Prospects for Group Processes and Intergroup Relations Research: A Review of 70 Years' Progress

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Three archival analyses are presented substantially extending empirical reviews of the progress of group-related research. First, an analysis of social psychological research from 1935 to 2007 (cf. Abrams & Hogg, 1998) showed that group-related research has a steadily increasing proportion of titles in the principal journals and currently accounts for over a sixth of all the research in our list of social psychological journals. Second, analysis of the most cited papers from a set of principal social psychology journals from 1998 to 2007 showed that a third of high-impact articles in social psychology focus on groups. Third, analysis of the content of two major specialist journals in the field, *Group Processes & Intergroup Relations* and *Group Dynamics: Theory, Research, and Practice*, showed that together these journals cover a broad range of group-related research, and that the only keyword common to both journals was *social identity*. These findings demonstrate the health and major contributions of research into group processes and intergroup relations to social psychology as a whole.

KEYWORDS   empirical review, group dynamics, group processes, group-related research, intergroup relations, research development

RESEARCH in social psychology covers a wide range of areas, such as self regulation, pro- and anti- social behavior, attitudes, persuasion, the self, interpersonal relationships, language and communication, attribution, culture, and—last but not least—group processes and intergroup relations. What is the contribution and impact of group-related research to social psychology and how has it changed over time? This article provides a quantitative basis for evaluating the progress and impact of group processes and intergroup relations research, within social psychology, from 1935 into the 21st century. The primary goal of this review is to evaluate how the contribution of this research area to social psychology has changed and progressed over the years. It represents a substantial development and expansion of the quantitative review conducted 10 years ago in *GPIR*'s inaugural issue by Abrams and Hogg (1998), and augments several other

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narrative and discursive reviews by extending the time period to over 70 years, analyzing impact over the last 10 years, and exploring the themes covered over that period.

There have been several reviews, comments, empirical analyses, and overviews of the nature of group research in social psychology (e.g. Abrams & Hogg, 1998; Bettenhausen, 1991; Davis, 1996; Jones, 1985; Levine & Moreland, 1990, 1998; Manstead, 1990; McGrath, 1978, 1997; McGrath & Altman, 1966; McGrath & Kravitz, 1982; Moreland, Hogg, & Hains, 1994; Poole & Hollingshead, 2005; Sanna & Parks, 1997; Simpson & Wood, 1992; Steiner, 1974, 1983, 1986; Tindale & Anderson, 1998; Wheelan, 2005; Wittenbaum & Moreland, 2008; Zander, 1979).

Collectively, these reviews provide various insights into the theory, methodology, analysis, and applications of research in group processes and intergroup relations. According to many of the reviews mentioned earlier, group processes and intergroup relations research is central to social psychology. This feeling is characterized in many prefaces, editorials, and introductory paragraphs. For example, in a recent chapter on individual identity Worchel and Coutant (2001) comment that:

> groups are not merely entities in the file drawer of the mind. Groups are physical realities that dot the social landscape like trees in a dense forest. . . . Indeed groups often survive long after the original members have turned to dust. (p. 462)

However, recent reviews of research into group processes have noted that much of the research literature focuses on the individual (e.g. Abrams & Hogg, 1998, 2004; Wittenbaum & Moreland, 2008). Indeed, the shift in the Zeitgeist away from small groups and toward social cognition approaches was probably at the heart of Steiner's (1986) concerns, and may to some extent represent a struggle for supremacy of different levels of analysis and methodological approaches in social psychology (Abrams & Hogg, 2004; McGrath & Altman, 1966). In fact, Hornsey (2008) recently noted that some researchers have considered groups as "something of a label of convenience for

what happened when interpersonal processes were aggregated" (p. 204). Commentators have linked this trend to studying group processes at the individual level to many factors, including the cognitive revolution, methodological limitations, and problems with analysis of group data (e.g. Abrams & Hogg, 1998, 2004; Hogg & Tindale, 2001; McGrath & Altman, 1966; Sadler & Judd, 2001; Steiner, 1986; see also Zander, 1979).

The study of social dilemmas provides an example of this trend to focus on the individual within group-related research. Social dilemmas are without doubt a group-based phenomenon (Kerr & Park, 2001). However, one informative and fruitful avenue for research in the area is based on analysis of individual difference measures that categorize people into *pro-social* or *pro-self* (Social Value Orientation, McClintock, 1978; see e.g. Au & Kwong, 2004; de Kwaadsteniet, van Dijk, Wit, & de Cremer, 2006). Social dilemmas research also widely uses methods of computer simulation and thought experiments, often for hypothesis generation or preliminary exploratory work (e.g. Brewer & Schneider, 1999; Davis, 1973). Although it is generally easier to study the individual, it is clear that to fully understand social processes, group research is *also* important (e.g. Hogg & Tindale, 2001), and there is a necessary interplay of individual and group-level analysis. In terms of our example of social dilemmas, knowledge would be much more limited if researchers did not continue to also conduct face-to-face group experiments and consider situational and/or structural moderators of group processes (for example, alcohol: see Hopthrow, Abrams, Frings, & Hulbert, 2007; group discussion, e.g. Caldwell, 1976; Hopthrow & Hulbert, 2005; group size, e.g. Messick, 1973; and framing, e.g. Kerr & Kaufman-Gilliland, 1997. See also Kerr & Park, 2001).

Research into minority influence is another example whereby the study of group processes has veered towards a focus on the individual. Current studies often measure attitude change after exposure to written information regarding minority vs. majority opinions rather than actual exposure to groups with a minority

view (see Levine & Kaarbo, 2001). Social dilemmas and minority influence research are not unique among group research topics in their employment of varied methodologies and approaches. It is this multifaceted nature of group research that characterizes social psychology's depth and breadth of research questions, issues, and applications.

