Brothers in arms: Libyan revolutionaries bond like family

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What motivates ordinary civilians to sacrifice their lives for revolutionary causes? We surveyed 179 Libyan revolutionaries during the 2011 conflict in Libya. These civilians-turned-fighters rejected Gaddafi's *jamahiriyya* (state of the masses) and formed highly cohesive fighting units typical of intense conflicts. Fighters reported high levels of "identity fusion"—visceral, family-like bonds between fighters and their battalions. Fusion of revolutionaries with their local battalions and their own families were extremely high, especially relative to Libyans who favored the revolution but did not join battalions. Additionally, frontline combatants were as strongly bonded to their battalion as they were to their own families, but battalion members who provided logistical support were more fused with their families than battalions. Together, these findings help illuminate the social bonds that seem to motivate combatants to risk their lives for the group during wartime.

revolutionary war | intergroup conflict | group identity | self-sacrifice | identity fusion

During the revolutionary war in Libya in 2011, thousands of civilians formed small revolutionary battalions to overthrow the Gaddafi-led regime. Although most fighters were not kin, in such conflicts cocombatants characteristically express feelings of brotherhood for each other (1). In some cases, these feelings are strong enough to compel them to sacrifice their lives for one another. Such willingness to self-sacrifice for genetic strangers has puzzled scientists since Darwin. By embedding ourselves in a battalion during the revolution, we were able to explore this phenomenon empirically.

Participants were either frontline combatants (high exposure to risk and suffering) or logistical supporters (lower exposure) who completed a brief questionnaire. Items were inspired by recent evidence suggesting that some members of groups develop a visceral, family-like sense of unity or "identity fusion" with their group (2, 3). Evidence suggests that fusion with a group (e.g., one's country) is a key proximal cause of personally costly, progroup behavior or "parochial altruism." For instance, fused individuals are particularly apt to say they will fight and die for their country (4, 5). In hypothetical scenarios based on the classic "trolley dilemma," fused persons endorse diving in front of a speeding train to save the lives of fellow group members (5–7). These findings suggest that identity fusion may predispose civilians to enact extreme sacrifices in naturally occurring settings, such as joining a militia that is pursuing a goal that is shared by one's group.

In July 2011, 4 months into the Libyan revolution, the second author (B.M.) joined a humanitarian relief convoy traveling from Malta to Misrata. There, he noted that rebels spontaneously formed microgroups of three to five fighters constituting each battalion. Rebels were together constantly, eating, praying, sleeping, and fighting as "bands of brothers" or *katiba*. As the revolution came to an end, the first author (H.W.) joined B.M. and met with the revolutionary leadership in Misrata. The leaders agreed to allow members of several battalions to complete our questionnaire.

To develop the questionnaire for Libyan revolutionaries, the first and second authors first carried out focus groups as part of a larger fieldwork endeavor in Libya. The first and second authors were primarily based in Misrata, Libya, and one local contact, a bilingual battalion member, assisted with the administration of the survey and recruitment of battalion member participants.

Participants were 179 male, Libyan nationals (M^{age} = 28.03 y, SD 4.68 y, range 20–48 y) from four different battalions registered with the Misratan Military Council. Respondents self-identified as primarily frontline fighters (defined as those who served on the frontline with an assault rifle; $n = 42$) or battalion nonfighters (i.e., logistical supporters, such as workers who serviced vehicles or drove ambulances; $n = 137$).

Participants then completed the pictorial fusion scale (2) in reference to four different groups (own family, own battalion, other revolutionary battalions in Libya, and ordinary Libyans who supported the revolution but were not a part of a combat battalion). Each participant chose which of five pictorial representations best represented their relationship to the group (Fig. 1A). Choosing the option showing the "self" circle completely enveloped by the "group" circle merited classification as fused with the group. Participants who chose any of the other options (indicating partial or no overlap between the "self" and "group") were considered not fused with the group (see ref. 2 for scale and coding details).

Nearly all participants indicated that they were fused with their own family (99%), own battalions (97%), and other battalions (96%). The near-ceiling levels of fusion with own family, battalion, and other battalions are remarkable. Dozens of studies in more than 10 countries (8) have shown that in peacetime populations exhibit rates of fusion with their nation ranging from 6% [fusion with Europe (4)] to 41% [fusion with Spain (2)].
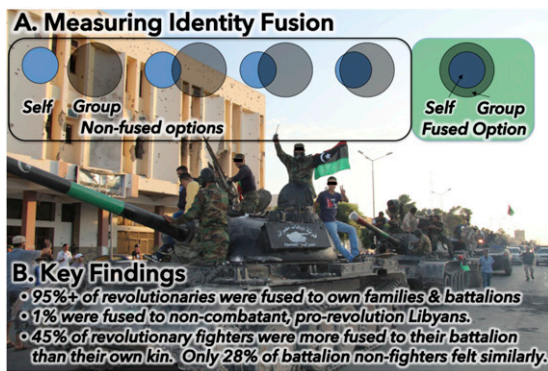
Fig. 1. Identity fusion among Libyan revolutionaries. (*A*) The pictorial measure of identity fusion. (*B*) Key study findings.

