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# Everyone for themselves? A comparative study of crowd solidarity among emergency survivors

John Drury[1]*, Chris Cocking[2] and Steve Reicher[3]

[1]Department of Psychology, University of Sussex, Brighton, UK
[2]Department of Psychology, London Metropolitan University, London, UK
[3]School of Psychology, University of St Andrews, St Andrews, Scotland, UK

Crowd behaviour in emergencies has previously been explained in terms of either 'mass panic' or strength of pre-existing social bonds. The present paper reports results from a study comparing high- versus low-identification emergency mass emergency survivors to test the interlinked claims (1) that shared identity in an emergency crowd enhances expressions of solidarity and reduces 'panic' behaviour and (2) that such a shared identity can arise from the shared experience of the emergency itself. Qualitative and descriptive quantitative analyses were carried out on interviews with 21 survivors of 11 emergencies. The analysis broadly supports these two claims. The study therefore points to the usefulness of a new approach to mass emergency behaviour, based on self-categorization theory (SCT).

An understanding of how crowds behave in emergencies has long been held to be necessary to disaster response and management (Canter, 1990; Quarantelli, 2001; Sime, 1990). The early orthodoxy was of 'mass panic' (Chertkoff & Kushigian, 1999). This has lately been challenged by models of crowd behaviour which have stressed the endurance rather than dissolution of social bonds (Aguirre, 2005). The present paper describes an interview study with 21 survivors of 11 different mass emergencies to examine the usefulness of applying self-categorization theory (SCT; Turner, 1982; Turner, Oakes, Hogg, Reicher, & Wetherell, 1987) to the domain of mass emergency behaviour. On the one hand, it is suggested here that the 'mass panic' approach is correct to suggest a discontinuity between everyday and mass emergency behaviour, but wrong in its account of what that behaviour is. On the other hand, the emphasis on social bonds rightly stresses the prevalence of solidaristic behaviour, but neglects emergent sources of that solidarity. An approach based on SCT supersedes both by offering an account of mass emergent sociality. This has the potential advantage of reconnecting the field of mass emergencies and disasters with mainstream social psychology, from which it has largely been disconnected since the 1960s.

* *Correspondence should be addressed to Dr John Drury, Department of Psychology, University of Sussex, Brighton BN1 9QH, UK (e-mail: j.drury@sussex.ac.uk).*

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### *'Mass panic' versus pre-existing social bonds*

'Mass panic' is an explanatory framework covering a family of related ideas. These include the notion that, since the crowd is less intelligent and more driven by simple emotions than is the lone individual (Le Bon, 1895/1968), crowd reactions to an emergency will be disproportionate to the danger (Smelser, 1962) and will be highly 'contagious' (McDougall, 1920; Ross, 1908). Further, since 'instinct' is said to overwhelm socialization, collective bonds dissolve, and personal survival becomes the overriding concern (Strauss, 1944), resulting in competitive behaviours within the crowd. While 'mass panic' has been largely rejected in academic psychology and sociology (Donald & Canter, 1992; Quarantelli, 2001), the concept remains entrenched in cognate disciplines (e.g. comparative biology; Dyer *et al.*, 2008) and popular accounts (Dynes, 2003; Quarantelli, 1960; Tierney, Bevc, & Kuligowski, 2006). The concept of mass panic is also still influential in crowd modelling (e.g. Helbing, Farkas, & Vicsek, 2000), where its irrationalist assumptions have implications for the design of public spaces and evacuation procedures (Sime, 1995; Still, 2000).

In disaster research, the critique of the notion of 'mass panic' grew from the observation that collective behaviour in emergencies is more typically characterized by sociality (such as mutual aid, orderliness, and courtesy) than by individualized competition (Fritz & Williams, 1957; Quarantelli, 1954). Two (complementary) frameworks have been put forward to explain such sociality, each stressing the importance of pre-existing social bonds.

First, there is the normative approach (Johnson, 1987a, 1987b), according to which, everyday social roles and norms (rules of conduct) continue to shape the behaviour of people facing emergencies. This would appear to explain certain mundane patterns of behaviour found in crowds escaping from fires, such as routine courtesy, respect for the elderly, and conformity to gender roles (e.g. Johnson, 1988).

Second, there is the affiliation model which suggests that: (i) in conditions of threat, we are motivated to seek the familiar rather than simply exit and (ii) the presence of familiar others (affiliates) has a calming effect, working against the 'fight or flight' reaction (Mawson, 2005). This model seems to explain the evidence that people prefer to remain with loved ones even at risk of death, rather than escape alone (Sime, 1983).

Historically, the concept of social norm has been crucial in the development of alternatives to irrationalist models of collective behaviour (e.g. Turner & Killian, 1957). Yet without supplementary principles to specify when and why one social rule and not another is instantiated at a particular time, generic social norm theories at best merely re-describe rather than explain and predict the occurrence of behaviour (Tajfel, Flament, Billig, & Bundy, 1971). Further, both the normative approach and affiliation do not appear adequately to address perhaps the most significant novel behaviour observed in emergency crowds: mutual aid amongst strangers, sometimes even at risk to their own safety (Chertkoff & Kushigian, 1999; Proulx & Fahy, 2003; Ripley, 2005). Indeed, the affiliation model denies such novelty in emergencies since it predicts that being amongst strangers in an unfamiliar setting will lead to mass panic (Mawson, 2005).

We suggest that the inability of both normative and affiliation models to account for discontinuities between ordinary behaviour and the extraordinary behaviour observed in emergency crowds derives from their theoretical emphasis on pre-existing social bonds. What is needed is a model of *mass emergent* sociality, that is social bonds that can arise within a crowd of *strangers*. In short, while the 'mass panic' approach emphasizes the *dissolution* of social bonds, and normative and affiliation approaches stress their *maintenance*, we also need to look at the possibility of the *creation* of such bonds.