A further limitation associated with the diversity of groups and intergroup research, is that research outlets are not only confined to social psychology or even to psychology fields (see also Sanna & Parks, 1997). Such research appears in various adjacent disciplines such as communications, I/O, politics, and experimental economics. Nonetheless, much of the core theorizing and basic research has been conducted within social psychology and it was beyond the scope or terms of reference of the present review to explore these adjacent disciplines fully.

Despite this diversification of group research toward both individual-focused studies within psychology and to other fields beyond social psychology, the volume of some areas of group research in social psychology appears to have diminished over time (e.g. intragroup processes as compared with intergroup relations, see Wittenbaum & Moreland, 2008). There have been various speculations as to why there may be this reduction in output, especially of face-to-face group research. For example, the costs to researchers associated with group work may be seen as exceeding the likely rewards (cf. Zander, 1979). First, the collection of data from group-based studies is very time consuming, especially in face-to-face group studies. Getting the required number of participants together at the same time in the same place is difficult and costly in time and money (Davis, 1996). Second, pressures to publish continue with the more competitive job market, the tenure system, and move towards metric measures of research output, such as the impact factor of the outlet journal or the number of citations (e.g. Abrams & Hogg, 1998; Universities UK, 2007). Finally, the number of studies and/or participants required in the field might also be higher than for some other topics or disciplines, and it is not uncommon for editors and reviewers to request

'another study' or 'more data' which may deter less senior academics from developing research and expertise with small groups.

Group Processes & Intergroup Relations was launched 10 years ago, in 1998. The inaugural issue opened with Abrams and Hogg's (1998) analysis and consideration of the progress of, and prospects for, group processes and intergroup relations research. This empirical review examined the volume of group processes and intergroup relations research that was being published in social psychology journals between 1974 and 1996. They found that group-based research lost favor in the 1970s and 1980s, but had resurgence in the mid to late 1990s. They argued that this upsurge was due to advances in methodology and theory in the area, especially the growth of European social psychology and its unique focus on the wider context and societal issues, and the social identity approach. Indeed, the social identity approach continues to be an important meta-theory, informing research into intragroup processes, intergroup relations, and social cognition (e.g. Abrams, Frings, & Randsley de Moura, 2005; Abrams & Hogg, 1999, 2004; Hornsey, 2008).

More recently, Wittenbaum and Moreland (2008) conducted a review focusing on small groups in social psychology, extending on a previous review by Moreland et al. (1994). They computed an index based on the proportion of pages devoted to group research in three major social psychology journals (*Journal of Experimental Social Psychology*, *Journal of Personality and Social Psychology*, and *Personality and Social Psychology Bulletin*). The analysis showed that over half the page proportion of group-related research published in the three journals from 1975 to 2006 was about intergroup relations (topics such as stereotyping and social identity), whereas research into intragroup processes had a smaller proportion of pages in the three journals. In fact, Wittenbaum and Moreland (2008) conclude that research into intragroup processes is at an all time low.

The present review extends previous empirical studies or analyses of group-related research in social psychology. We consider the progress and current state of group processes research in three ways. First, we provide a more extensive

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replication of Abrams and Hogg's (1998) analysis of group research. Abrams and Hogg's analysis was from 1974 to 1996, whereas our analysis extends this back to the past (from 1935) and up to the last 10 years (2007, the last year at which there are complete records). Second, we examine the 10 top-cited papers from each of the principal social psychology journals over the last 10 years (1998–2007 inclusive). We show how many of these papers related to group processes and intergroup relations, and which areas within these fields have had the most impact. Thirdly, we present an analysis of the content of the two recently established major journals in the field that offer a direct outlet for group-related research, *Group Processes & Intergroup Relations* (founded 1998) and *Group Dynamics: Theory, Research, and Practice* (founded 1997). This detailed consideration of group processes research offers insight into how much research is being published in the broad area, what impact this research has, and which topic areas are most popular.

Analysis 1: Extension of Abrams and Hogg's (1998) empirical review

Overview and method

Abrams and Hogg (1998) predicted that group processes and intergroup relations research would increase over time. However, their empirical review was limited by the constraints of the available electronic database at the time. Specifically, many journals were not fully integrated into the database PSYC-LIT, and for those that were, PSYC-LIT only maintained records from 1974. This was problematic because, according to Steiner (1986), the pattern of change in publication rate showed a steady increase until the 1960s, at which time there was a drop in publications followed by a very modest incline in the 1970s. Due to the limitation of PSYC-LIT, Abrams and Hogg (1998) were only able to examine the publication trends at the reported point of increase. Later studies (i.e., Moreland et al., 1994; Wittenbaum & Moreland, 2008) have addressed this limitation of PSYC-LIT. In their analyses, Moreland et al. (1994) and Wittenbaum

and Moreland (2008) concluded that intragroup research is at an all-time low, challenging Abrams and Hogg's claim that this research field would be experiencing a steady increase. However, Moreland and colleagues consciously limited the scope of their examinations to a very small subset of the social psychological literature, putting into question the generalizability of their conclusions. Therefore, the purpose of this analysis is to examine whether or not Steiner's reported patterns of publication rates of group-related research are supported with a more comprehensive dataset, and whether or not Abrams and Hogg's prediction that future research trends would show stabilization of publication rates was accurate.

A computer-based literature search of PsycINFO was conducted at the beginning of 2008 for the years from 1935 to 2007.[2] Only journal articles were included to ensure that material was peer-reviewed prior to publication. Therefore, no material published in books or conference papers was included. The methodology followed that of the Abrams and Hogg analysis, which in turn was based on both Steiner's (1974) original review as well as the first quantitative review of this literature (Goodstein & Dovico, 1979). Although this methodology may not be as meticulous as an analysis at the level of individual journals (e.g., Moreland et al., 1994), it is believed that the current methodology is needed to efficiently code across so many journals and that the representativeness of the large sample base adds a much-needed extension to the extant literature.

