Armed in ARMY: A Case Study of How BTS Fans Successfully Collaborated to #MatchAMillion for Black Lives Matter

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ABSTRACT
Music fans strategically support their artists. Their collective efforts can extend to social causes as well: In 2020 for example, ARMY—the fandom of the music group BTS—successfully organized the #MatchAMillion campaign to raise over one million USD to support Black Lives Matter. To better understand factors of fandoms’ collaborative success for arguably unrelated social goals, we conducted a survey focusing on ARMYs’ perceptions of their fandom and their social effort. Most ARMYs viewed the fandom as a community, loosely structured with pillar accounts. They reported trust in each other as well as high team composition, which mediated the relationship between their neutral psychological safety and high efficiency. Respondents attributed their success in #MatchAMillion to shared values, good teamwork, and established infrastructure. Our findings elucidate contextual factors that contribute to ARMYs’ collaborative success and highlight themes that may be applied to studying other fandoms and their collaborative efforts.

1 INTRODUCTION
Fans of celebrities, movies, characters, sports teams, and other public figures are increasingly growing in size and impact, as evident from such tangible examples as the crowdsourced fan series “Star Trek Continues” [55, 63] and the work done by the Harry Potter Alliance, a non-profit run primarily by Harry Potter fans who fight for human rights.1 Similarly, music fandoms have become prominent in the current landscape of social media, collaboratively accomplishing goals on these platforms on a regular basis [39, 47]. Due to fandoms’ massive size and influence, it is often the negative aspects, such as toxic behavior (e.g., bullying or doxxing), that garner media attention [12, 33, 51, 64]. Yet fandoms are also sources of positive influence, as showcased by numerous donations and other forms of support that fans provide not only for artists, but also for each other—at times for social causes that seem unrelated to their artists.

ARMY (Adorable Representative M.C. for Youth) is the fandom of BTS, a music band of seven members originating from South Korea that debuted as a unit in 2013 [48]. Estimated to be in the millions [46, 57],2 ARMY has made headlines in popular media for many different reasons. It has undoubtedly become one of the most powerful and visible fandoms on social media [71], where they have accomplished a number of records. On August 21, 2020, ARMY worked together to break the record for most YouTube views in the first 24 hours for BTS’s single “Dynamite” with 101.1 million views [73]. As of December 26, 2020, ARMY has also kept BTS at #1 on the Billboard Social 50 social media chart for 210 weeks.3

One of ARMY’s most prominent accomplishments beyond these record-breaking music efforts was their June 2020 #MatchAMillion campaign, in which they raised more than one million USD for the Black Lives Matter (BLM) movement. When BLM was reignited by the murder of George Floyd in late May of 2020, One In An ARMY (OIAA)4 mobilized to create a Twitter thread and establish a carrel,5 enabling ARMYs to donate to various organizations to “provide both immediate resources and long-term support for the Black Lives Matter movement and Black people”. On June 6, 2020, it

1https://www.thehpaliance.org/what_we_do
2BTS’s official social media accounts report that they have approximately 29 million followers on Twitter and 36 million on their BANGTAN TV channel on YouTube [46]. Weverse, an app BTS’s label Big Hit Entertainment released as a venue for BTS and fans to interact through, sees 1.4 million users daily on the platform [57].
4OIAA (https://www.oneinanarmy.org/) is “a fan collective comprised of volunteers across the globe” that believes in using their “collective power for global good”. The motto “I am ONE in an ARMY” suggests that “many people giving small amounts can create a substantial impact when we work together”.
5An interactive one-page site through which ARMYs were able to donate.

CCS CONCEPTS
• Human-centered computing → Human computer interaction (HCI): Empirical studies in HCI: Collaborative and social computing: Empirical studies in collaborative and social computing: Interaction paradigms;

KEYWORDS
Online community, Collaboration, Collaborative success, Teamwork, Fandom, Fan activism, Philanthropy

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was made known that BTS and Big Hit Entertainment had donated one million USD to BLM. This donation led to an idea for ARMY to match it, and soon fans on Twitter started sharing messages to encourage each other to achieve this goal. Approximately one day later, ARMY exceeded the one million USD donation [7].

Involvement in philanthropic deeds is not new for fandoms. Lady Gaga has encouraged her fans, Little Monsters, to actively engage in “a range of philanthropic and activist efforts” [6]. One Direction fans, Directioners, have donated to charitable causes in honor of members’ birthdays [67]. Fans of Seo Taiji and Boys once raised 35 thousand USD to plant 27,500 trees in an effort to preserve the Brazilian rainforest [30]. The “values inherent in fandoms have increasingly become the basis for political action, since [...] its passively hysterical, Beatlemania beginnings” [53]. However, ARMY’s #MatchAMillion feat is particularly notable in that these fans were able to organize themselves to advocate BLM so prominently without BTS explicitly asking them to do so, and on a scale much larger than previously seen. In fact, ARMYs have organized and engaged in more than 600 fan-driven campaigns, donating more than two million USD despite BTS never asking them directly to participate in any of these efforts. This brings us to the guiding question of our research:

\textit{How does an online fandom collaborate autonomously, effectively, and impactfully for a cause that is unrelated to its initial purpose of formation?}

To address this question, we conducted a survey-based case study to examine ARMY’s recent #MatchAMillion campaign as a unique example of an impactful social collaborative effort [58]. Case study research is particularly appropriate as our question seeks to “explain some contemporary circumstance (e.g., “how” or “why” some social phenomenon works)” and requires an “extensive and “depth” description of some social phenomenon” [84]—that is, how fandoms collaborate effectively for a cause separate from their artists. Our exploratory survey was designed to better understand (1) how ARMYs view the fandom as a collective, (2) how individuals become motivated to contribute to social collaborative efforts orchestrated by ARMY, and (3) how they perceive the fandom’s involvement in #MatchAMillion. Here, “social collaborative effort” (SCE) refers to collaborative efforts that ARMYs undertake for social reasons that are distinct from other collaborative activities that directly support BTS, such as streaming or voting. We sought to understand ARMYs’ mental models of the fandom’s structure, confidence in the collective, shared culture [36], as well as their motivations for and collective achievement of #MatchAMillion. In addition to exploratory questions, we also probed ARMYs’ perceptions of team characteristics (e.g., team composition, cohesion), organizational culture, and the fandom’s efficacy and viability from having achieved #MatchAMillion.

Our work elucidates fans’ perspectives of their fandom—an instance of an online collective or community [2] that is especially nebulous due to its organic formation and evolving membership [50]. More importantly, we contribute to better understanding how a fandom collaborates effectively through a concrete SCE. We also shed light on fans’ perceptions of their collaborative efforts and the effects of the fandom’s success in achieving their goal in the #MatchAMillion campaign. By understanding the contextual complexity surrounding ARMY’s engagement in SCEs, we hope to bring clarity as to whether unique factors within the ARMY fandom lead them to quick and large-scale successes. Furthermore, by contextualizing fans’ perceptions of their community within group literature, we contribute to understanding which team characteristics are prominent in this fandom. Given that fandoms have been gaining traction, growing larger, and showing immense power [82]—and collectives are increasingly forming in similar manners as fandoms—our work may also provide grounding for understanding future online fandoms and communities.