### *A self-categorization approach to solidarity among emergency survivors*

The present paper argues that SCT (Turner, 1982; Turner *et al.*, 1987) can provide such a model of sociality, explaining at least some aspects of novel crowd behaviour in emergencies. SCT suggests that cognitive representations of the self take the form of self-categorizations, which may range in inclusively from personal self-categorizations to shared, collective self-categorizations. Seeing oneself as personally interchangeable with other in-group members on some relevant dimension – 'depersonalization' – means not only sharing a definition of social reality with these others but perceiving them as part of self. Emotionally and behaviourally, this means being able to coordinate with them, caring about them, and acting in their interests, even if these others are not personally liked or even known. In short, then, SCT would suggest that mutual aid and other aspects of solidarity are a function of shared identity.

SCT principles have been applied to explain broadly related phenomena such as group cohesion (Hogg, 1987), commitment to collective action (e.g. Veenstra & Haslam, 2000), helping within and between groups (e.g. Levine, Prosser, Evans, & Reicher, 2005), and the use of group resources to deal with stressful situations (Haslam, O'Brien, Jetten, Vormedal, & Penna, 2005). A study by Kugihara (2001) was the first to apply the social identity approach to the field of emergency evacuation behaviour. His experimental simulations of emergency escape situations showed that cooperative or aggressive responses to others in a pseudo crowd could be understood in terms of the norms associated with particular group identities (rather than in terms of disinhibition through de-individuation). The present approach shares with Kugihara the idea that norms are bound up with social identities. However, by drawing upon recent work on the dynamics of crowd conflict, we can go further and suggest how shared identities can arise in an emergency crowd.

The elaborated social identity model of crowd behaviour (ESIM; Drury & Reicher, 2000; Reicher, 1996a, 1996b, 2001; Stott & Reicher, 1998) distinguishes between physical and psychological crowds. A physical crowd – or mere aggregate of individuals or small groups – can become a psychological crowd when crowd members perceive out-group action against them as indiscriminate. Through sharing a common relationship to an antagonistic other, crowd members come to see themselves as one. This, in turn, is the basis for solidarity, cohesion, and empowerment in the crowd (Drury & Reicher, 1999). Such a *shared fate* is one of the possible psychological criteria for shared self-categorization (Turner, 1987). The relevance of this analysis for mass emergencies and disasters is that here too there emerges a shared relationship to an external force, group, or agent, within which members' fortunes are experienced as one. As Clarke (2002) puts it, in disasters, the shared experience of an external threat creates a sense of 'we-ness' among those who are similarly threatened, according to which social bonds are created and strengthened (i.e. not simply reproduced). We-ness can be defined, following Dovidio, Piliavin, Gaertner, Schroeder, and Clark (1991) as 'a sense of connectedness or a categorization of another person as a member of one's own group' (p. 102), and therefore corresponds with SCT's definition of a common identity or self-categorization.

The social identity approach in general, and SCT in particular, has become the dominant explanatory framework in-group processes and intergroup relations. Since the 1960s, however, the field of mass emergency behaviour has however has largely been populated by ideas from sociology and clinical psychology (Aguirre, 2005). To the

extent that we can show the usefulness of SCT in explaining some aspects of mass emergencies, this study can contribute to reconnecting the field with mainstream social psychology.

### *Overview and research questions*

The analysis presented in this paper is based on a *post hoc* interview study with survivors from a number of different emergency events. The use of semi-structured interviews was considered appropriate to the aim not only of accessing participants' perceived shared threat, but also their levels of identification and accounts of behaviours. The aim was to compare high- versus low-identification survivors. It was expected that there would be some variability in the *perception* of shared danger even among survivors at the same events. Following SCT, we would expect to find evidence for high-identification among those survivors reporting a shared threat. In terms of the consequences of shared identification, again following SCT we would expect to find that those high in identification with others would express more solidarity than those low in identification. More specifically, where survivors report high-identification with others, we should expect to find more references to both help (given, received and observed) and orderliness, and less to personally selfish[1] and disorderly behaviour, than among survivors reporting low levels of identification. Moreover to the extent that this pattern of solidarity occurs between strangers not just friends and family members, then this is evidence in support of SCT over the affiliation model.

Enquiring as to someone's actions in an emergency clearly raises accountability and social desirability concerns. In the context of an interview, asking a survivor whether she helped those in need is perhaps to invite her to minimize any personal selfishness and exaggerate her helpfulness in order to avoid the shame that would attach to disclosing morally reprehensible behaviour. This kind of point therefore seems to render an analysis based on self-reports deeply problematic. In the present case, however, there are two responses to such scepticism.

First, in the present analysis, we will not be relying simply on self-report measures of own behaviour to compare helping across high- and low-identification survivors. As well as survivor reports of their own action, we look at their reports both of helpful actions observed and of help they received from others.

A second and more important response to scepticism about self-reports of helping, however, is that helping is but one instance of more general forms solidarity that are of interest here. As Reicher and Haslam (in press) argue, it is less the (unusual) acts of helping but the more mundane acts of support, coordination, and acknowledgement taking place between people that oil the wheels of social cohesion. Such 'ordinary' solidaristic actions derive from a shared social identity just as much as 'heroic' acts of help given to those in need. Thus, we would expect not only greater helping to be reported by high-identification survivors, but also greater orderliness (e.g. queuing, courtesy, emotional self-control). Since such orderly behaviours are a less morally loaded issue than that of helping 'victims' in need, the use of this data is less open to the criticism that interviewees will be motivated to underplay the negatives and exaggerate the positives in disclosing their own actions.