The parameters of the search were limited by the list of keywords used in Abrams and Hogg (1998), as well as additional keywords that have gained prominence in journal article titles and abstracts in the past 10 years of group research (i.e., keywords *added* to the original list were *dehumanization*, *entitativity*, *essentialism*, *group categorization*, *group contact*, *group conflict*, *group productivity*, *infrahumanization*, *social categorization*, and *social norms*). Alternative spelling of words (e.g., behavior/behaviour) and word stems with alternative endings (e.g., stereotyp*) were included (see Table 1 for a full list of keywords).

Table 1. Search parameter keywords (articles were included if any of the following keywords appeared in search)

Black sheep	Group comparison	Group performance	Intergroup-dynamic
Collective action	Group conflict	Group polarization	Intergroup-relations
Collective behavior	Group consensus	Group problem-solving	Leadership
Collective efficacy	Group contact	Group process	Majority influence
Collective protest	Group context	Group productivity	Minority influence
Collectivism-individualism	Group decision	Group relations	Nationalism
Conformity	negotiation	Group serving	Outgroup
Dehumanization	Group decision-making	Group shifts	Prejudice
Entitativity	Group discussion	Group size	Racism
Essentialism	Group dynamic	Group socialization	Self-categorization
Ethnocentrism	Group decision-and-	Group research	Norm formation
Group action	Group entity	Groupthink	Sexism
Group and individual	Group goal	Homogeneity	Social categorization
Group and primed	Group identity	Infrahumanization	Social dilemma
Group and self	Group ideology	Ingroup	Social identity
Group behavior	Group influence	Intergender	Social influence
Group categorization	Group interaction	Intergenerational-relations	Social judgment
Group cohesive	Group leader	Intergroup	Social norms
Group community	Group member	Intergroup discrimination	Stereotyping

The search included all the journals considered to be of direct relevance to social psychology by Abrams and Hogg (1998), as well as additional journals that have gained prominence in social psychology in the past 10 years (journals *added* to the original list were *Personality and Social Psychology Review, Political Psychology, Journal of Cross Cultural Psychology, Group Processes & Intergroup Relations, Group Dynamics: Theory, Research, and Practice,* and *Social Development*). The purpose of these parameters was to be as inclusive as possible while excluding journals covering non-social psychological areas (see Table 2 for list of journals). Although some potentially includable keywords and journals have undoubtedly been missed, it is believed that this sample of journals and keywords serves as a representative source for tracking publication rates.

The purpose of including these specific keywords and journals was to allow comparison between the original Abrams and Hogg (1998) analysis as well as identify emerging research areas and publications in the last 10 years. As in the original Abrams and Hogg (1998) paper, the authors do not suggest that this list is

exhaustive, but only that it represents a reasonably representative source for tracking publication rates. Additionally, triangulation between these keywords with journals relevant to social psychology was intended to reduce instances of terms being related to work of little or no relevance to groups. For example, the keyword term 'homogeneity' could also include articles concerned with the homogeneity of variance. However, a search of the more specific keyword 'homogeneity of variance' shows that while there are 56 articles published in psychology journals with this keyword, none of these articles are from one of the journals included in the analyses (e.g., articles are from *Psychological Methods, British Journal of Mathematical and Statistical Psychology, Journal of General Psychology*).

Additionally, a second search was conducted in which the parameters were further restricted to the 'principal' journals in social psychology as well as high profile cross-psychology journals originally defined by Abrams and Hogg (1998). Abrams and Hogg (1998) identified these journals as the *British Journal of Social Psychology, European Journal of Social Psychology, Journal of Experimental Social Psychology, Journal of*

Table 2. Search parameter journals (articles were included if published in the following journals)

American Journal of Psychology	*Journal of Occupational Psychology*
American Journal of Sociology	*Journal of Organizational Behavior*
American Psychologist	*Journal of Organizational Behavior Management*
Annual Review of Sociology	*Journal of Personality*
Applied Social Psychology Annual	*Journal of Personality and Clinical Studies*
Basic and Applied Social Psychology	*Journal of Personality and Social Psychology*
British Journal of Social Psychology	*Journal of Research in Personality*
British Journal of Sociology	*Journal of Research on Adolescence*
Current Psychology Research and Reviews	*Journal of Social and Clinical Psychology*
European Journal of Social Psychology	*Journal of Social and Personal Relationships*
Group Analysis	*Journal of Social Behavior and Personality*
Group and Organization Studies	*Journal of Social Issues*
Group Decision and Negotiation	*Journal of Social Psychology*
Group Dynamics: Theory, Research and Practice	*Journal of Sport and Exercise Psychology*
Group Processes & Intergroup Relations	*Journal of Sport Behavior*
Human Relations	*Journal of Youth and Adolescence*
Journal for the Theory of Social Behavior	*Organizational Behavior and Human Decision Processes*
Journal of Adolescence	*Organizational Dynamics*
Journal of American College Health	*Personality and Social Psychology Bulletin*
Journal of Applied Communication Research	*Personality and Social Psychology Review*
Journal of Applied Psychology	*Political Psychology*
Journal of Applied Social Psychology	*Psychological Bulletin*
Journal of Applied Social Sciences	*Psychological Review*
Journal of Applied Sport Psychology	*Small Group Behavior*
Journal of Black Psychology	*Small Group Research*
Journal of Black Studies	*Social Behaviour*
Journal of Community and Applied Social Psychology	*Social Behavior and Personality*
Journal of Conflict Resolution	*Social Cognition*
Journal of Cross Cultural Psychology	*Social Development*
Journal of Experimental Social Psychology	*Social Psychology Quarterly*
Journal of Language and Social Psychology	*Social Science and Medicine*
Journal of Occupational and Organizational Psychology	*Social Science Quarterly*
	Social Science Research

Per-sonality and Social Psychology, Journal of Social Issues, Personality and Social Psychology Bulletin, Psychological Bulletin, Psychological Review, Social Cognition, and *Social Psychology Quarterly*. Journals for this search were chosen if they were sponsored by a major professional social psychological association (i.e., British Psychological Society, European Association of Experimental Social Psychology, Society of Experimental Social Psychology, American Psychological Association, Society for the Psychological Study of Social Issues, Society for Personality and Social Psychology, International Social Cognition Network, and American Sociological Association.