2 RELATED WORKS

2.1 Global fandom and social media

Fandom is a well-researched area of study with existing literature showcasing the evolution of popular media fandom since the 1930s [9]. Since then, fans have remained at the forefront of technological transformation and have become “well-integrated into the media landscape” [9]. Continued advances online have impacted key areas of fandom regarding communication, creativity, knowledge, and organizational and civic power [6]. The internet has also become a “social hierarchy where fans share a common interest while also competing over fan knowledge, access to the object of fandom and status” [32].

Fandom, as considered in this paper, refers to “the regular, emotionally involved consumption of a given popular narrative or text” [68]. Of this, the ARMY fandom shows the characteristics of “transformative fandom”, which is “a subset of fan culture that remixes elements from original media (e.g. movies, video games, and books) into new media that is transformative of the original content” [21, 24]. Examples of transformative works by ARMY include numerous “theory” videos in which the fans connect different elements to understand the overarching narrative of the “Bangtan Universe”, an alternate universe created by Big Hit Entertainment, told through transmedia storytelling (e.g., theory explanation). BTS Universe Story is another example—it is a sandbox game in which ARMYs participate by creating their own stories using BTS members as characters and sharing them with other fans.

Social media has given both individuals and groups the power to expand their reach and create solidarities within this massive infrastructure [17]. Twitter especially became a predominantly used platform by digital fandoms, as it emerged as a powerful tool permitting real-time exchange of information on real-world happenings [4]. Use of hashtags and the act of trending are significant aspects of Twitter that showcase online groups’ cohesion, helping to bring visibility to the topics they are promoting and “spread their relations with their idols” [47, 66]. An analysis of One Direction fans, Directioners, and their ability to influence and dominate Twitter trends found that the fandom’s Twitter network comprised many clusters of fans who were highly interconnected [69]. While it was made up of some big fanbases who had the most influence due to their large following, each fan—no matter how small of a following—played a key role in driving conversation on the platform, especially if they worked as a collective [69].

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As a global fandom on social media, ARMY has been examined as a “tribe” with four dimensions—digital intimacy, non-social sociability, transnational locality, and organizing without an organization [17]. Chang and Park [17] emphasized ARMY as having organizational awareness and valuing teamwork, while also being spontaneous, boundaryless, self-governing, and without any leader. While there is no central coordinating organization within the fandom, ARMY is still successful in coordinating projects and achieving organizational cohesion through a structure in which members propose an action, spread the word, and others “show up” for the cause [17].

2.2 Activism and philanthropy by music fans

A wide range of existing literature on fan activism has helped to provide a better understanding of how fan cultures mobilize around political and civic goals. Fan activism—“fan driven efforts [used] to address civic or political issues through engagement with and strategic deployment of popular culture content”—is considered a form of participatory culture [11]. In recent decades, younger generations have been more engaged civically and politically, participating more often through informal, nonhierarchical networks online [11]. According to Jenkins [35], this space—where popular culture and participatory culture come together, and there are low barriers to entry—enables civic skills to be cultivated.

Activism and organization work within fandoms due to fans’ “intense individual investment in the text” as “they participate in strong communal discussions and deliberations about the qualities of the text” [5]. Additionally, the strength of fan activist groups is built on shared media experiences, a sense of community, and the wish to help [43].

There have been many notable examples of fan activism by music fans throughout years, as we have seen artists such as Lady Gaga with gay rights and U2 with antipoverty campaigns [38]. It is also prevalent among Korean popular music (K-pop) fans who have “long-provoked criticism in Korean society due to their fan-atactic behaviours” [41]. According to Kim [41], the public started to reconsider this negative stereotype of K-pop idol fandom in the late 2000s due to the transnational popularity of K-pop groups and fans’ philanthropic actions. These activities are now common within the K-pop community, with fundraising and charity efforts not only initiated for civic engagement, but also used to promote the artists they support [38]. While some might devalue charitable acts by fandoms with assumptions that their motive is merely “to promote their singer or that it’s a shallow fad,” fandoms such as ARMY are proving that “self-initiated actions […] lead to factual aid regardless of motive” and can be contagious [48].

2.3 Group identity, image, and values

The rise of social media has assisted fan activist groups in their development and widespread engagement, and has also led to celebrities using their platforms to mobilize their fans to partake in philanthropic and activist projects [6]. Fans can be strongly impacted by a celebrity’s values and actions, resulting in supportive and politically engaged fan communities. For example, Lady Gaga’s fandom, Little Monsters, have said that the singer’s political activism played a role in strengthening, reinforcing, or enhancing their own views [19, 25]. Furthermore, many were exposed to new ideas, and their worldviews were transformed by Lady Gaga’s political activism [19]. The singer was also able to influence fans who had never previously participated in philanthropic or activist efforts, allowing them to realize the change they can make through her [5].

BTS’s values resonate with fans, but are more subtly found in the messages and social commentary within their music, where “messages about youth, dreams, struggle, and self-love [are] easy to relate to and identify with” [56]. A big part of BTS’s appeal is the group’s perceived authenticity in the eyes of fans who strongly connect with the members through shared lived experiences, inspiring them to believe that they too can overcome similar obstacles [42, 56].

ARMY as a whole also work to uphold their own positive image in the eyes of the public and their idols. As fans build up various types of skills, knowledge, distinctions, and vocabulary as a fandom, they recognize the rules of their culture [28]. Because it is common for Korean media to cover news related to K-pop fan communities [41], ARMY is often found reminding each other that “ARMY are the faces of BTS” [48]. Part of K-pop fandoms’ participatory culture focuses on the responsibility to build their public image [41, 48]. For ARMY, this has led to creating etiquette campaigns that instill “rules of proper public behavior, such as not littering around the [concert] venue, not standing on the spectator seats, and to be polite when other singers perform” [48]. According to Lee [48], ARMY aims “to be exemplary fans in the image of BTS, who always strive to be wholesome and good influence.” Furthermore, fans’ self-reflection and control over their roles and values have also led to the development of policing structures within fandom to ensure that they “actively and positively contribute to the […] community” [79].

2.4 Fandom as group and team

The collective efforts shown by ARMY suggest that the fandom often works more as a cohesive group, team, or organization than a simple network of people. Therefore, literature on organizations and teams is pertinent to our study. ARMY is a “purposive group” [29], having a clear purpose for existing (i.e., to support BTS). Yet defining ARMY as a group, which encompasses “an enormous variety of social forms” [29], is increasingly ambiguous as membership is nebulous—the composition of the group shifts and sometimes inconspicuously (e.g., online) [80]. While it is possible to purchase the official, annual ARMY membership, many BTS fans still identify as ARMY without this membership. Prior to the launch of Weverse, two had to take an exam to be part of the official fan café. Even after the launch of Weverse, the fan café still exists with the same gatekeeping mechanism [85], while on Weverse, anyone can participate as ARMY.

Despite this dynamic nature, psychological sense of community (PSOC) can arise in fandoms. Such is the case of science fiction fandoms, as found through a survey study measuring five factors including belonging and cooperative behavior that suggest “PSOC can be a strong facet of communities of interest” [62]. Strong PSOC was found “in the absence of geographic proximity, even in the

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1This exam comprised various questions (e.g., about BTS’s discography) that changed every cycle to prevent cheating, and it was not uncommon for fans to have to take it multiple times to get the perfect score to be accepted into the community.
absence of regular face-to-face contact” [62]. Furthermore, PSOC was found to “predict general participation in a community collaborative” [61]. Along the same lines, PSOC can be found in the way fans use the pronoun “we” to represent their communal identity. As seen through a textual analysis of comments on BTS’s official Facebook page, fans “make their presence as a group known to each other and represented as culturally heterogeneous but coordinated for collective action” [15].