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[1] *If, following SCT, we can say that the self is not only personal but also collective (Turner, Oakes, Haslam, & McGarty, 1994), then the everyday concept of 'selfish' needs to be qualified if it means to refer to people acting out of personal interest.*

## Method

### *Recruitment criteria*

There are three widely cited criteria for the types of events studied when testing 'mass panic' versus normative and affiliation models. Mass emergency events (1) involve a mass of people; (2) include a shared threat (of death); but (3) in which there is still a perceived possibility of successful escape, albeit time-limited (Quarantelli, 2001). To recruit interviewees who had experienced such events, we placed advertisements in UK national newspapers for people who had been involved in emergencies such as fires in public places, sinking ships, and bomb attacks. We then snowballed the initial sample. We also contacted people who had been involved in one well-known disaster, the Hillsborough, UK, football stadium crush in 1989 and the Fatboy Slim beach party in Brighton, UK, in 2002.

All participants were offered a nominal fee of £10 for the interview. Most chose to donate this to a relevant charity.

### *Events and participants*

Twenty-one participants (11 male, 10 female) took part in the study, with experiences of 11 different events.

*Sinking of the Jupiter*, 1988[2] (four participants). The cruise ship Jupiter sailed from Athens, Greece, but struck another vessel shortly after leaving port. It began taking in water and sunk within an hour. On board were 400 secondary school students from the UK plus their teachers and some of their teachers' families. The passengers evacuated the sinking ship and remained in the sea until rescued. Two crew members and two passengers died. Thus, large numbers were involved and there was the threat of death, but also the possibility of evacuating the ship in time and being rescued. Two of our interviewees were teachers at the time (one male, one female, married to each other) and the other two were pupils (both female).

*Sinking of the Oceanos*, 1991[3] (one participant). The Oceanos was cruising round the coast of South Africa in 1991. The ship began taking in water due to a door that had not been sealed properly, and began to list and then sink. The crew abandoned the 500-plus passengers, who were then stranded for several hours until eventually being airlifted to safety. There were no fatalities, though there was the clear threat of death in that passengers had to be rescued before the vessel finally sank; and there was some urgency in that those rescued first were perceived by some to have more chance of survival. Our interviewee, a female, was with friends on the cruise.

*Hillsborough (UK) football stadium disaster*, 1989[4] (four participants). Liverpool FC were playing Nottingham Forest in the semi-finals of the FA Cup, at the Hillsborough football stadium, Sheffield. There was a bottleneck of fans trying to get through the limited turnstiles into the ground, and police eventually opened the gates, directing people into already overcrowded pens. In the crush, 96 people were killed. There was a diminishing possibility of escape for some fans through climbing out of the pens and on to the pitch. Our four interviewees (three male and one female) attended the game separately. The first two managed to get away before the main crush in the pens. The

[2] *Yule, Udwin, and Murdoch (1990). See also Earthtalktoday (2003). Retrieved November 15, 2005 from http://www.earthtalktoday.tv/peter/index.html*

[3] *Moss Hills/Stagebeat (n.d.). The Oceanos sinking. Retrieved June 20, 2008 from http://www.oceanossinking.com/*

[4] *Hillsborough Justice Campaign (n.d). The Hillsborough disaster. Retrieved June 20, 2008 from http://www.contrast.org/hillsborough/history/index.htm*

other two were caught in the crush; one had to escape by climbing over dead bodies; the other was hauled to safety by others in the stand above the pens.

*Ghana football stadium 'stampede'*, 2001[5] (one participant). Some fans attending a cup match at the Accra stadium between Ghana's two top clubs, Hearts of Oak and Asante Kotoko, began throwing missiles at each other. Police responded with tear gas. The crowd tried to escape the tear gas, but most of the stadium exits were locked. One hundred and twenty six people were suffocated or crushed to death. At least at one stage, there was the perceived chance of escape through some of the exits if people were quick enough. Our participant (female) was a supporter of one of the teams and attended the match with her family. She escaped without injury, though her father was hospitalized in the crush.

*Bradford (UK) football stadium fire*, 1985[6] (one participant). During Bradford City's home game against Lincoln City, a fire broke out in one of the stands. Fans' attempts to exit were hampered by locked gates. Fifty-six fans died of burns and smoke inhalation. Our interviewee (male) was 14 at the time the disaster happened, and attended the match with friends. He escaped without injury.

*Fire at Sonesta Hotel*, *Cambridge*, *Massachusetts*, 1971 (one participant). Guests were woken in the night by fire-fighters breaking down doors to rescue them from a blaze which had taken hold in the hotel. Survival was possible if people got out in time, and all guests, including our interviewee (male) were successfully rescued.

*Harrods bomb*, 1983[7] (one participant). A car-bomb, planted by the IRA, exploded near the Harrods store in London. A warning had been given, but six were killed in the blast, including four police officers, and many more were injured. A second (false) warning was given for another bomb, meaning that those present after the blast were still subjectively in danger, but would survive if evacuated in time. Our interviewee (male) was a police officer called to the scene. He arrived immediately after the explosion, and his main job was to seal off the area from the public.

*Fatboy Slim beach party*, 2002[8] (four participants). Organizers of a free concert on Brighton beach, UK, featuring DJ Fatboy Slim, expected around 60,000 people, but 250,000 turned up. The roads, emergency services, and public transport were overwhelmed, and there were fears of a fatal crowd crush, especially when the tide came in and large numbers tried to leave the beach at once. In fact, there were no fatalities during the event. Two of our interviewees (one male and one female) were stewards, whose job was to direct the crowd to and from certain areas of the beach, and to liaise with the emergency services. The other interviewees (both female) were fans who came to the event (separately) with their friends, and had difficulty leaving due to the crush of people.