Results

Relevant journals From 1935 to 2007 the relevant journals published 90,827 articles (M = 1244.21 per year, SD = 834.93) of which 14,973 articles (M = 205.11 per year, SD = 187.35) concerned group or intergroup processes as operationalized by the included keyword search terms. Therefore, 16.49% of articles published in relevant social journals between 1935 and 2007 were concerned with group/intergroup processes. The linear (R^2 = .80, $F(1, 71)$ = 282.85, $p < .001$) and quadratic (R^2 = .80, $F(2, 70)$ = 141.85, $p < .001$) trends are significant; however, the best fit to the trend is cubic, R^2 = .82, $F(3, 69)$ = 101.63,
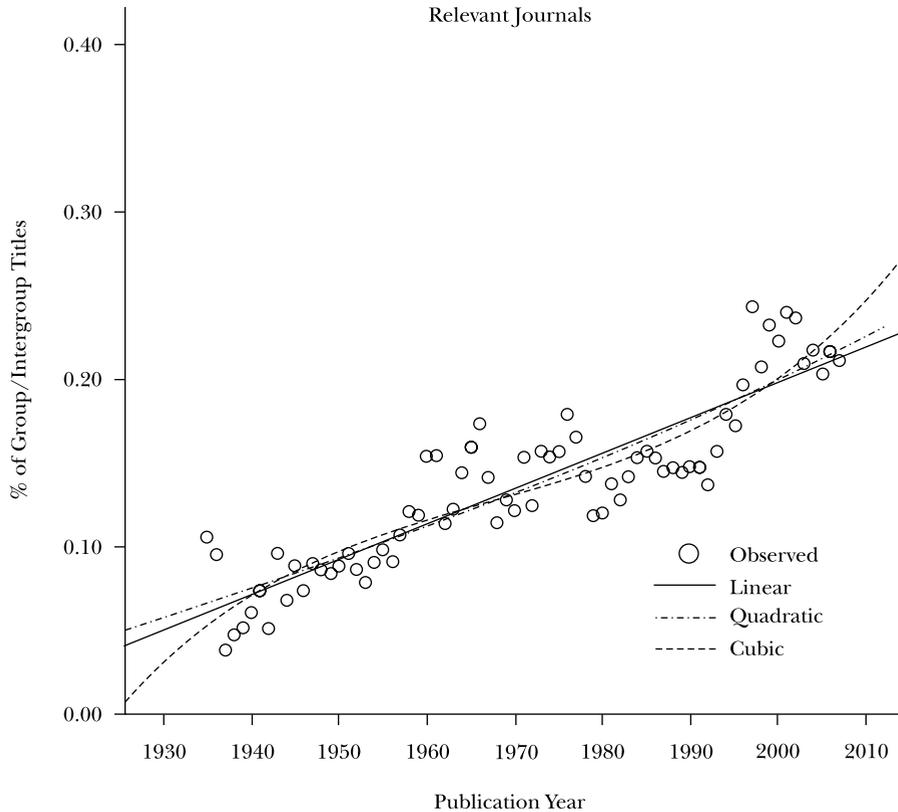
Figure 1. Percentage of articles on group processes or intergroup relations in the relevant journals search.

$p < .001$, $\beta_{cubic} = 5.45$, $p = .029$, $\Delta R^2 = .01$, $p = .029$ (see Figure 1).[3]

Principal journals From 1935 to 2007 the principal journals published 24,954 articles ($M = 341.84$ per year) of which 4,826 articles ($M = 66.11$ per year) concerned group or intergroup processes as operationalized by the included keyword search terms. Therefore, 19.34% of articles published in the principal social journals between 1935 and 2007 were concerned with group/intergroup processes. The linear ($R^2 = .79$, $F(1, 71) = 269.00$, $p < .001$) and quadratic ($R^2 = .84$, $F(2, 70) = 183.23$, $p < .001$) trends are significant; however, the best fit to the trend is cubic, $R^2 = .86$, $F(3, 69) = 142.12$, $p < .001$, $\beta_{cubic} = 6.85$, $p = .002$, $\Delta R^2 = .02$, $p = .002$ (see Figure 2).

Rate of change in publication

Relevant journals Correlations between the advancement of each decade (i.e. years 0–9 within each decade) and proportion of group-related research suggested changes in publication rate (see Table 3).[4] Overall, there was a significant and steady increase in proportion of group-related research from the 1930s to the 1980s. The 1980s saw a temporal stabilization of publication rates. In the 1990s the proportion of group-related research began to increase dramatically. However, the proportion of group processes and intergroup relation articles seems to have once again stabilized in the most recent decade.