Comparable to PSOC is team cohesion, described as “a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives” [15], as both have the “intent to measure ‘connectedness’ within a collective context” [10]. While it is unclear which is the most suitable entity descriptor for fandoms (e.g., group, team, organization, community, or network), they work together collectively and often show team characteristics such as team cohesion. Team cohesion has been shown to have a strong relationship with team outcomes, which “may include performance (e.g., quality and quantity) and members’ affective reactions (e.g., satisfaction, commitment, viability)” [54]. In particular, team cohesion has been found to be positively related to team success [16], perceived performance, and team viability [77]. Team beliefs—team efficacy and team psychological safety—have also been found to affect team performance, mediated by team learning behavior [22]. Team efficacy, which is “a group’s shared belief in its conjoint capabilities to organize and execute the course of action required to produce given levels of attainment” [1], has “been found to be positively related to many types of group outcomes” including “team satisfaction and the resulting viability of a team” [70].

As ARMY is a community based on a common interest in (and passion for) BTS, we expect their PSOC will be reflected in team psychological safety. Having had multiple successes in collaborative efforts for both BTS-related and -unrelated causes, we expect ARMYs to have a high pre-existing sense of team composition correlated with high team efficacy. We hypothesize #MatchAMillion is a campaign made possible not only because of a love for BTS, but also because of a shared value system of philanthropy. Finally, we expect that ARMYs’ perceived success of #MatchAMillion will show high team cohesion and viability as well as higher team efficacy from this campaign.

3 METHODS

3.1 Survey design

We conducted a survey in order to sample the large, diverse, and global ARMY fan community. Comprising free-text, ordinal, and multiple-choice questions, the survey collected basic demographic information and probed three main themes related to our research question. The complete list of survey questions can be found in the Supplementary Material.

3.1.1 How ARMYs see ARMY. We first wished to garner insights into perception of the ARMY fandom by its members. Participants delivered descriptions of how they view ARMY, and elaborated on confidence (or lack thereof) in the fandom. Prior pilot interviews revealed variances in how individual ARMYs regarded the fandom—for instance, as an organization or a large team. As we could find no established metrics specifically for fandoms, we considered various metrics with which to characterize ARMY. For organizational culture, particularly the “compliance, motives, leadership, decision making, effectiveness, values and organizational forms” [20], we referenced the Organizational Culture Assessment Instrument (OCAI) [14]. OCAI is itself based on Quinn and Rohrbaugh’s Competing Values framework [65], whose axes of (1) flexibility and stability, and (2) integration and differentiation are “inherent in any human system” [20]. Inspired by OCAI, we derived four characteristics to describe the following organizational culture types (Figure 1): Clan (flexibility, internal focus) emphasizes discretion, dynamism, and concurrently emphasizes integration and unity; Adhocracy (flexibility, external focus) emphasizes innovation and creativity while accommodating change and risk; Hierarchy (stability, internal focus) emphasizes control, organization, and efficiency; and Market (stability, external focus) emphasizes competition, strategy, and meeting goals. Given ARMY’s ability to mobilize and organize to carry out #MatchAMillion, we also investigated a variety of team metrics referenced from prior literature [22, 77].

Figure 1: ARMY’s culture type was assessed based on four characteristics selected for each of the four culture types—Clan, Adhocracy, Hierarchy, and Market—according to the Competing Values Framework and Organizational Culture Assessment Instrument [14].

3.1.2 ARMYs’ personal involvement in social collaborative efforts. Our second category of questions aimed to assess motivations for joining the BTS fandom, clarify individual ARMYs’ level of involvement in SCEs before and after joining ARMY, and understand the specific nature of their involvement in such efforts.

3.1.3 Fandom involvement in social collaborative efforts. Our final category of questions assessed participation in SCEs—in ARMY and other fandoms—as well as fans’ perceptions of both the organization of ARMY and involvement (individually and collectively) in the #MatchAMillion campaign. Finally, we queried participants on the perceived success of #MatchAMillion, as well as the extent to which success—and awareness thereof—influences further participation in ARMY’s SCEs.

3.2 Participants and data collection

This study was approved by the ethics boards of all the co-authors’ universities; each participant confirmed their eligibility and approved consent information presented at the start of the survey prior to answering any questions. Participants were recruited through Twitter using a prominent BTS/ARMY research account with over
60K followers at the time of recruitment. We used this Twitter account because it has a significant following of ARMYs from around the world. Posts promoting the survey were shared by followers several hundred times to individuals even outside of the Twitter account’s network. Overall, it received over 4,800 engagements on Twitter.\(^8\) The diversity of the respondents who participated in the survey reflects the diversity of the ARMY fandom. Responses were collected over 10 days, from August 13–22, 2020.

We obtained responses from \(N = 273\) eligible participants who self-identified as ARMY and took part in #MatchAMillion. The age range of participants was 18–63 years (\(M = 27.7\) years) and 255 (93.4\%) were female. Forty-nine nationalities and multiple races and ethnicities were represented: White (40.7\%), Asian (29.3\%), Hispanic, Latino, Spanish origin (12.8\%), Black (6.2\%), multiple race/ethnicities (6.2\%), and Middle Eastern or North African (1.5\%). Further details on nationalities are included in the Supplementary Material. Regarding affiliation with ARMY, 72\% of respondents became an ARMY the same year they became a BTS fan, and 22\% a year later. Participants indicated becoming a BTS fan and identifying as ARMY predominantly between 2016 and 2018 (41\% BTS fans, 51\% ARMY), followed by 2019 or later (38\% and 43\%, respectively); only 11\% reported becoming a BTS fan, and 6\% an ARMY, in 2013–2015. Based on ordinal responses from 1 (“never”) to 6 (“multiple times per day”), the social media platforms used most by ARMY were Twitter (\(M = 5.94\)), YouTube (\(M = 5.44\)), and Weverse (\(M = 4.49\)). The #MatchAMillion/BLM campaign was viewed by all as either successful (\(N = 259\)) or somewhat successful (\(N = 14\)).

### 3.3 Data analysis

Due to the voluntary nature of the survey, responses to most questions were optional. We report mean responses for quantitative questions based on the total number of responses given. For questions assessing characteristics of teams (as reported in Tables 1 and 2), we followed the procedure of Edmonson [22]. First, the scoring scale for questions reflecting reverse wordings (e.g., “If you make a mistake within ARMY, it is often held against you”) was reversed. Following that, based on complete responses across all categories of interest, we computed Cronbach’s alpha across the sub-questions for each category. We then computed each participant’s mean and standard deviation across the questions in each category, and correlated the mean vectors between all pairs of categories. Motivated by Edmonson’s report of the relationship between safety and performance being mediated by learning [22], we additionally performed two mediation analyses: First to determine whether team composition was a mediator between team psychological safety and efficacy, and second to determine whether the relationship between team efficacy and viability was mediated by team cohesion. For these linear models we treated the ordinal responses as approximately continuous [60]. Finally, for responses reflecting paired comparisons (as reported in Figures 3 and 4), we conducted paired two-tailed t-tests, correcting for multiple comparisons within each group using False Discovery Rate (FDR).