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[5] *Mark Gleeson. Terror of tear gas must end (2001). Retrieved June 22, 2008 from http://news.bbc.co.uk/sport1/hi/football/africa/1306917.stm. Eyewitness: Ghana's football horror (2001). Retrieved June 24, 2008 from http://news.bbc.co.uk/1/hi/world/africa/1324423.stm. Ghana tragedy: How it happened (2001) Retrieved June 24, 2008 from http://news.bbc.co.uk/1/hi/world/africa/1323173.stm. Ghana mourns after football tragedy (2001). Retrieved June 24, 2008 from http://news.bbc.co.uk/1/hi/world/africa/1322433.stm. Charlayne Hunter-Gault: Ghana soccer match tragedy (2001). Retrieved June 24, 2008 from http://archives.cnn.com/2001/WORLD/africa/05/10/hunter-gault.debrief/*

[6] *1985: Fans killed in Bradford stadium fire (n.d.). Retrieved June 22, 2008 from http://news.bbc.co.uk/onthisday/hi/dates/stories/may/11/newsid_2523000/2523561.stm*

[7] *1983: Harrods bomb blast kills six (n.d.). Retrieved June 22, 2008 from http://news.bbc.co.uk/onthisday/hi/dates/stories/december/17/newsid_2538000/2538147.stm*

[8] *Fatboy Slim crowds cause chaos (2002). Retrieved June 22, 2008 from http://news.bbc.co.uk/1/hi/entertainment/music/2127259.stm*

*Canary Wharf (UK) emergency evacuation*, 2001[9] (two participants). Minutes after the planes struck the World Trade Center towers in September 2001, people in certain other prominent office blocks around the world expected a similar attack. Hundreds hastily evacuated Canary Wharf in London, fearing the worst, but there was no attack and no fatalities. Our interviewees (male and female) were employees of a company occupying a suite of offices high up in the tower building.

*Frankfurt tower block emergency evacuation*, 2002 (one participant). A year after 9–11, an alarm was raised for an expected plane attack on an office tower block in Frankfurt, and its occupants were evacuated. Again, despite the perceived threat, there was no attack and no fatalities. Our interviewee (female) was working on the 39th floor of the block when everyone was given the order to evacuate.

*Grantham (UK) train accident*, 2003 (one participant). Just outside Grantham, UK, two carriages of a train became separated. Passengers in the carriages detached from the engine were rescued and put on board another train some time later. The passengers in the stranded carriages risked being hit and perhaps killed by other trains, but there was hope that the rescue services would reach them in the meantime. Our interviewee (male) was one of these passengers.

### *Interview procedure*

Interviews took take place at a location of the survivors' choosing, usually their home. Each interviewee was first asked to provide some background, to set the scene, and then to tell the story of the events as she or he remembered them. The rest of the interview was organized according to the following issues: (i) *Behaviour*: for example, 'What did you do in response to these events? How quickly did people respond and begin to evacuate? Was evacuation easy/difficult? Why? What did others do? Did people co-operate/help each other out? Did anyone behave selfishly?'; (ii) *Thoughts/feelings*: for example, 'What were you thinking/feeling as the incident progressed? Can you describe your emotions? How strong were these emotions? Did you feel in control of your actions/feelings? Do you think that anyone panicked? What did they do?'; and (iii) *Identification*: for example, 'How would you describe those in the evacuation with you? How did you feel towards them? Did you feel a sense of unity with each other?'

Each interview lasted between 45 and 90 minutes.

### *Analytic procedure*

Each interview was fully transcribed. Altogether, the transcribed interviews comprised 157,332 words, that is an average of 7,492 words per interview.

The analysis comprised thematically coding the interview texts in relation to the issues of interest. (i) *Shared identification* was operationalized in terms of references to feelings of 'unity' and 'togetherness' (felt by the survivor and/or perceived by the survivor amongst others in the crowd). (ii) *Shared fate* was operationalized in terms of references to shared danger, including shared threat of death. (iii) *Solidaristic behaviours* were operationalized variously. First, we included as 'helping' such behaviours as lifting people up, moving objects so that others could escape quicker, giving encouragement, sharing bottles of water, and giving information and advice. Behaviours defined as personally selfish included barging or pushing others aside,

[9] *UK buildings evacuated (2001). Retrieved June 22, 2008 from http://news.bbc.co.uk/1/hi/uk/1538156.stm*

ignoring others in need, trying to step in ahead of others and ignoring pleas for help. Second, 'orderliness' was operationalized in terms of references to each of the following: order and calm, being in control of one's emotions, 'panic' (collective and individual), adherence to everyday rules (norms), maintenance of social roles, and (dis)courtesy (references to dis/courtesy, politeness, saying please or thank you and other displays of manners, people offering that others go first, rudeness, and apologies).

The size of a piece of coded text varied from a sentence to a multi-sentence chunk. Sentences or chunks were coded according to the rule of thumb: assign the single most appropriate code in the scheme (Miles & Huberman, 1994, p. 65). We coded for both the number of interviewees per theme and, where appropriate, the number of instances of a behaviour per interviewee. To check for reliability, we trained an independent judge[10] in use of the coding scheme. She and the lead researcher then separately coded a sample of the material. On 189 observations there were 152 agreements, giving a percent agreement rate of 80.

The final analysis was quantifiable but the comparisons presented here restricted to raw data and descriptive statistics, due to the small size of the sample.

## Results

All the events were large-scale and involved hundreds of people. It was clear from speaking to them that most of the interviewees who had been at the same events had no contact, usually did not know or see each other and therefore did not affect each other's responses. (For one of the events – the sinking of the Jupiter – two of our participants were husband and wife, but became separated at the start of the emergency.) All accounts are therefore treated as independent data-points.

The Results section is divided into three parts. First, as a preliminary, we examine the extent and nature of shared identification among survivors to make an operational distinction between high- and low-identification. Second, we explore the antecedents of identification. Finally, we determine the consequences of identification by comparing high- and low-identification survivors on two forms of solidaristic behaviour: helping (vs. personal selfishness) and (dis)orderliness.