Conversely, only 1% indicated that they were fused with ordinary Libyans who supported the revolution but did not join battalions. The near-floor levels of fusion with ordinary Libyans were surprising as well. In later interviews, many participants viewed noncombatants as free-riders who stood to benefit from the ouster of Gaddafi without having made significant sacrifices themselves. The dismissive attitudes of fighters toward ordinary Libyans may have sown the seeds for the dissension that emerged among the revolutionaries after the war.

Consistent with other Arab Spring movements, younger participants were especially inclined to become fighters rather than nonfighters [r (177) = −0.18, P = 0.015]. Younger men were also especially apt to report being more fused with their battalion than their family [r (177) = −0.15, P = 0.048]. Together, these results are in line with perspectives on young males as especially predisposed to form powerful bonds that buttress willingness to die for one's group (9, 10).

Finally, participants were asked to choose the group with which they felt most fused. Consistent with past work on the primacy of the family unit (8), 68% of participants indicated they felt most fused with their family, 32% felt most fused with their own battalion, and no participants said they felt most fused to other revolutionary battalions or ordinary Libyans. Importantly, the tendency to favor family over battalion was moderated by fighter vs. nonfighter role [χ^2(1) = 4.13, r (177) = 0.15, P = 0.04]. Whereas only slightly more than one-quarter (28%) of nonfighters reported being more fused with their battalion than family, almost half (45%) of fighters reported being most fused with their battalion. In addition, self-rated commitment to the goals of the revolution ["To what degree are your personal interests the same as the interests of the revolution? From 0 (extremely different) to 6 (exactly the same); M = 4.57, SD .76] was associated with role in the revolution [r (176) = .17, P = 0.02], such that fighters were more personally committed to the goals of the revolution than nonfighters.

The tendency for fighters to express stronger fusion with the battalion than nonfighters may reflect either of two processes. One possibility is that high levels of fusion with the battalion may have caused people to volunteer for frontline combat. Libyan revolutionary battalions were formed organically and without coerced enlistment, making it possible that those who were highly fused and thus highly willing to risk their lives freely chose to become frontline combatants. Such a scenario would suggest that fusion compels group members to translate their intentions into risking their lives on the frontlines of war.

A second possibility is that fighting may have fostered fusion with the group. This explanation is consistent with a wealth of cross-cultural ethnographic work on the effects of intense, dysphoric rituals on group cohesion (11, 12). This work suggests that

perceiving experiences that define the personal self as being shared with other group members may be one of the most common pathways to family-like bonds (i.e., identity fusion) (3). That is, in some social groups, life-shaping experiences may take the form of group-sanctioned, extreme rituals [e.g., painful initiation rites (12)] or chance life events, such as witnessing the horrors of ethnic cleansing or engaging in intense battle (13). Such experiences commonly produce "flashbulb memories" (14) prompting a search for sense and meaning through subsequent reflection that may result in a sense of shared essence and fusion with coparticipants (3).

Whether fusion with the group encourages people to take up the fight, taking up the fight encourages fusion, or both, our findings make one point clear: When ordinary citizens band together and do battle, their connections to one another take on familial—or even suprafamilial—qualities. Moreover, once formed, these family ties may compel combatants to make extreme sacrifices for their group, including even the ultimate sacrifice.

Our findings contribute to evolutionary perspectives on altruistic behavior and to understanding of military groups in general. Although cohesion in the military has been extensively studied, the primary focus has been on how cohesion affects group performance rather than self-sacrifice (15). Our evidence that frontline fighters bearing the brunt of enemy fire most strongly fused to their units is consistent with the longstanding but untested hypothesis that relational ties with cocombatants, resulting from shared deprivation and negative stress, motivates participation in combat (16, 17).

Materials and Methods

Before the study, we received verbal consent from leadership within the councils to interview and survey members of these groups. In one of the groups surveyed, we were fortunate to obtain a list of members beforehand, which allowed us to draw names at random to contact for participation in the study. In the other groups, no lists were available, so we recruited every third or fourth member we encountered (resulting in a pseudorandom sampling of the battalion population). In addition, a bilingual research assistant translated all study materials from English to Arabic. Materials were also back-translated to ensure the translations were accurate.

The research was conducted in concordance with the Ethics Guidelines of the Association of Social Anthropologists of the United Kingdom and Commonwealth. This study received ethical approval from the University of Oxford's Social Sciences and Humanities Interdivisional Research Ethics Committee, a unit of the Central University Research Ethics Committee, in 2011 before study commencement. Before participation, survey administrators explained the purpose of the study, then asked participants if they would be willing to voluntarily participate without compensation. Where reasonably practicable, written consent was obtained. However, in many cases, audio-recorded oral consent was obtained owing to participant concerns about remaining anonymous. The ethics committee approved both forms of consent. Given our goal to collect a large N sample without unduly disrupting the work of battalion participants, we kept the survey very brief (less than 5 min to complete) and used simple questions that we believed would not elicit socially desirable or otherwise biased responses. Additionally, participants were surveyed individually to avoid social pressures from others. After completion of the survey, participants were thanked and debriefed. Participants were asked to not discuss the survey with other potential participants. Data reported here are available upon request from the first author.

We collected data from a total of 185 participants (M^{age} = 28.08 y, SD 4.70 y, range 20–48 y). Six participants did not provide answers to multiple survey questions, thus their data were excluded from further analysis. This left a final sample of 179 participants. One additional participant failed to answer only the question regarding goal alignment, but his data were not dropped from analyses.

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