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\(^8\)Engagement is “Total number of times a user interacted with a Tweet. Clicks anywhere on the Tweet, including Retweets, replies, followers, likes, links, cards, hashtags, embedded media, username, profile photo, or Tweet expansion.”


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4 RESULTS

### 4.1 How ARMYs see ARMY

As a first step toward understanding how ARMY carried out the #MatchAMillion campaign, we asked participants how they viewed ARMY as a group, and why. Across 261 free-text responses (IRR = 100\%), 83\% involved nouns—most frequently “community” (55\%) and “family” (15\%), followed by “network” (13\%), “group” (10\%), and “team” (10\%). The most commonly used adjectives were “diverse” (31\%), “supportive” (20\%), “organized” (17\%), “united” (10\%), and “collaborative” (8\%). Many responses expressed multifaceted and nuanced perceptions of ARMY as a group—e.g., “A community and a movement [...] communities are groups that nurture [a] shared identity and have implicit social rules and a culture. But ARMY is not closed within itself, we’re interested in impacting the world, so we’re also a movement” (P114); “Family. We don’t always get along, and we have disagreements, but we fight for one another” (P237).

**Perceived structure.** Participants were mixed in their perceptions of whether or not the fandom was structured as a group. Of the 239 responses that could be coded as “structured”, “not structured”, or “mixed” (IRR = 97.2\%), 55\% expressed that ARMY was structured and 23\% that it was not; 22\% indicated that ARMY was both structured and not structured depending on perspective. Those who felt ARMY was structured sometimes mentioned large social media accounts serving as “informal leaders” (P001) and providing structure by serving as pillars or hubs within the fandom: “This hub-spoke model happens with numerous accounts [...] and they are all interconnected” (P245). Those who perceived no structure at times acknowledged the large fanbase but felt ARMY lacked overall organization—“No, it’s not structured as a group at all, though perception might be that it is” (P018); “We just come together at times” (P137)—or attributed the perceived lack of structure to an absence of a formal organizing entity: “Not structured, but interconnected. We don’t have a ‘leader’ [...] but many groups or persons who lend their skills and expertise” (P074). Despite the large accounts and reliance upon them, most participants viewed the community structure as largely flat and leaderless (i.e., not hierarchical): “ARMY structure is..."
a rhizome. There’s no hierarchy, it’s not linear. Just roots and shoots spreading out always growing, a network, connected” (P037).

Organizational culture. To gain more specific insights into the organization of ARMY, we asked participants to indicate their agreement with a set of adjectives implicating four organizational culture types (Figure 1). Responses on a 7-point Likert-style scale “strongly disagree” to “strongly agree” ranged from 4.28 (slightly above neutral) to 6.82 (nearly “strongly agree”). The highest-ranked culture type perceived by individual ARMYs (including ties), was market type (42%), followed by clan (33%), advocacy (22%), and hierarchy (3%).

Team psychological safety, composition, and efficacy. We assessed metrics evaluating team efficacy, team psychological safety, and team composition to better understand how ARMYs viewed themselves as a group. As shown in Figure 2 and Table 1, we found ARMYs self-evaluated highest on team efficacy and composition, and were more neutral on psychological safety. Reliability (Cronbach’s alpha) was highest for team composition, followed by efficacy and psychological safety. Correlations among pairs of categories did not exceed $r = 0.40$. Our mediation analysis revealed that psychological safety significantly predicted both team composition ($F(1, 260) = 49.19, p < 0.001$) and team efficacy ($F(1, 260) = 4.04, p = 0.046$), but that when predicting team efficacy from both psychological safety and team composition, only team composition was a significant predictor ($t = 4.098, p < 0.001$). Therefore, we conclude that team composition mediates between psychological safety and efficacy (Sobel test, $p < 0.001$).

Confidence in ARMY. Participants provided free-text responses to describe their confidence in the ARMY fandom. Out of 242 responses (IRR = 98.1%), 83% of ARMYs reported confidence in the fandom: “ARMY is a very capable fandom with many talented/knowledgeable individuals” (P029). On the other hand, 33% described a lack of confidence—“Lately ARMY attacks from within” (P028)—and 16% described both (“ARMY is a very big fandom which is both beneficial and, in certain aspects, problematic ... we can mobilize quite fast for comeback goals or similar but this also often fuels a mob-mentality that is counterproductive and against what ARMY actually stand for” (P049)). As factors inspiring confidence in ARMY, 56% of responses pointed to past successes—including intentional action such as #MatchAMillion and intentional inaction such as not trending anything during BTS’s performance at the Grammys “as we came to know of Kobe Bryant’s passing the day of” (P013). Feeling connected (45%)—in their love for BTS, and in shared values and experiences—was second most described, followed by trust (31%) toward ARMY stemming from having experienced mature fans, accumulated knowledge, and general willingness to learn: “I saw how ARMYs continued to grow, learn and adapt since 2014 so I came to trust the fandom’s efforts” (P239). Factors leading to a lack of confidence in ARMY largely reflected internal issues (36%) such as disagreements and hatred that have within the ARMY fandom, e.g., “People are very quick to jump and react quickly [...] people need to be more willing to listen and work together” (P047). Other issues involve “solo stans” and different expectations (e.g., “lazy ARMY” (P099); whether BTS should make a statement on BLM). External issues were noted as well (9%), including articles written by “journalists with a bad history with BTS” (P117) and actions from “Western Media which undermine their achievements as POCs [[persons of color]]” (P119).

4.2 How ARMYs see personal involvement in social collaborative efforts

While our current study of ARMY concerns their success in carrying out SCEs, our participants’ top reasons for liking BTS were based on the band themselves—specifically their music (89%), message (63%), members (63%), and performance (51%). In fact, social efforts conducted by BTS or ARMY were the least-chosen reasons (less than 10% of respondents) for becoming a BTS fan, and most (80%) did not know of ARMY’s SCEs prior to becoming an ARMY. But while most did not know of ARMY’s SCE endeavors prior to becoming one, many were interested in SCE, such as BLM, before their involvement in ARMY (51%). Even so, querying four facets of SCE involvement (Figure 3) prior to and as an ARMY, we found that involvement in all aspects increased once becoming an ARMY (all $t > 5.63$, all $p_{FDR} < 0.001$): Providing social network resources nearly doubled, while other activities increased by an average of 0.5.

4.3 How ARMYs see the fandom’s involvement in social collaborative efforts, particularly #MatchAMillion

Our final category of questions assessed ARMY’s success specifically for the #MatchAMillion campaign. ARMYs saw their involvement in SCE as being somewhat unique to this fandom: While 21% of participants indicated that they belonged to at least one other fandom (e.g., One Direction, Star Wars, TXT, anime), when asked whether similar kinds of SCE occur in the other fandoms, only 7.5% of this subset answered “Yes, to a similar degree as ARMY is involved in.” In terms of organization, ARMYs felt on average that their efforts were at least “very well” ($M = 4.25$) organized, and deemed that “a lot” ($M = 3.94$) of ARMYs (on a 5-point scale from “none at all” to “a great deal”) were involved in SCE related specifically to philanthropy—that is, not streaming parties, charting, or other music promotion activities.