### *Extent of shared identification*

A minority of survivors explicitly described a lack of unity they felt with, and observed among, others within the event:

> 1 F3: It wasn't a group thing, it was a very individual lots of individuals together.
> Int: right
> F3: yeah.. I felt like I was with my.. five or six friends and that was it.. and it was like the others were the enemy.
> (Fatboy Slim 3)

A few others were ambiguous or inconsistent. They seemed to suggest that there may be have been shared identification, but only for some people some of the time:

> 2 F: in this moment you are very concentrated in yourself really because you have to get out of the place.. but of course you see that everybody is doing the same []11 but in this moment

[10] *Thanks to Tricia Maxwell for this.*
[11] *[] indicates material edited out for reasons of brevity.*

> you are more like . . . . so of course the sense of community and because we were all going out..from that..
>
> (Frankfurt)

Thus, there is evidence for at least some feelings of identification with the rest of the crowd in most of the survivors interviewed here. Yet 12 of the accounts were clear and unambiguous that they felt a *strong* sense of unity during the events. The comments of all of these high-identification survivors also included references to the feelings of others, suggesting that the sense of unity wasn't something that existed only subjectively for them, but was perceived in at least part of the rest of the crowd:

> 3 Int.: How would you describe those who were in the evacuation with you? Is there any phrase or word you would use to describe them?
>
> J2: I guess I'd say mutually supportive. We were all strangers really, we were certainly surrounded by strangers but . . . . most of, I mean I'd got my kids by me, but most people were split up from anybody they knew, and yet there was this sort of camaraderie like you hear about in the war times and this sort of thing.. there there was certainly a pulling together as opposed to a pulling apart.
>
> (Jupiter 2)

This quote makes the important point that what was being talked about in each case was a sense of unity with *strangers*. Indeed, we exclude from the operational definition of high-identifiers those who referred only to 'unity' with the small group of known affiliates that they were already with.

Those 12 survivor accounts defined as high-identification were as follows: sinking of the Jupiter (survivors 1, 2, and 3); sinking of Oceanos, Hillsborough disaster (survivors 2, 3, and 4); Sonesta Hotel fire, Fatboy Slim beach party ('survivors' 1 and 4); Canary Wharf ('survivor' 2); and Grantham train accident. The following nine accounts were defined as low-identification: sinking of the Jupiter (survivor 4); Hillsborough disaster (survivor 1); Ghana football 'stampede', Bradford fire, Harrods bomb, Fatboy Slim beach party ('survivors' 2 and 3); Canary Wharf ('survivor' 1); and Frankfurt tower evacuation.

Variation in identification within events is consistent with our expectation that perceptions of shared fate (danger) can vary within events in a large crowd. Such variability therefore allows us to make comparisons between survivors in terms of both the antecedents and the consequences of such identification.

### *Antecedents of shared identification*

Four of those at the football disasters and three of those at the Fatboy Slim beach party described feeling a sense of unity with the crowd prior to the emergency. It is perhaps to be expected that levels of prior identification will be higher amongst people at sports or music crowds than amongst passengers on ships and trains; the former are already a psychological crowd (i.e. they share the aim of coming together as a crowd) while the latter are an aggregate of individuals who are simply co-present as a physical crowd. Interestingly, however, all except one of those with this prior sense of identification reported that their sense of unity increased, either in strength or, as in the following example, in inclusiveness, in response to the emergency:

> 4 I think everyone would accept that one had really gone beyond the definition of identifying the person as a as a supporter of football.. at this point, they're just human beings struggling, to be fair . . . I don't think anyone saw Liverpool fans and Notts Forest fans [ ] People stopped being supporters of a football team and were just people.
>
> (Hillsborough 2)

While, based on our recruitment criteria, each event appeared prima facie to involve a danger of death to the crowd, it emerged during the interviews that there was a wide range of perceptions of the extent of such danger among 'survivors' at the same events. As discussed, this then allowed us to compare variations in identification in relation to such perceived shared threat.

As Table 1 shows, across the sample as whole, most survivors reported both feeling in danger and perceiving this feeling to be shared across the crowd. Importantly, however, and as expected, reports of both personal and shared danger were proportionately more numerous for high- than low-identification survivors. Moreover, some high-identification participants explicitly *explained* the feeling of unity in terms of the shared fate of the crowd as a whole:

**Table 1.** Comparison of low- and high-identification survivors on personal and shared perceptions of threat

| | Identification | | |
|---|---|---|---|
| | Low | High | Total |
| 'I felt in danger' | 56[a] | 67 | 62 |
| 'Shared sense of danger' | 67 | 92 | 80 |

[a] Figures are percentage of interviewees endorsing the statement, based on low-identification sample size of 9 and high-identification sample size of 12.

> 5 All of a sudden everyone was one in this situ- when when a disaster happens when a disaster happens, I don't know, say in the war some- somewhere got bombed it was sort of that old that old English spirit where you had to club together and help one another, you know, you had to sort of do what you had to do, sort of join up as a team, and a good example of that would be when some of the fans got the hoardings and put the bodies on them and took them over to the ambulances
> (Hillsborough 3)

In almost all cases, the sense of shared fate is described in terms of the shared threat of death. The only exception was the survivor involved in the train accident, for whom it was less obvious, though still possible, that passengers were in danger of being killed. However, the common experience was still enough to bring people together in a way that did not happen on normal train journeys:

> 6 TA: Oh yeah of course I I get on the train everyday. So a train journey you would normally take is, you know, I myself get on the train at ten to seven in the mornings, sit down, open the paper and there might be one or two people talking out of a completely packed carriage.
> Int: Yeah.
> TA: So, you know, that that sort of thing and the perception . . . of of being involved in that, and everyone's involved and let's do, let's group together
> (Train accident)

In contrast, and again as we would expect, those who reported no shared threat tended to report little unity with the rest of the crowd. For example, 'Fatboy Slim 3' was a party-goer who did not perceive any threat from the tide. She approached the event with an initial feeling of 'being part of something'. But this changed very rapidly when she perceived other crowd members as antagonistic competitors for space rather than part of a common group of fellow party-goers (see Extract 1 above).

