and explain a particular statement as a "fact" (Fuller 2018). Even so, it is hard to make fact-checking about political posts and statements, especially since political polarization and echo chambers have been created in the age of posttruth. Fake news may not be persuasive in cultural and political conflicts (Peters, McLaren, and Jandrić 2020).

It reminds us to realize the limitations of fact-checking. What we need to be concerned with is that people are more willing to trust information that appeals to their emotions and personal beliefs than to seek out facts and objective information (Cook 2018). Fake news does not concern ideas but facts. The "marketplace of ideas" was always about ideas, not facts (Waldman 2018).

According to the author, the difference in methodology between Cofacts and other fact-checking organizations is that most fact-checking organizations usually hire journalists and

researchers to debunk rumors. Cofacts said that they do not believe in an omnipotent judge. They believe that they can get close to the truth only through the collaboration of citizens. The author argued that the concept of "embodied objectivity" insists on the particularity and embodiment of all vision to challenge disembodied objectivity. It is important what objectivity the fact-checking service provided and what we believed. It suggests that critical pedagogy advocates that people continuously dialogue with society through themselves so that they can get closer to partial reality.

Habermas (1989) has proposed the concept of "the public sphere" as a metaphor of media. As Graves (2016) argued, the work in building a new journalistic institution for fact-checking is the same truth seeking as a traditional journalist. As a matter of fact, the fact-checking movement in the world included journalists around their countries. The concepts of "debunk," "truth," and "fact" always appeared in this paper quite the same as journalistic discussions in investigative journalism. It is a big question in the history of journalistic research, as well as in the age of posttruth. This debate coincides with the continuation in journalism of whether elite journalists or active citizens could reach the truth or authenticity we need in a democratic society.

In the 1920s Dewey and Lippmann debated on the role of media and the public in a democratic society. Dewey argued that democracy depends on the participation of citizens. Dewey believed that the public is capable of rational thought and decision-making. Although the quality of citizens may be flawed, it can be cultivated. Lippmann argued that the democratic quality of citizens is generally poor. Experts like journalists have their duties to ensure that the public be informed and then enhance democracy for the public (Iggers 1999). Under Lippmann's argument, it is hard for the public to participate in democracy.

Comparing the ideas of Lippmann and Dewey shows a clear contrast between elitism and antielitism (Schudson 1999). Following the debating, Cofacts disagreed that experts like journalists or researchers have more power than the public. They believed that the public could actively participate to find the truth in public lives.

Fact-checking organizations are just like news media and journalists whose verification of fact-checking is subject to the public. Any fact-checking units need to represent the truth with transparency and objectivity in a democratic community. All of the outcomes of fact-checking are actually fact-checked greatly by the public. The public with media literacy and education is able to distinguish truth and falsehood.

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Confronting the Politics of Knowledge

How can the politics of knowledge be done differently? What alternative epistemic practices and communities are possible?

and even my great-aunts used WhatsApp. They had never used the Internet before and so that's what it became." Maria Carolina Santos is a journalist in the Brazilian city of Recife. She gave a slight shake of her curly, dark-haired head. "You'd see that funny video, those little comedy bits that come in. And the 'good morning,' there were those good mornings, the stickers, and so on. And from the same people, health information, or rather fake health news. Which there is a lot of—a tea for arthritis, 'if you drink this comfrey juice with orange every day, you won't get diabetes.'" Maria Carolina went on, "Then you start to receive things that are more ideological, right? The person who offered these green juice recipes also started sending these ideological things and the person already recognized it because it was what they had been reading for years."

Maria Carolina wrote an impassioned accounting of her profession's sins some years back, in between the first and second round of the 2018 elections that had put reactionary right-wing candidate Jair Bolsonaro in the presidency. Her rebuke of journalism and its failure to adapt to a new information environment went viral among my Facebook contacts at the time. When I tracked her down for an interview in April 2023, I asked how she had seen what was happening so clearly. She shrugged and smiled. "I love WhatsApp groups. I love to just see, to follow along, you know, not to talk. But I saw, for example, how I was left in the dust during the election of '18, like a lot of people were. Because there were so many lies. And you could see that journalism was completely lost. A lot of money, a lot of foundation money was for fact-checking projects, which I hate. I think it's antijournalism. Journalism has to be at the fore. Journalists have to go after the facts. Today, you have to establish a bond of trust to give the news. This fact-checking journalism arrives afterwards, it's debunking (*desmentindo*) things. Who likes someone who just debunks? Nobody likes the one who is debunking. Nobody!"