Awareness of #MatchAMillion. Perhaps unsurprisingly (given their willingness to discuss the initiative further) 95% of participants stated that they knew how the #MatchAMillion campaign began and evolved. However, participants did share different details about the process. Across 260 free-text responses describing the

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<th>Team metrics</th>
<th>Mean</th>
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Table 1: Team composition, efficacy, and psychological safety of ARMYs toward ARMY. Means reflect a 7-point scale and account for reverse-worded questions. Cronbach’s alpha coefficients are presented in bold on the diagonal, and italicized values represent Pearson’s correlation coefficients between pairs of categories.

8Solo stans are fans who only support a single member of the group and largely disregard the rest, as well as the group’s record label.
At least

As an ARMY
Prior to becoming ARMY

Providing social network resources (i.e., amplifying, spreading the word, retweeting)
Providing services (e.g., translating, designing, artwork, tutoring)
Providing organizational support (i.e., creating, backbone, setting up)
Providing financial resources (i.e., donating)

With focus and effort, ARMY can do anything we set out to accomplish.
ARMY can achieve tasks without requiring us to put in unreasonable time or effort.
Achieving ARMY’s goals is well within our reach.

Working with members of ARMY, my unique skills and talents are valued and utilized.
People in ARMY sometimes reject others for being different.
No one in ARMY would deliberately act in a way that undermines my efforts.
Members of ARMY are able to bring up and discuss problems and tough issues.
It is safe to take a risk within the ARMY community.
It is difficult to ask other members of ARMY for help.
If you make a mistake within ARMY, it is often held against you.

It is difficult to ask other members of ARMY for help.

Figure 2: Team metrics of the ARMY fandom in general. Statements preceded with * are reverse worded, so their response scales were reversed for the analysis shown in Table 1.

Figure 3: Frequency of involvement in SCE before and after becoming an ARMY. Significance from paired t-tests are indicated by **** (p < 0.0001).

campaign’s evolution (IRR = 98.3%), BTS’ donation was mentioned most (83%), followed by the internal goal setting of one million USD within 24 hours (68%), and spreading the word (65%); “Although I was not financially able to participate, I was active into spreading it, retweeting and singing [sic] petitions” (P064). Moreover, 40% indicated that they or ARMY were already planning to contribute toward the BLM movement (“ARMYs had been donating to #BlackLivesMatter even before #MatchAMillion began (P222), and 30% knew about the external context including recent protests and incidents that inflamed these protests (“The turning point was for sure George Floyd” (P193)). Regarding ARMY’s broader awareness
of #MatchAMillion, participants perceived that “a lot” to “a great deal” of ARMYs (M = 4.62) were aware of the initiative.

Providing support. Among the four forms of support we assessed (as listed in Figure 3), 88% of participants provided social network resources and 87% provided financial resources, while only 7% provided organizational support and 6% provided services such as translation. While ARMY is lauded for achieving the #MatchAMillion goal, most of the 239 reports of motivation (IRR = 88.7%) mentioned simply wanting to provide help (81%)—to BLM (“BLM is something that is always important to me”) (P052), people of color (“I just thought about [...] how people of color live their lives being afraid of the police”) (P156), and the Black ARMYs suffering from racism (“As there are many African American ARMY impacted by this, I hope that they can have hope in the fact there are so many diverse people who support BLM”) (P123). While some participants noted alternative motives (3%), such as “I think a lot of ARMY did it for BTS, not for BLM” (P077), 41% wanted to support POC ARMYs, help ARMY reach their collective goal, and were inspired by ARMY (“Seeing that ARMY wanted to do even more, it truly inspired me”) (P176); 35% were already planning to donate or participate in BLM as they felt it was an important cause; and 29% were inspired by BTS to take action (“To see so many people coming together including BTS inspired me to raise my voice too”) (P169).

Uniting for #MatchAMillion. Participants described how they thought ARMY was able to unite for this initiative. Across 237 coded free-text responses (IRR = 97.6%), aligned values and good team dynamics were mentioned most: 49% believed shared values and compassion brought them together (“BTS was formed under the ideal to protect their fellow generation and [to rise] against oppression and to protect the sense of freedom of their values”) (P018), and 46% mentioned good team dynamics, from active communication and collaborative attitude to accountability toward one another (“Supporting ARMYs had wide networks to spread the movement. There is also a collective ‘hive’ mentality [and] some celebrities and public figures were also asked to take accountability”) (P048). Other factors were well-established infrastructure (38%, “We already have the mechanism in place when we stream or buy songs”) (P063), BTS’s explicit stance (31%, “BTS united us as always”) (P089), “I was going to donate anyway, but knew that BTS would do something, so waited for their lead”) (P271), ARMY characteristics (27%, “ARMYs are super socially active”) (P105), clarity of the goal (27%, “There was a clear goal that everybody shared”) (P087), pre-established practices (19%, “ARMY already has pre-existing fanbases and practices when it comes to collaborative efforts”) (P140), and shared unrest due to BLM (17%, “I think a lot of people were feeling the desire to help somehow with the BLM movement and #MatchAMillion was a good outlet for those impulses”) (P191).

The way ARMY is structured as a fandom was also seen to be helpful (99%) in achieving #MatchAMillion across 240 coded free-text responses (IRR = 97.8%): “I believe [that] ARMY’s group structure played a huge role” (P008). 3% felt that ARMY needed more structure (“the goal could have been achieved faster if there was slightly more structure”) (P001), while 2% felt that ARMY’s lack of structure was not helpful for the campaign (“at times it was a disadvantage because we are so globally diverse with people of very different values at times which caused upset in the ARMY community”) (P81). These sentiments were corroborated by ordinal responses on clear direction, team cohesion, team efficacy, and team viability (Table 2). Finally, participants reported higher team efficacy for #MatchAMillion than for ARMY in general (Figure 4); this result was significant for the second statement “ARMY [can achieve tasks / could achieve MatchAMillion] without requiring us to put in unreasonable time or effort” (t = 2.94, p<0.01). Our mediation analysis revealed that team efficacy significantly predicted both team cohesion (F(1, 260) = 19.38, p < 0.001) and team viability (F(1, 260) = 6.04, p < 0.05). However, conducting a linear regression to predict team viability from team cohesion and team efficacy, we found that only team cohesion was significant (t = 11.48, p < 0.001). Therefore, we conclude that team cohesion mediates between efficacy and viability (Sobel test, p < 0.001).

#MatchAMillion outcome. Our final questions assessed ARMY’s knowledge of the #MatchAMillion outcome, and whether the campaign’s success would influence their future involvement in SCE. ARMYs were mixed in their responses: Regarding knowing the outcome of the campaign, 47% of the 220 responses (IRR = 94.43%) answered that it was important (“Knowing the outcome made it easier for me to trust them”) (P224) and 40% responded that it was not (“It doesn’t, I will continue to participate as I trust BTS and ARMY”) (P232); 34% stated that knowing where the donations were going was important to them (“I wanted to be sure that my contribution does go to a legitimate donation drive that is dedicated to the BLM”) (P215). Regarding the influence of success on participation in future initiatives, 67% of the 218 responses (IRR = 95.18%) mentioned that this success would encourage them to participate further: “The successful outcome of #MatchAMillion/BLM affects my future participation in similar efforts because I now see the benefits of advocacy within a community, to spread awareness and contribute as much as I can with others who have the same purpose in mind instead of just relying on myself to support the cause” (P078). At the same time, 35% did not consider success a factor (“Nope!! I’m someone who donates and gets involved anyways [...] I’ll get involved in more things even if this one would not have gone as well as it did”) (P159), and 2% answered that the success would affect them somewhat but they would participate in future SCE nonetheless.