### *Consequences of shared identification*

We examine the extent of solidarity in the mass emergency events by comparing the low- and high-identifiers on (i) references to help and personal selfishness and (ii) 'orderliness' (references to 'order and calm', 'control of emotions', 'mass panic', 'individual panic', rules (norms), roles, and dis/courtesy).

#### *Help versus personal selfishness*

As Table 2 (below) shows, across the sample as a whole, helping was much more common than personal selfishness.[12] More importantly for present purposes, whether counting the number of interviewees making statements or the numbers they reported, the pattern is exactly the same and the difference between high- and low-identifiers very clear: help in the high-identification group was always more frequent than in the low-identification condition:

> 7 As soon as I could get my arms out I was helping people and pushing them up, yeah, absolutely it was.. yeah it was only you felt that 'cos I mean it's only when you look back you just feel 'oh I could have done that', I mean you look back, I mean everyone did help each other and I don't think there was anyone that.. could really look back and say I didn't do anything to help anybody
> (Jupiter 3)

The Table shows that, while the difference in percentages between high- versus low-identification interviewees is small, the difference between the two groups in the number of observations/experiences reported is much larger.

In line with expectations, some survivors themselves linked the extent of mutual helping to the emergent sense of unity in the crowd:

> 8 The behaviour of many people in that crowd and simply trying to help their fellow supporters was heroic in some cases. So I don't think in my view there was any question that there was an organic sense of . . . unity of crowd behaviour. It was clearly the case, you know.. it was clearly the case that people were trying to get people who were seriously injured out of that crowd, it was seriously a case of trying to get people to hospital, get them to safety.. I just wish I'd been able to.. to prevail on a few more people not to.. put themselves in danger.
> (Hillsborough 3)

Some high-identification survivors went further and described how some people disregarded their own personal safety in their efforts to help others. Importantly, they attributed this to the powerful sense of togetherness they experienced:

> 9 Losing a trainer [shoe] was absolutely minor, completely and utterly minor, I mean a trainer can be replaced any day of the week as human beings can't, we so I, you know, in answer to your question is togetherness was very very good yeah very very good
> (Hillsborough 3)

Results were more mixed for personally selfish behaviour, although the low absolute numbers makes interpretation tricky. On the one hand, more high- than low-interviewees admitted and experienced personally selfish acts. On the other hand, there were greater numbers of survivors reporting, and instances of reported, personally selfish acts among low- than among high-identification interviewees.

Table 2 shows that for both male and female interviewees, 50% reported giving help, and that numbers of each gender helped were similar. However, more women

[12] *Clearly there are possible problems of double counting here (the same helper being observed by more than one interviewee); but this would be the case for acts of personal selfishness too.*

**Table 2.** Comparison of low- and high-identification survivors on helping and personally selfish behaviours

| | Identification | | |
|---|---|---|---|
| | Low | High | Total |
| 'Survivors helped others' | 78[a] (14) | 83 (34) | 81 (48) |
| 'Other survivors helped me' | 44 (6) | 66 (14) | 55 (20) |
| 'I helped other survivors' | 33 (7) | 66 (14) | 50 (21) |
| 'Other survivors were personally selfish to others' | 44 (5) | 33 (4) | 39 (9) |
| 'Other survivors were personally selfish to me' | 22 (2) | 33 (5) | 28 (7) |
| 'I was personally selfish to other survivors' | 0 (0) | 8 (1) | 4 (1) |
| Male interviewees | | | |
| 'Other survivors helped me' | 20[b] (1) | 50 (7) | 35 (8) |
| 'I helped other survivors' | 20 (2) | 50 (7) | 35 (9) |
| Female interviewees | | | |
| 'Other survivors helped me' | 33 (4) | 83 (7) | 58 (11) |
| 'I helped other survivors' | 25 (1) | 50 (6) | 38 (7) |

[a] Figures are percentage of interviewees *endorsing* the statement, based on low-identification sample size of 9 and high-identification sample size of 12 (Figures in brackets indicates number of survivors the interviewee *reported* seeing or experiencing).
[b] Figures are percentage *endorsing* the statement, based on low-identification sample sizes of five male and four female interviewees, and high-identification sample sizes of six male and female interviewees each.

interviewees reported being helped than did men. Numbers reported helping are so small, however, that this pattern should be treated with caution.

*'Orderliness' versus 'disorder'*

Table 3 below shows that more high- than low-identification survivors stated that there was 'order and calm', that they were 'in control of their emotions', that only occasional individuals panicked, that there was conformity to everyday rules (norms) and roles, and that there were displays of courtesy.

For example, behaviour such as queuing was more commonly reported amongst those high in identification:

> 10 J1: They just followed the queue because maybe that was the way out..
> Int.: Was it quite orderly waiting in this queue?
> J1: It was very orderly very orderly noisy but very orderly and people calling out and and this teacher very calmly saying 'come on, just keep going get going get going'
> (Jupiter 1)

By contrast, more low- than high-identification survivors stated that there was 'mass panic' and discourtesy. Although reports of (dis)courteous behaviour were few and far between, the pattern was as expected, with no accounts among high-identification survivors and vivid accounts from those low in identification:

> 11 F3: People were trying to barge past me, I thought that was really selfish. No-one was letting me go first. There was no courteousness at all.
> (Fatboy Slim 3)

The references to 'panic' were more complex. Even some of those in the high-identification group who described collective 'order and calm' also talked about the

**Table 3.** Comparisons of low- and high-identification survivors on measures of orderliness and disorderliness

| | Identification | | |
|---|---|---|---|
| | Low | High | Total |
| 'Order and calm' | 22[a] | 42 | 32 |
| 'Control of emotions' | 33 | 42 | 38 |
| 'Mass panic' | 56 | 50 | 53 |
| 'Individual-only panic' | 44 | 83 | 64 |
| 'Everyday rules' | 33 | 67 | 50 |
| 'Normal roles' | 56 | 83 | 70 |
| 'Courtesy' | 11 | 25 | 18 |
| 'Discourtesy' | 11 | 0 | 6 |