I remembered our conversation as I read Mei-chun Lee's "Checking Facts by a Bot: Crowdsourced Facts and Inter-generational Care in Posttruth Taiwan." As Lee so neatly puts it, "Social media has become one of the main sources of information and a new political battleground." On Taiwan's LINE, as in WhatsApp in Brazil and elsewhere, an older generation of relatives is especially implicated in mis- and disinformation transmission. If the "WhatsApp aunties" (*tias do Zap*) and uncles are particularly active players in encrypted messaging networks, they are also particularly vulnerable. Cofacts, the crowd-sourced fact-checking service that Lee explores, is a response to this situation in Taiwan, one that is sensitive to the digital divide between generations and the cultural norms of their interactions.

There have not been many anthropological accounts of fact-checking, and this is one of the contributions of Lee's article. She provides the kind of tangible nuance about why Cofacts was developed and how it works that can come only from fieldwork. One could read online that it is a service that combines a chatbot and a database of responses researched and written up by volunteers. But we come to understand that, like with Maria

Carolina's great-aunts, the messaging app *is* the Internet for many Taiwanese elders, and they really do not know how to google. And we learn that a kind of care and filial piety led to the invention of this approach, so that instead of confrontational correction of the rumors and scams posted to LINE, nieces and nephews, sons and daughters can use Cofacts. "I don't need to say they're wrong," Lee's interlocutor explains, "I only need to forward what the bot says."

The downsides of what Cofacts cofounder Johnson Liang calls the "free market of speech" perhaps loom larger for me than in this account. Alt-science, a name that intentionally echoes "alt-right" (Casarões and Magalhães 2021), is a much gloomier representation of citizen action. People who supported the use of ivermectin and hydroxychloroquine for COVID-19 long after studies failed to find benefit also claimed the mantle of science, pointing to misleading studies and personal anecdotes. To be fair, this included doctors; they, as much as the layfolk who were sucked in, took up a science with its own sort of standards, an *I*-pistemology in which their senses and personal experience replaced knowledge coming from official institutions and experts (van Zoonen 2012). The medications' purported benefits fatally dissuaded and delayed people getting to the hospital and convinced others that they could protect themselves without a vaccine.

Yet the very real flaws of popular knowledge making have to coexist alongside the reality that, as Cofacts editor "Butterfly" says, "This is no longer an era where truth is confirmed by a single authority." Another contribution of Lee's article is to insist that Cofacts instantiates both a posttruth loss of certainty and an embodied "political and epistemological reconfiguration." As a Wikipedia of rumors, Cofacts emerges from and contributes to this new reality. Lee suggests that the kind of crowdsourced fact-checking done by Cofacts accepts the "indecisive, easily changing, and vulnerable condition of facts . . . to provide an alternative way to reconstruct facts without resorting to authorities." I might argue that they are still resorting to authoritative knowledge, albeit black boxed and presented as a choice (users get to up- or downvote the response options that the chatbot retrieves for them), but regardless, the ramifications are far-reaching. Cofacts is clever on a practical level. The one thing all of these furiously forwarding relatives know how to do is send you a message, so making forwarding the mechanism of accessing the database is ingenious. But what strikes me as transformative about the tack taken by Cofacts is that it works on an ethical level. "By training its users to think critically and actively contribute, Cofacts makes fact-checking not just about producing another piece of content in a sea of rumors but a collaborative practice to combat rumors."

Using the service as much as editing for it is a mode of subjectivation (*assujétissement*), inviting or inciting people "to recognize their moral obligations" (Foucault 1997:264). For better or worse, they shape themselves as they read options, assess claims, and choose the one they want.

Despite the potential for digital care inherent in this posthuman assemblage, there are complexities in its implementation. As I argue in the article, by delegating the task of delivering fact-checking results to the “inhuman” chatbot, *yàn shìdài* (“the weary generation”) can avoid confronting their parents in the midst of hotly debated elections, thereby softening intergenerational conversations rather than outright rejecting them. Using the chatbot may spare *yàn shìdài* from directly confronting their parents, but this does not mean that the one being corrected will happily accept it. Meg Stalcup’s Brazilian friend Maria Carolina is right: “Who likes someone who just debunks? Nobody likes the one who is debunking. Nobody!” Cesarino has a similar comment and asks an important question about “how baby boomers respond to being fact-checked by bots and, conversely, how their children and grandchildren react in those instances where such stratagem fails.”