5 DISCUSSION

Fandoms work with and leverage social media platforms as evidenced in our work; thus, how these platforms are currently designed and the interactions between users afforded by these platforms are highly relevant to the HCI community. We expand upon

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<td>0.59</td>
<td>0.15</td>
<td><strong>0.71</strong></td>
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Table 2: Team metrics of ARMY from achieving #MatchAMillion. Means reflect a 7-point scale and account for reverse-worded questions. Cronbach’s alpha coefficients are presented in bold on the diagonal, and italicized values represent Pearson’s correlation coefficients between pairs of categories.
how ARMYs view the fandom in general as well as how the #MatchAMillion campaign has impacted them individually and collectively.

5.1 ARMYs’ perspectives of the fandom

5.1.1 Understanding ARMY as a group and its structure. The term community was most frequently used to describe ARMY as a group, rather than an organization or network. Most ARMYs perceived the fandom to have some kind of organization, and more ARMYs felt that it was structured (55%) than not (23%). This perceived structure was mainly due to the hub-like network with pillar accounts, in-line with previous literature describing ARMY as an “acentered rhizomatic system” [48] and analogous to how the Directorion fandom was connected: “Different fanbases and big accounts who kind of lead us and influence the fandom” (P030). ARMY, like Directioners, is also highly interconnected and interacts with others across geographical boundaries, allowing for “the dissemination of news past a regional level and on a worldwide scale” [69].

However, the communities differ in that Directioners’ hubs were primarily fan accounts that provided news and updates on One Direction [69], whereas ARMY’s hubs have expanded to create a larger ecosystem that includes expertise- and culture-based accounts. One such pillar account is OIAA, who are acknowledged by ARMY as key players and having great influence, making it possible for the fandom to successfully assemble spontaneously [17], just as they did for #MatchAMillion. The commonality uniting these ARMY clusters, or subgroups, around the big accounts helps to “foster identity-based commitment to a community” [44]. This is one of many design claims for successful online communities [44] that have already been successfully implemented within ARMY and brings unity in each of the subgroups as testified by “It’s a diverse collective of people that share a common interest, but the bonds that many form with each other within ARMY often transcend that interest” (P027). However, ARMYs note that it is not merely the implementation of such best design practices for online communities that will lead them to success, as noted by the following quote: “I saw someone tweet something like: ‘It’s just funny how other fandoms have copied the ARMY blueprint to a T, but still haven’t copied One In An ARMY as yet. I think that speaks to why ARMYs are as powerful as they are” (P018).

5.1.2 ARMY’s culture. True to descriptions of ARMY from participants (e.g., “flat” [P244], “grassroots” [P161], “leaderless” [P001], “decentralised” [P018]) and prior literature (“self-governing” [17]), the hierarchical culture type scored lowest (3%). Instead, ARMY was primarily characterized under two culture types—market and clan—that are at opposing “diagonal” quadrants of the Competing Value Framework that, in effect, have “contradictory or competing” values [14, 65]. Market culture emphasizes winning in an “external environment [that is] hostile rather than benign” [14]. BTS and ARMY have endured misunderstanding, misrepresentation, and prejudice by the media and the general public (“internet trolls, bad media image against BTS, misinformation or accusations” [P183])—as a “manufactured” boy band with good looks [13], supported by “a bunch of mindless, screaming teenage girls” [40]. Constantly “struggling” (P060) against these external threats of misrepresentation of the fandom and underappreciation of BTS (“BTS has been put [...] in a bad light since the start of their career, and that both moves us to want to help them and makes us relate to them and their struggles, as being abused and bullied is something most of ARMY has experienced both in and out of fandom” (P109)—along with competing with the outgroups (“insurmountable obstacles placed in BTS’s way that ARMY has no control over, but also [...] other fanbases that may be jealous of ARMY and BTS (P116)”—has “[increased] members’ identity-based commitment” [44], keeping them even more united. This market culture may have contributed to ARMY’s high team composition and efficacy in general, as they perceive to engage in these struggles with success.

Also supported by the clan culture type, ARMY is bound by “shared values and goals, cohesion, participativeness, individuality, and a sense of ‘we-ness’” [14, 49]. Years of supporting one another in a “hostile” environment may have led to profound bonding and instilled among ARMY the perception that fans share a common value of being “supportive of each other” (P006) (further discussion in § 5.1.3). In ARMY fandom, we can point to numerous examples of fans supporting other fans beyond the music as they donate their time and expertise for translating BTS content; tutoring, teaching, and practicing Korean; mentoring and career counseling; networking in domain-specific communities (e.g., medical, legal, academic); providing fan arts; and more [7, 53]. That ARMYs resonate with each other as subjects of prejudice and discrimination further promotes the group’s and individuals’ psychological entities to overlap, resulting in individual ARMYs becoming greatly concerned for the fandom’s welfare and success [8]. Hence, it is not surprising that BTS and ARMY have formed a bond stronger than a typical artist–fan relationship and that ARMYs would perceive themselves as a close-knit community and sometimes even refer to themselves as a “family”.

Of these two culture types, it is reasonable to think that market dominates given ARMY’s diverse range of demographics, geographies, backgrounds, and interests. Being “diverse”—participants’ most-used adjective to describe ARMY—can hinder team cohesion [26] and impede feeling greater we-ness (“like any type of diverse community there are good and bad people” (P121)). This may explain clan being slightly less prominent, despite “family” being the second most-used term to describe ARMY. The emergence of these two culture types were also echoed respectively in the proportion of participant mentions, with past successes (56%) being highest, showing the competing orientation of market culture. This was followed by feeling connected (45%), showing the collaborative and familial connectedness of clan culture when explaining the source of their confidence in ARMY. Taken together, the market and clan cultures allow ARMY to be versatile and channel the culture necessary for their goals.

5.1.3 ARMY is more than a fandom around BTS. What sets ARMY apart from other fandoms is the extent to which it promotes the values in BTS’s messages [76]. BTS has promoted and continues to promote values of self-love and radical acceptance—and taking a stance against violence and discrimination based on race, gender, and nationality [83]—through their music as well as their campaigns (e.g., “Love Myself” campaign in collaboration with UNICEF [23]). BTS’s commitment to these core values is strong and clear, and was our participants’ second most-selected reason for becoming a fan. Many ARMYs also articulated that BTS speaks and embodies
messages of not being “alone in [their] struggles [and] how [ARMYs] can rely on [BTS]” (P071) and henceforth brings shared values of compassion and empathy for others in ARMY. “Moral compass” was also a phrase that occurred in participant responses, suggesting that being an ARMY implies sharing the same morals. This set of shared values is another layer contributing to ARMY’s strong sense of connection, strengthened as ARMYs also widely share self-created “rules” of etiquette [48], much like a code of conduct. Efforts to control values and behavior, however, can sometimes lead to community policing to quell perceived unacceptable behavior [79]. Some of these proactive measures are taken with the mindset that “ARMYs are the face of BTS” [48], and this aligns with our participants thinking about how their own actions align with the value of BTS and stating that they wanted BTS to be “proud of them” (P068).