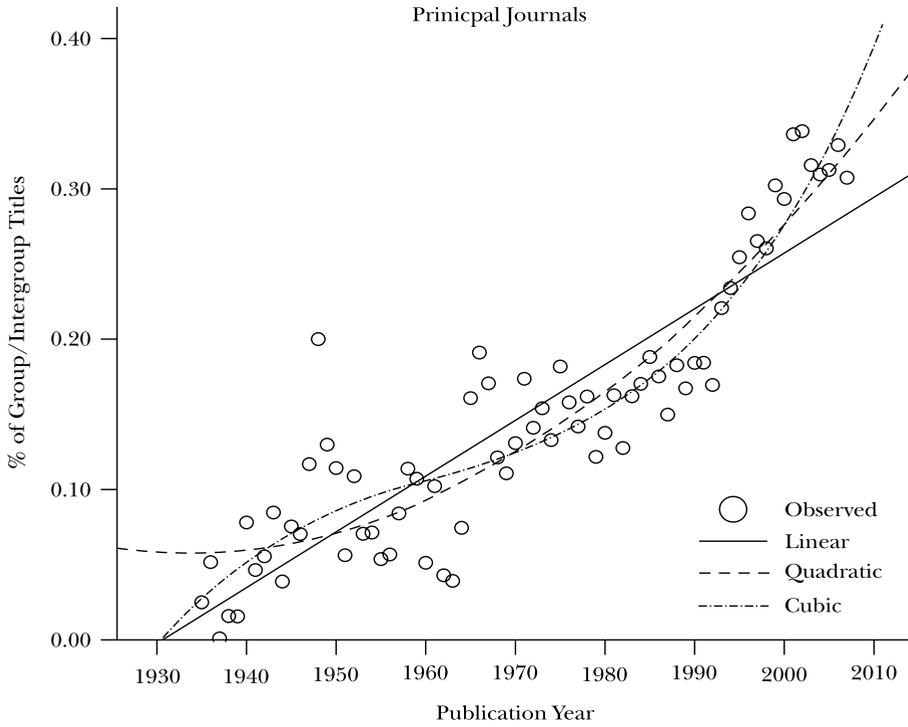**Principal journals** A similar analysis was conducted as for the relevant journals (see Table 3

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Figure 2. Percentage of articles on group processes or intergroup relations in the principal journals search.

for correlations and *z*-tests).[5] Once again, there was a significant and steady increase in proportion of group-related research from the 1930s to the 1980s. However, in the principal journals this increase remained steady throughout the 1980s and into the 1990s. This was followed by a dramatic increase in proportion in the 1990s. In the most current decade there is a continuing steady increase in the proportion of group processes and intergroup relations articles in the principal journals.

Discussion
The results of this study provide the first quantitative support of Steiner's (1974) assertion that there was a steady increase in the publication of group processes and intergroup relation articles until the 1960s. However, unlike previous analyses which showed a dip in the rate of publication in the 1980s (e.g., Abrams & Hogg, 1998;

Wittenbaum & Moreland, 2008), these analyses showed that from the 1960s to the 1980s the decrease may have been specific to relevant journals, although there continued to be a steady increase in the principal journals. Similar to other analyses, the 1990s saw a dramatic increase in the publication of group processes and intergroup relation articles. However, this increase seems to have slowed in the present decade. Interestingly, in the 2000s the proportion of group research articles seems to have stabilized in the relevant journals, although it is still steadily increasing in the principal journals. This same pattern—one of stabilization in publication in the relevant journals and steady increase of publication in principal journals—was present in the 1980s immediately before the upsurge in publications in the 1990s. Wittenbaum and Moreland (2008) take a more pessimistic view of the current changes in rate of publication,

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Table 3. Within decade correlations and between decade *z*-tests for relevant and principal journals

	Relevant journals			Principal journals		
	Mean % (*SD*)	*r*	Comparison *z*[†]	Mean % (*SD*)	*r*	Comparison *z*[†]
1930–50s	8.0 (1.9)	.52*	—	7.1 (4.4)	.46*	—
1960s	14.2 (2.1)	.52	0.00	12.5 (4.5)	.52	0.18
1970s	13.9 (1.4)	.59	0.19	15.6 (2.1)	.54	0.05
1980s	16.7 (3.3)	.09	1.10	21.5 (4.3)	.69*	0.46
1990s	22.0 (1.3)	.93***	2.93***	31.1 (2.3)	.90***	1.17
2000s	13.6 (5.0)	−.07	3.23***	15.0 (8.8)	.49	1.75*

Note: * $p < .05$; *** $p < .001$.

[†] These tests compare the correlation in each decade with the correlation in the immediately preceding decade.

believing that it is being precipitated by a reduction of group researchers in the field and will continue to decline in future years. However, the current analyses show a slowing down and not a decline and, therefore, it seems more likely that group processes and intergroup relations research has seen an end to dramatic increases, and that there will henceforth be a stable and substantial presence in the relevant journals, and an eventual stabilization in the principal journals.

Analysis 2: The impact of group research over the last 10 years

Overview and method

Previous empirical reviews have considered the quantity of research into group processes and intergroup relations. In this section of our review we analyze research that has been of high impact in the principal journals over the last 10 years. We con-sider this an important extension of previous reviews as it allows us to examine whether group processes and intergroup relations research is having an impact beyond mere quantity of research published, and also allows us to consider which specific research topics have recently had the most impact in the field.

We analyzed the 10 articles with the highest im-pact (as measured by Total Cites from Thomson's ISI Web of Knowledge, version 4.2; due to joint ranked total cites this was sometimes more than 10 per year). We used these articles over the last 10 years in our list of principal journals: *British Journal of Social Psychology, European Journal of Social Psychology, Journal of Experimental Social Psychology, Journal of Personality and Social Psychology, Journal of Social Issues, Personality and Social Psychology Bulletin, Social Cognition, and Social Psychology Quarterly* (Abrams & Hogg, 1998; Analysis 1 earlier).[6] We chose this 10 year period as it is the time since Abrams and Hogg's (1998) review and it reflects a reasonable number of data points to analyze citation trends.