[a] Figures are percentage of interviewees endorsing the statements (of 9 low- and 12 high-identification interviewees).

crowd 'panicking'. Yet, when asked, these same people also did one or more of the following: (a) explicitly denied that there was mass panic; (b) said that panic was exhibited only by one or two individuals not the crowd as a whole; and (c) distinguished between behaviour and feelings. Thus, for example, it was commonly pointed out that though people were afraid and sometimes even vocalizing this fear through screaming, there was no loss of control:

> 12 no.. though I don't think people did lose control of their emotions and I think the restraint shown by.. particularly several of the.. individuals that I've mentioned I've talked about.. it was the degree of the capacity of people to help others who were clearly struggling you know.. it's it should be source of great pride to those people I think because you know, they were clearly in control of their own emotions and their own physical insecurity I mean a lot of people were very.. as I was you know.. you're being pushed, you're being crushed when you're hot and bothered you're beginning to fear for your own personal safety and yet they were I think controlling or tempering their emotions to help.. try and remedy the situation and help others who were clearly struggling so.. I would have to say that that was a degree of emotional control that.. that still stands out.
>
> (Hillsborough 2)

## Discussion

Accounts of unity with strangers in the crowd as a whole were common in the data-set. However variation in the strength or consistency in descriptions of unity enabled us to divide the sample into high- and low-identifiers in order to examine the antecedents and consequences of such feelings of unity. While some survivors reported a sense of unity with others at the beginning of the event, more interesting was the enhancement or emergence of unity that developed in relation to the emergency itself. There was a clear pattern such that those high in identification were more likely to report a shared fate than were those low in identification. Some were even explicit that it was the shared danger of death that brought them together. This evidence is in accord with SCT on the possible antecedents of shared self-categorization and the creation of a psychological crowd from a mere aggregate of co-present individuals (Turner, 1982; Turner *et al.*, 1987).

Reports of solidaristic behaviours on our numerous measures were prominent across all the accounts. This finding conflicts with the predictions of the mass panic approach but is in line with previous research demonstrating the overwhelming sociality of crowds in emergencies and disasters (Chertkoff & Kushigian, 1999; Fritz & Williams, 1957; Rodriguez, Trainor, & Quarantelli, 2006). Importantly, however, on almost all measures the pattern was consistent with the specific predictions we derived from SCT – there were more reports of solidaristic behaviours for high-identification than low-identification participants. While the results for 'personally selfishness' behaviours are more mixed, the pattern for all measures of helping and '(dis)order' were exactly as predicted.

A number of our interviewees referred explicitly to being particularly concerned for the loved ones they were with, and some of the reports of helping referred to affiliates. However most helping did not involve friends or family members. The solidarity exhibited was amongst strangers, despite (or, as we would argue, because of) the danger. Not only does this data conflict with the predictions of the affiliation model (Mawson, 2005), it again stands in direct contradiction to the 'mass panic' approach. The 'mass panic' approach would predict that, in cases of entrapment, the greater the perceived threat of death, the more the individual will act competitively (Johnson, Feinberg, & Johnson, 1994). In the present case, however, the opposite was found: those who expressed the most solidarity behaviourally were in turn those who reported strong shared identification due to the shared fate they experienced in the crowd.

Given the existing literature on gender variations in helping across everyday and dangerous situations, it was considered relevant to compare male and female interviewees within the data-set. Previous work has found that though women are more helpful than men in general, they are less likely than men to intervene in events which involve danger (Eagly & Crowley, 1986). There is no such pattern detectable in the present data-set, though cells are too small for a meaningful conclusion. However, there is a pattern here in line with the suggestion of Johnson (1987b) that, in emergencies, role-demands prevail. There is little information here on the gender of the people the survivors reported helping, but more of our women interviewees reported being helped than did the men.

This issue of roles and rules takes us to the question of norms. There was indeed evidence of 'everyday norms' and roles being adhered to. But, importantly, this (along with courtesy and control of emotions) was much more the case for high- than for low-identification survivors. As we suggested, shared social identity is the basis not only of helping but of everyday social cohesion. The present pattern again fits more closely with an explanation based on SCT than on a generic norm approach.

The endorsement of 'mass panic' by around half of our interviewees is worth commenting on. 'Mass panic' is a family of academic theories, but it also exists as a discourse in popular culture, which is drawn upon in news reports and fictional media images to describe and explain collective responses to disasters and emergencies (Dynes, 2003; Tierney *et al.*, 2006). As a discourse, in survivors' self-reports it could function to excuse and explain away personally selfish behaviours. Rather than a deliberate choice for which one can be held responsible, unacceptable behaviour might be blamed on the 'emotional contagion' sweeping through the panicking crowd: the 'selfish' survivor 'didn't know what he was doing' or 'got carried away'. Yet it is significant that all our interviewees who drew upon this discourse also contradicted it in various ways: they all referred to help given or observed, and most referred to forms of orderly behaviour predominating. Indeed, fewer people referred to 'mass panic' than to

the panic of an unrepresentative few in the crowd. Given that it did not appear to be used strategically, references to 'mass panic' by our interviewees can be argued simply to be a function principally of its availability and predominance as a popular off-the-shelf discourse for 'explaining' emergencies. It was used either as a gloss on events, or to refer to fear (i.e. emotions), rather than to actual mass panic (i.e. personally selfish and competitive) *behaviours*.