Certainly, nobody enjoys being corrected or fact-checked. Even if the fact-checking responses are delivered by the chatbot with care, recipients may still feel offended. As Michelle Murphy reminds us, care is not always enjoyable and desirable; it often entails “work of discomfort, unease, and trouble” (Murphy 2015:721). To avoid making the corrected individual feel uncomfortable, Cofacts is designed such that users must actively forward a rumor to the chatbot to receive a fact-checked response, and they have the discretion to decide whether to share these responses with the original group where the rumor originated. Correcting rumors is an art of communication—the timing of replies, tone, and choice of words all influence the recipient’s perception. While Cofacts serves as a platform for care, the manner in which this care is delivered ultimately depends on each individual user.

It is worth noting that, as Cofacts is open-source, its code and database are freely available for anyone to use. An engineer has used Cofacts’s database to build another chatbot called Auntie Meiyu. LINE users can add Auntie Meiyu as a member to their group. When Auntie Meiyu finds a member sending a message with incorrect information, she will proactively intervene to correct it. While the design of Auntie Meiyu makes fact-checking effortless, it has faced backlash. People feel that their conversations are being monitored. Also, the real-time and rigid corrections from Auntie Meiyu have made many people feel uncomfortable. I once asked the founder of Cofacts if they would build something similar to Auntie Meiyu, and they firmly said no. They do not want to see machine responses completely replacing human communication.

Nevertheless, some seniors initially distrusted Cofacts’s chatbot because of negative portrayal by a mainstream media outlet during the 2018 elections, which labeled it as a political tool for a specific party. However, with the outbreak of the COVID-19 pandemic in 2020, the demand for fact-checking surged. Since health-related rumors are less politically charged compared with election-related ones, Cofacts regained trust among seniors. Recently, as Taiwan faces persistent threats

from China’s information operations, the public has become increasingly vigilant against mis/disinformation. Many civil society groups are engaged in community outreach to promote media literacy. In these initiatives, young instructors provide hands-on guidance to seniors in using various fact-checking tools, including Cofacts. In my subsequent research, I participated in these courses and witnessed the transformation of the elderly from passive recipients of fact-checking results to active users of fact-checking chatbots. While the individuals I observed may not represent the entire baby boomer generation, their evolving trust in fact-checking tools suggests a broader trend among seniors in Taiwan.

In the comment, Cesarino poses another important question that has been on my mind as well: “Are all crowdsourcing processes the same? To what extent is the assumption of a ‘wisdom of the crowd’ more than industry public relations? When is the wisdom of the crowd indeed wise, swarm intelligence indeed intelligent? Could they be, on the contrary, dysfunctional or even destructive?” She uses the example of Jair Bolsonaro’s aspirational fascism and asks, “What sets Cofacts’s chatbot apart as a democratic form of crowdsourcing rather than a fascist one?”

Cesarino’s questions point out the dual nature of digital technology—the crowd participation it fosters can be either democratic or populist. I believe that the key to making Cofacts democratic rather than populist lies in the fact-checking process itself. This demanding task requires significant time investment and prioritizes logical thinking to counter narratives based on emotion and belief, attracting individuals with keen discernment rather than impassioned crowds. Other commentators also offer insightful perspectives on this issue. Lin reminds us that “all of the outcomes of fact-checking are actually fact-checked greatly by the public.” Meg also notes that “using the service as much as editing for it is a mode of subjectivation (*assujétissement*), inviting or inciting people ‘to recognize their moral obligations’ (Foucault 1997:264). For better or worse, they shape themselves as they read options, assess claims, and choose the one they want.” Additionally, Perng quoted Haraway’s “response-ability” to describe the ethical responsibility borne by participants amid the uncertainty and crisis-laden landscape of posttruth. These insights collectively underscore that Cofacts’s crowdsourcing transcends mere passionate activism, embodying a conscientious effort by citizens to meticulously verify facts and curate responses deemed most suitable for their society.

I am sincerely grateful to Dominic Boyer, Leticia Cesarino, Andrew Graan, Chao Chen Lin, Sung-Yueh Perng, and Meg Stalcup for their invaluable comments, thought-provoking questions, and stimulating discussions. This exchange has allowed me to refine my arguments and enrich my understanding with additional field materials gathered since the writing of this article. Today, the issues of posttruth and mis/disinformation are not only pertinent but also pressing. It is my hope that through my article and our subsequent dialogue, we

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Figure 1. Screenshots from a conversation with Cofacts's chatbot.