Based on the title and abstract the articles were dummy coded as being group processes and intergroup relations research or not, and their total citations were recorded. Articles on group-related research were further coded for three main foci: Intergroup, Intragroup, and Social Cognition (yes/no; articles could be coded as yes for each category).[7] A concise list of more specific topics was devised by the authors based on the list of keywords provided earlier (Abrams & Hogg, 1998) and other reviews of group processes and intergroup relations. These were: intergroup relations; intergroup contact; intergroup conflict; social identity; stereotyping; stereotype threat; social influence; essentialism and/or entitativity; group performance; decision making or productivity; social dilemmas; leadership; structure or ecology of groups; power in groups; conflict within groups.[7] We were able to categorize all articles under this framework apart from one (which was about analysis of group level data): this article was excluded from the analyses.

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In general, the total of number of citations for any individual article will increase as a function of time. Therefore, total citations as a function of publication year was not considered to be an informative index. Rather, the current analysis focuses on how much of the highest impact work in the field of social psychology has been about intergroup relations and group processes, and which general and specific topic areas are covered.

Results

Representation of group-related research   From 1998 to 2007 inclusive the total number of 'top ten' citation articles was 881, and 310 of these were about groups—35.2% (ranging from 13.9–53.8%). Table 4 presents these data by specific journal and it is clear that in some journals high impact work is more groups oriented (e.g. *BJSP*, *EJSP*) than in others (e.g. *JPSP*, *SPQ*). Table 4 also shows that the focus on group-related research is not directly mirrored by the overall impact of the journal in the Social Psychology Thomson Web of Knowledge ISI category (impact factor).

Furthermore, the total citations for group-related research ($M = 27.99$, $SD = 33.18$) were not significantly lower than for articles that are not group-related ($M = 34.23$, $SD = 54.82$) in the principal journals, $F(1, 865) = .013$, $p = .91$ (see Table 5 for analysis by journal). Table 5 shows one notable exception, the *Journal of Experimental Social Psychology*, in which group-related research was cited significantly more than non-group-related research.

Intergroup, intragroup, and social cognition research   The 310 group-related research articles were coded for three general categories of research: Intergroup, Intragroup, and/or Social Cognition. The high impact research papers in group-related research were most likely to be about intergroup relations ($N = 210$), followed by social cognition ($N = 152$), and then intragroup processes ($N = 37$). Figure 3 shows the percentages from all the top cited articles in social psychology over the last 10 years. It indicates the percentage that was group-related in total (see earlier), as well as separated by general categories of intergroup, intragroup, and social cognition. Analysis shows that there are no significant trends over time (linear, quadratic, cubic) but that the proportion of highly cited research in each area has been steady over the last 10 years with mean percentages for *Intergroup* = 29.3%, for *Social Cognition* = 17.9%, and for *Intragroup* = 4.1%.

As indicated by the total frequencies and proportions, some articles fell into more than one of the three categories. Specifically, 41.6% ($N = 129$) of the high-impact articles were categorized solely as *Intergroup*. There were 25.8% ($N = 80$) of articles categorized as solely *Social Cognition*. Intragroup processes appear to feature least in this analysis with only 5.2% ($N = 16$) solely being categorized as *Intragroup*. Those

Table 4. Percentage of top impact group related papers in principal journals

Journal	IF (Rank)	Total *N*	Group *N*	Group percentage
BJSP	1.418 (17)	100	50	50.0
EJSP	1.287 (20)	117	63	53.8
JESP	2.107 (8)	110	43	39.1
JPSP	4.223 (2)	101	14	13.9
JSI	1.136 (–)	111	38	34.2
PSPB	2.419 (6)	108	42	38.9
SC	1.154 (23)	125	33	26.4
SPQ	1.298 (19)	109	27	24.8
Total	—	881	310	35.2

Note: *IF* = Impact factor 2006; (*Rank*) = Journal rank in social psychology category (*JSI* is not categorized in Social Psychology).

Table 5. Comparison of total cites analysis

Journal	Mean total TC (*SD*)	Mean non-group TC (*SD*)	Mean group TC (*SD*)	Difference non-group TC/Group TC
BJSP	22.94 (19.37)	23.90 (22.14)	21.98 (16.31)	t (98) = −0.49, *ns*
EJSP	20.57 (19.56)	20.07 (18.57)	21.00 (20.52)	t (115) = 0.25, *ns*
JESP	28.13 (32.54)	22.15 (16.58)	37.44 (46.75)	t (108) = 2.46 *
JPSP	102.91 (100.76)	104.00 (106.28)	96.14 (57.62)	t (99) = −0.27, *ns*
JSI	25.97 (27.88)	23.38 (26.26)	30.94 (30.49)	t (109) = 1.36, *ns*
PSPB	39.21 (29.14)	42.39 (29.95)	34.21 (27.42)	t (106) = −1.43, *ns*
SC	12.20 (13.69)	12.13 (13.44)	12.40 (14.59)	t (123) = 0.09, *ns*
SPQ	12.72 (12.47)	13.55 (13.48)	10.22 (8.43)	t (107) = −1.21, *ns*
Total	32.03 (48.39)	34.23 (54.82)	27.99 (33.18)	F (1, 865) = 0.01, *p* = .91

Note: TC = Total Cites. * $p < .05$.

articles coded as within two categories were 20.6% (*N* = 64) as *Intergroup and Social Cognition*, 4.2% (*N* = 13) as *Intragroup and Intergroup*, and a further 1.3% (*N* = 4) as *Intragroup and Social Cognition*. Finally, a further 1.3% (*N* = 4) covered all three categories *Intergroup*, *Intragroup*, and *Social Cognition*.