### *Limitations of the present study*

The present study has a number of limitations, the most obvious of which is the reliance on survivors' self-reports. There are a number of issues here. First, as discussed in the Introduction, there may be an issue of moral accountability (and hence self-presentational motivations) around the question of help given to those in need. However, the other solidaristic behaviours we asked survivors about are far less morally loaded. As discussed, the pattern across the more sensitive 'helping' data and the less sensitive 'orderliness' data was very similar. In addition, across the data-set, while it is true that interviewees were much more ready to report others' personally selfish acts against self than own personally selfish acts against others, they were also more ready to report helping incidents by others (to self and in general) than they were to report their own helping. Finally, and crucially, if self-presentation was a major motivation among our interviewees, why should there be the pronounced difference between high- and low-identification participants in reports of help?

Second, there is a related but broader issue of interviewer context and effects. Standard techniques were employed to avoid leading interviewees to answer in particular ways (e.g. asking open questions before closed questions). More importantly, interviewees were asked about help and other behaviour before unity, so the interviewer did not know whether each survivor was a 'high-' or 'low-identifier' before ascertaining the extent of their solidaristic behaviours. An additional reason to think that self-reports of identification themselves were no mere artefact of the interview schedule is that many of the statements by those we came to define as 'high-identifiers' occurred spontaneously – that is before the interviewer had asked participants whether they felt any unity with others in the crowd.

Third, there is an issue around selectivity, which itself breaks down into several subissues. With a traumatic topic such as mass emergencies, there is inevitably selectivity in who comes forward to be interviewed for the research. It would seem impossible to control for this, and hence it seems therefore inevitable that we should treat the data with caution on this basis. It is possible that other stories of the event could be told if different people were interviewed. The only defence that can be made for this limitation of the study is that research of this type is by its nature difficult. For understandable reasons, survivors may not want to come forward and give their accounts. Our reasoning was that it was better to study those few who do come forward, and thereby offer some tentative analysis, than to conclude that we cannot after all study whether shared identification plays a role in mass evacuation behaviour among survivors.

For those who do come forward, we are of course at the mercy of interviewees' memories and subjective interpretations of events, some of which took place years ago. This problem can be addressed at least in part through further study focusing on more recent experiences (Drury, Cocking, & Reicher, 2009). However, there are ethical limits to how close to the event such interviews should be carried out. There is an obvious need to avoid distress; survivors are most vulnerably and PTSD most prevalent in the initial months following traumatic events (Gittelman, 2004).

Despite all these arguments in defence of this study, it remains true that self-report interview data is far better at telling us what survivors perceived, felt and wanted to say afterwards than 'what actually happened' during the events. Studies such as this are therefore not enough, and to give us greater confidence in the theoretical conclusions we have drawn from the analysis we must await future studies triangulating perceptions with measures of behaviour (Drury *et al.*, 2009).

However if we can for the moment bracket off the objections and treat the analysis as prima facie support for our theoretical account, we can finish by drawing out some possible implications of this study for broader issues of theory and practice.

### *Implications of the present study*

In pointing to the limits of not only the 'mass panic' approach but also of existing models of sociality in mass emergencies, this study opens the way for considering the principles of SCT as an alternative explanatory framework. The analysis suggests that emergencies and disasters can fruitfully be conceptualized in terms of *crowd* behaviour. Over twenty years of experimental social psychology have converged around the conclusion that crowd behaviour and other group processes are largely explicable not in terms of irrationality, individual psychology, interpersonal interaction, or generic norms but rather in terms of social identity. An aggregate of individuals becomes and acts as a psychological crowd when there is a cognitive redefinition of the self from a personal to a social identity (Turner *et al.*, 1987). The social identity framework has been able to provide explanations not only of small group processes such as conformity and group productivity but also macro-level collective phenomena such as nationalism, social movement participation, trade union commitment, societal prejudice, leadership and followership, and psychological aspects of social change (Drury & Reicher, in press; Haslam, 2004; Reicher, 2007; Reicher & Hopkins, 2001). In these cases, as in the case of much social behaviour in mass emergencies, people act with and for others because they categorize them with self rather than because they know them personally. To the extent that behaviour in mass emergency emergencies can be added to this list of collective phenomena, therefore, the field is reconnected with mainstream social psychology from which it has largely been disconnected since the decline of small group experimental research in the 1960s.

Just as the pathologization of the emergency crowd in earlier theories had certain implications for practice (Sime, 1990, 1995), so its rehabilitation through the social identity framework suggests practical applications. In particular, the concept of *resilience* is an important one in disaster research and management (Durodié & Wessley, 2002), yet it has not yet been addressed through social psychology. On the one hand, it is conceptualized simply as an individual trait (e.g. Noppe, Noppe, & Bartell, 2006). On the other hand, it is employed in sociological disaster research to describe improvisation amongst emergency organizations (e.g. Tierney & Trainor, 2004) or 'community' resourcefulness post-disaster (e.g. Kendra & Wachtendorf, 2001). The present approach suggests an elaboration that could complement both of these: '*collective* resilience' refers to the way a shared identification allows groups of survivors to express solidarity and cohesion, and thereby to coordinate and draw upon collective sources of support and other practical resources, to deal with adversity (Drury *et al.*, in press; cf. Haslam *et al.*, 2005).

At the level of metatheory, this reversal of perspective – from crowd as problem to crowd as solution – serves to challenge the high value usually accorded to individualism

in Western cultures. The examples of mass emergencies such as those analysed in the present study point to the possible *dangers* of acting as an individual. In these cases, safe exit was more likely the more people thought of themselves and acted as a group. The more that everyone acts as an individual, the more likely it is that exits will be blocked as people compete, and the group as a whole will suffer (Mintz, 1951).

In conclusion, then, the present analysis provides some support for the ideas (1) that panic is a feature of individuals not of crowds and (2) that the mass sociality observed in emergencies is a consequence of emergent shared self-categorization rather than a function of pre-existing social bonds. Putting these claims together, we would suggest that, in liberating us from the restrictions of individuality (Turner, 1987), the psychological crowd is a crucial adaptive resource for survival in mass emergencies and disasters.

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