When it comes to specific political or social issues, however, BTS does not typically take a particular stance or promote a specific perspective. This is in contrast to some other prominent artists such as Lady Gaga, Halsey, and Taylor Swift [3, 12, 74]. Even with donations made by BTS members, news is typically obtained and released to the public by an external entity (e.g., organization receiving the donation, news channel) rather than the artists themselves or their record label. To characterize the leadership style, BTS exemplifies the “leading by example” model that inspires ARMY [56] rather than direct instruction or persuasion. In fact, BTS and ARMY seem to be characterized more as forming “a horizontal relationship as friends and allies” [48] and partners [42] supporting each other, rather than BTS directly “leading” the ARMY to do certain things. While this partnership between BTS and ARMY is often a synergistic one, as can be seen from their collective contribution of more than two million USD to BLML, the lack of clear directive leadership can sometimes lead to the disagreements within the fandom. Not seeing eye-to-eye with each other on certain political or social issues, which inevitably occurs due to the diverse backgrounds represented in ARMY, can result in infighting and heated discussion; this was also the case prior to the success of #MatchAMillion (further discussed in §5.2.1).

5.1.4 Trust in ARMY.

“I’m not a very social person in real life and online but since becoming ARMY I’ve started to develop confidence to put myself out and talk with others in the community.” (P011)

“I regularly get messages that remind me to stay healthy, eat, take care of myself and such messages keep me going.” (P218)

Trust formed the basis of many ARMYs’ confidence in the fandom (31%). Mature fans—despite some being "ridiculed" (P151) for being old—were trusted for their accumulated knowledge in BTS, experiences in bringing ARMY to success as a collective, and ability to "temper out" (P248) those causing drama within ARMY. Many were also trusting of the fandom for their fellow ARMYs’ resourceful nature and their willingness to share their expertise (i.e., knowledge transfer). Other reasons for trust in ARMY came from their general characteristics: Having willingness to listen and learn; showing support and positivity; and being reliable and having each others’ back. It seems to be this trust, which comes from various sources, that keeps the negative aspects or members of the fandom manageable and encourages continued engagement ("[...] there is tremendous work being done within the fandom for research, philanthropy, and social justice. I try to highlight those projects within my own timeline and ignore/block the negativity” (P161)). Rather than “swift trust” [34], which is the “fragile and temporal” trust often experienced by global virtual teams, ARMY’s trust seems to be one that is unconditional, upon which “shared values determine their behavioral expectations” of relationship-building and strong cooperation [37]. Such underlying trust may have led to confidence in collective goals and psychological safety displayed by some ARMYs, and significantly determined their team cohesion [26].

While there was great trust in ARMY’s effectiveness in collaborative pursuits, there was also a lack of trust in certain kinds of fans. This was attributed to a generation gap at times, as well as cyber bullying [72, 81] and cancel culture [59] that pervade social media. Being a fan on social media inherently carries such risks, but they are exacerbated within ARMY due to its size and effectiveness in amplifying messages. Responses indicating a lack of confidence in ARMY (although half of these also described confidence in ARMY) pointed to internal issues, typically arising from differences in perspectives and positions, such as solo stans, shippers (fans who imagine and/or support a romantic relationship between certain members), and multis (fans who belong to multiple fandoms): “There are certain types of ‘ARMY’ who are too quick to criticize without looking at the bigger picture or doing proper research [and] seem to thrive off the idea that one or more of the members is/are suffering and they need to be saved” (P199). Some disputes are also thought to be stimulated by antis (haters against BTS) who had infiltrated the fandom, usually under the pretense as an ARMY (“I do believe that most toxic ‘fans’ aren’t even fans at all [...] they are people posing to be fans that just spread hate” (P266)). Even so, some ARMYs who identified this as the reason for their lack of confidence and trust also stated that they did not consider these solo stans and multis to be true ARMYs—but also recognized that to outsiders, all BTS fans may be viewed as the same, lacking distinctions of these inner complexities.

Nonetheless, these figures within the fandom, and the amplification of their voices afforded by social media, may have brought about lower-than-expected evaluations of team psychological safety. In particular, we found ARMYs slightly tending toward the statement “If you make a mistake within ARMY, it is often held against you”. This was in line with the statement “It is safe to take risks within the ARMY community” being evaluated as less than slightly accurate. Therefore, while ARMYs in general might have confidence “[stemming] from mutual respect and trust” that ARMYs “will not embarrass, reject, or punish [them] for speaking up” [22], team psychological safety may be impacted heavily due to negative figures within the fandom—even a small number of aggressive fans’ behavior can make one feel unwelcome and unsafe. This may explain our finding that the relationship between team psychological safety and efficacy is mediated by composition. Overall, these evaluations showed ARMY’s disinclination to take chances, which ranged from sharing their opinions that would potentially enrage certain subgroups of the fandom (“ARMYs attack each other as hard as they would an outsider troll” (P123)) as well as not actively contributing: “If you are a lazy ARMY, I do believe you will feel the wrath of the community [because] everyone [else] is putting in efforts.”
which conveys that while the public goods problem does exist [18], social loafing [45] may not be tolerated within this fandom.

5.2 ARMYs’ perspectives around #MatchAMillion

5.2.1 Trust in ARMYs to #MatchAMillion. Trust in ARMY extended to #MatchAMillion, with fans expressing their trust in the fandom to take action and contribute. These actions ranged from retweeting to those outside of their ARMY network (e.g., non-ARMY friends, family) to signing petitions and watching “videos on Youtube that allowed [the participant] to donate just by giving them views” (P089)—which they found out about from other ARMYs. Everyone’s encouraging attitude toward those who made multiple donations, as well as those who could not make a donation but contributed in other ways, built even more trust in each other and in reaching their goal. According to multiple responses, we found that ARMYs, regardless of how big or small their accounts, took it upon themselves to do what is considered a “major task of management”, which is “to empower employees and facilitate their participation, commitment, and loyalty” [14]—from creating ways to engage to applauding each other for every contribution. This is congruent with group efficacy literature which has shown that when “uncertainty was low, team members worked interdependently, and when collectivism was high, the relationship between group efficacy and group effectiveness was positive” [27]. Many ARMYs also showed their trust in OIAA for their process (e.g., vetting organizations to donate to), transparency (e.g., of how much had been collected in donations and where they would go), and success, as they had been facilitating numerous philanthropic efforts by ARMYs since they were established in 2018.

However, many also experienced internal conflict that threatened to break their trust in ARMY, as with opposing opinions on BTS’s role in BLM—specifically, whether BTS should publicly speak up about the BLM movement or not.10 A song by one BTS member11 further fanned the fire within ARMY. “ARMYs were at each other’s throat because Agust D [...] released his mixtape and one song was very offensive to Black ARMYs” (P021). These internal struggles were difficult for ARMYs, as numerous participants mentioned that it was a “relief” (P071)—some even felt “euphoria” (P149)—when BTS made a statement in support of BLM and donated to the cause.