Topic areas   The topic area covered by the largest number of group-related high-impact articles was intergroup relations, with 56.8% (*N* = 176). Within these there were 6.5% (*N* = 20) of the total group-related articles in the area of intergroup contact, and 4.8% (*N* = 15) about intergroup conflict. There was also a large number of articles from the social identity perspective (36.1%, *N* = 112). Stereotyping was the next most frequent topic area, with 29.0% (*N* = 90) of the articles, within these 6.1% (*N* = 19) of total group-related articles related to stereotype threat. The remaining topics that were covered in the high impact articles included 5.5% (*N* = 17) on social influence, 4.8% (*N* = 15) on essentialism and/or entitativity, 2.6% (*N* = 8) on group performance, decision making, or productivity, 2.3% (*N* = 7) on social dilemmas, 1.6% (*N* = 5) on leadership, 1.0% (*N* = 3) on structure or ecology of groups, 1.0% (*N* = 3) on power in groups, and 0.3% (*N* = 1) on conflict within groups.

Topic areas depending on the journal and publication period (split into two five-year categories: 1998–2002 and 2003–2007) are available in the Appendix. Exploratory analysis using chi squared revealed no systematic differences in topic areas across journal or publication year, so no further analysis of this data is presented.

Discussion

This analysis demonstrated that research into group processes and intergroup relations research as a whole is well represented amongst the top impact papers in social psychology, with over a third of these articles being about group-related research. Specifically, analysis 1 and Table 3 in this paper show that 15% of the total articles published in the principal journals in the 2000s are about group-related research. Interestingly, when examining the highest impact papers over the last 10 years, this proportion is much higher at 35.2%.[8] Furthermore, the analysis showed that the high impact papers about group-related research are generally cited just as often as high impact papers not about group-related research. In addition, group-related articles with the highest impact represent a range of topic areas and many broad categories of group-related research are covered with no obvious exceptions across intergroup, social cognition, or intragroup domains. The analysis demonstrates that articles about intergroup and social cognition research are more often amongst the highest impact papers for group-based research, accounting for almost 95% of high impact group-related papers. We have also shown which topic areas are most represented amongst the highest impact papers, with research
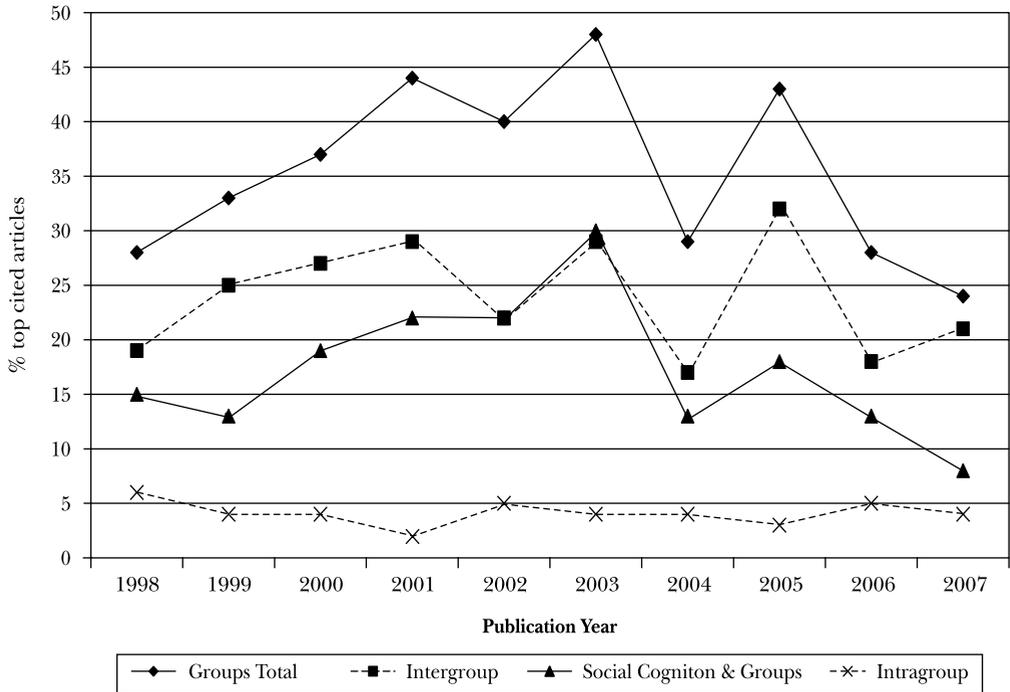
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Figure 3. Percentage of articles on group-related research in the top citations in the principal journals.

into intergroup relations, social identity, and stereotyping appearing most often.

Analysis 3: Tracking research in the two newest group-related research journals

Overview and method

In the late 1990s two new journal titles were launched for group-related research—*Group Processes & Intergroup Relations* in 1998, and *Group Dynamics: Theory, Research, and Practice* in 1997. These journals commenced as outlets specifically for group-related research at a time when this research was on the increase (e.g. Abrams & Hogg, 1998). We have focused our final analysis on these two journals because they are specific outlets for group-based research and they were both newly launched around the time of Abrams and Hogg's (1998) original review. To continue our review, we analyze the contents of

these two specialist journals to investigate what research has been published, and to compare their focus.

Group Dynamics: Theory, Research, and Practice was launched in 1997, and *Group Processes & Intergroup Relations* (*GPIR*) was launched in 1998. Both journals were set up as a response to interest in group-based research but with different emphases. In the inaugural issue of *GPIR*, Hogg and Abrams (1998) stated that this growth of the field was not mirrored with an increase in suitable outlets for such research. Furthermore, they stated that *GPIR* was established with a view to having an international scope with representation on the editorial board from all around the world. The editors also explicitly welcomed empirical articles and theoretical reviews about intergroup relations, social cognition, and small group processes.