5.2.2 The impact of #MatchAMillion on ARMYs’ perception of ARMY. Through their active engagement in #MatchAMillion, ARMYs showed that they were genuinely desiring to help the Black community, POCs, Black ARMYs, and everyone suffering from racial injustice. That the majority of ARMYs stated this as their first and foremost reason for getting involved indicates that the genuine desire to help was a shared value that fundamentally connected them. Group engagement model [75] supports this well, as the integration of group and individual identities induces ARMYs to become “inherently concerned with their group’s welfare and are therefore likely to behave on behalf of their group’s interests” [8]. The relationship between K-ARMY (Korean ARMY) and I-ARMY (International ARMY) is also an extension of this. As far as we know, ARMY is the only K-pop fandom in which the Korean and international fans have affectionate nicknames for each other (e.g., K-diamonds, I-lovelies or 이달의 뚜렷이 드디어).”

5.2.3 The impact of #MatchAMillion on ARMYs individually. It is noteworthy that while less than 10% of our participants attributed social efforts to joining the BTS fandom, they all participated in #MatchAMillion as a fandom-related SCE. Even though taking part in causes such as BLM was not the reason for becoming an ARMY, ARMY’s involvement has clearly impacted them. For one, many participants discussed how being part of ARMY contributed to one’s self-fulfillment as they were able to experience their individual abilities and efforts being amplified by working together as a community (“By individual I can make a difference. By group, we can move the world even.” (P196)). They discussed the sense of satisfaction and awe felt from being able to achieve something much bigger than themselves, engendering a greater sense of self-efficacy.

More than half of our participants indicated they were already interested in SCE before becoming an ARMY, but that being part of this community served as a catalyst to make them take action. We found that ARMYs’ social identities played a role in contributing to, and were further established from their participation in, #MatchAMillion. ARMY (41%) was surprisingly a greater motivation than BTS for participating in #MatchAMillion (41% versus 29%), furthering our understanding of how cohesive and committed individuals have become to the fandom. This heightened engagement in SCEs was also quantitatively verified as ARMYs’ active engagement increased in all aspects, most notably in providing social network resources and providing financial resources.
“I think this encourages me to participate in other ventures with ARMY. I felt supported by the ARMY and felt the energy and engagement from everyone working together towards the common goal.” (P001)

This collective success seems to be part of a positive reinforcement cycle that begets more future successes. That 67% of responses affirmed they would participate in future endeavors given this campaign’s success (the rest would take part regardless of success) can be interpreted alongside 56% of ARMYs for whom past successes contributed to feeling confident about the fandom. These results show that previous successes have motivated continued efforts including #MatchAMillion, and with this success they are even more willing and eager to be part of future collective efforts, thereby furthering their social identities as well.

Finally, being in the community not only encouraged many to take actions, but also benefited individuals in other ways. Many ARMYs, especially those not in the United States, stated that BLM was not covered in their local media, and through ARMY they were able to learn about racial discrimination in the US. The experience of amplifying the social message and participating in the campaign also enabled these individuals to learn how to effectively manage projects and better utilize tools like social media.

5.3 Design implications
Among many implications on how platforms can better support online communities including fandoms that can be derived from our study, we present the following four design implications.

First, provide affordances for users to be more aware of the extent of their community. While ARMYs most frequently described the fandom as a community, they were divided in their understanding of its structure. This mismatched mental model of the fandom could prevent ARMYs, especially newcomers, from understanding how the fandom spans and functions accurately.

Second, enable users to understand and find the subgroups by whom they wish to be surrounded. If fans are able to see the network of their community and how certain accounts are connected with each other visually, it could help identify particular subgroups that are of interest to them. It could also help filter out potentially problematic accounts (e.g., newly made accounts used for spreading misinformation). This would help users to distinguish which information is aligned with the overall community and which are outliers. As discussed above, network analysis on social media use could help reveal the overall structure to enable ARMYs to understand which part of the global network they are positioned in. This could further help subgroups strategize together and possibly achieve bigger goals than #MatchAMillion.

Third, it is important to help users be cognizant of the impact of their community. ARMYs being able to know about prior success and transparency were important for building trust in pillar accounts. Therefore, incorporating tools for greater transparency could also heighten ARMY’s trust in each other and further their team cohesion.

Lastly, the fandom’s pillar accounts were highlighted as being important in multiple responses. Yet there are some instabilities where important accounts are restricted or suspended especially before the new album releases from the artists (e.g., One In An ARMY’s account, for instance, was recently restricted on Twitter). Many times, such restrictions and suspensions on social media accounts occur in vague and opaque processes built in a hierarchical structure controlled by a group of developers. Allowing for a more democratic and transparent approach in verifying, and even protecting, accounts would add more stability to these pillar accounts and to the community that is critical for the success of such massive collaborative efforts.

6 LIMITATIONS AND FUTURE WORKS
Survey recruitment was mostly through Twitter, and thus we are representing the perspective of ARMYs who are active on this particular platform, as opposed to other social media. Given that the #MatchAMillion campaign was organized and conducted in Twitter, we felt that focusing on ARMYs on Twitter made sense. Despite obtaining rich responses through our survey instrument, there could be more detailed nuances that are missing. Thus, future studies employing more qualitative methods such as interviews would help further verify our findings. Moreover, the survey responses for some of the questions could be affected by recency/availability heuristics and require accurate recall (e.g., of frequency of involvement in their social collaborative efforts and team efficacy before #MatchAMillion). A long-term investigation could provide a more comprehensive overview with reduction of such biases. Lastly, ARMY is a massive fandom, and accordingly we note the limitation of generalizing findings from 273 responses to represent the perspectives from the whole fandom.

7 CONCLUSION
Investigating the case of ARMY and their #MatchAMillion campaign has enabled us to build a better understanding of the contextual complexities which can help to explain the success of collaborative efforts of an online community working toward causes unrelated to the community’s formation. In the case of ARMY, despite its reported lack of a central hierarchical structure, the distributed rhizome structure supported by pillar accounts as the backbone of the community provided the infrastructure needed for effective organization and mobilization. In addition, participants revealed that the unique characteristics inherent to ARMY, based on their set of shared core values, largely contributed to the success of their efforts. Because the fandom operates on social media, it is impossible to avoid typical associated risks and pitfalls accompanying its use. In addition, the internal fights due to different perspectives and types of fans further likely contributed to the lower psychological safety reported by ARMYs. However, the deep trust and companionship in the ARMY community, found in shared values and previous successes, seemed to compensate for these negative aspects and led to higher evaluations of team composition, which we found to mediate the relationship between psychological safety and team efficacy. Similarly, we also found that team cohesion was a mediating factor between the fandom’s viability predicted by team efficacy. Such findings and insights contribute towards a better understanding of how platforms can be designed further to support such large online communities. Lastly, from the perspective of the general public purposes.

or outsiders, because of the massive size of the fandom and their mobilization power, it may be tempting to speculate how online groups like this may be utilized for weaponization on social media. However, a deeper investigation reveals that the core reason for ARMY’s success lies in the shared values of the community members in addition to their strong desire to do “good” to amplify BTS’s positive influence. We may question whether other large fandoms on social media share similar traits, but at the minimum, we can say that with deeper understanding of each fandom’s culture, it would be premature to make generalized statements about how they may use their power.

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