Group Dynamics had a different approach and historical background. It was set up by Division 49 of the American Psychological Association

(Group Psychology and Group Psychotherapy). The Division was keen to establish an outlet for publications which would bridge the gap between the theory and research about groups, and the practice of group psychology (Stewart, Stewart, & Gazda, 1997). Rather than noting the increase of publication rates of group-based research, Forsyth (1997) emphasizes the importance of the application of research and theory of group-based processes in the inaugural issue of *Group Dynamics*. Kivlighan and Miles (2007) reported a content analysis of *Group Dynamics* from 1997 until 2002 and they highlighted six main themes: 1) cohesion and group identification; 2) attributions and perceptions in groups; 3) leadership and performance in groups; 4) power and relationships among group members; 5) knowledge and cognitive processes in groups; and 6) group psychotherapy. Kivlighan and Miles' (2007) analysis and conclusions suggest that the initial aims reported by Forsyth (1997) have been reflected in the articles published.

Although the missions and the historical context of these two group journals are different and highlight distinctive profiles, there has also been an overlap and background of mutual support in the editorial boards and development of these journals. This section of our review analyzes and compares the contents of the two journals utilizing the same list of prominent keywords used in Abrams and Hogg (1998).

We counted the frequency with which the keywords in Table 1 appeared in each of the past 10 years of *GPIR*. Only the keywords that were listed by the authors of the individual articles were included in the analysis. Prior to conducting the search the authors discussed the coding criteria for mapping key words in articles to the key words provided in Table 1. Despite slight variations or synonymous terms, it was possible to reach consensus about how each should be coded in terms of the Table 1 list. This method was considered optimal to ensure accuracy and consistency.

A similar frequency search using these keywords was conducted for the same publication period for *Group Dynamics*. This was conducted as a means of comparison with a journal of similar scope and publication period. This frequency search was also conducted manually using the same list of keywords. Unfortunately, during the early years of publication, the keywords provided by the authors were unconventional in that they were whole phrases pertaining to the research. EBSCOHost, the online journal archive used to conduct the manual search, provided simplified keywords in addition to those provided by the authors. Both groups of keywords were examined for repetition and variations of those provided in Abrams and Hogg (1998). In the instance that a keyword was found in both fields, only one was counted.

Results

Overall, *GPIR* and *Group Dynamics* produced a similar number of keywords over the past 10 years of publication. In the 40 issues of *Group Dynamics* examined, there were a total of 363 references to the terms on the keyword list. Similarly, in the 38 issues of *GPIR* (the first year of publication only included two issues) 337 references to the keyword items were produced. Taking into consideration the slight difference in the number of issues published, both journals yielded an average of approximately nine keyword references per issue. The cumulative total number of articles published during this 10-year period by *GPIR* and *Group Dynamics* were 248 and 231 respectively.

Group Processes & Intergroup Relations The results from the frequency search of *GPIR* indicated a fairly constant year-to-year increase in the references to these keywords (see Table 6). In the first year of publication (1998) there were a mere 16 references to the keywords and the first full year of publication (1999) had only 23 references. This increased to 52 references in 2007 and represents growth in the scope of topics covered by *GPIR*.

Throughout the past 10 years there has also been considerable consistency in the focus of the manuscripts published, as indicated by the keyword frequencies. As expected, 'intergroup' and 'intergroup-relations' were among the top five most frequent keywords over the past 10 years, followed by 'prejudice', 'social identity', and 'stereotyp-' (see Table 7). Moreover, these

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Table 6. Total references to keywords listed by Abrams and Hogg in *GPIR* and *Group Dynamics*, by year

	GPIR	*Group Dynamics*
1998	16	39
1999	23	46
2000	23	34
2001	34	30
2002	23	27
2003	36	40
2004	34	52
2005	42	33
2006	54	34
2007	52	28

overall top five keywords were among the top five keywords every year for a minimum of 70% of the years of publication. Among the rest of the keywords, a few of the more frequently referenced were 'group decision-making', 'in-group', and 'out-group'. It is notable that despite 'prejudice' and 'stereotyp-' both being among the top five most frequent keywords, the terms 'racism' and 'sexism' received two or less references over the entire 10-year period.

Group Dynamics: Theory, Research, and Practice

The overall frequency of keywords for *Group Dynamics* fluctuated considerably from year to year with the notable exception of one keyword (see Table 7). As expected, 'group dynamics' was the one of the top five keywords for all 10 years examined. The frequency of this keyword, 92 mentions, was nearly double the next highest keyword for either journal. However, this figure could be slightly exaggerated due to the use of both the keywords provided by the author as well as those provided by EBSCOHost. The remaining keywords that complete the overall top five list ('group cohesi-', 'group performance', 'leadership', and 'social identity') did not show

the year-to-year consistency of *GPIR*. In fact, 'group cohesi-' was the fifth most frequent keyword overall despite only being in the annual top five for two of the 10 years. Likewise 'social identity', the only top five keyword common to both journals, only made the top five list for four years in *Group Dynamics*. Thus, although they have relatively similar overall totals, the frequency searches for these two journals yielded very different results.

Discussion

Over the past 10 years of publication, the most common topics in *GPIR* seem to focus on the effects of group membership such as social identity, prejudice, and stereotypes. Alternatively, *Group Dynamics* contained considerably more articles pertaining to group processes in the workplace and within teams. Furthermore, some of the most frequently referenced keywords found in *Group Dynamics* were not on the search list, most notably 'group psychotherapy'. When considering the historical context of *Group Dynamics*, as discussed previously, this is not so surprising. The considerable difference in the results of the keyword frequency searches for *GPIR* and

Table 7. Top five most frequently referenced keywords from Abrams and Hogg (1998) in *GPIR* and *Group Dynamics* over the 10-year period examined

GPIR	Frequency	*Group Dynamics*	Frequency
intergroup	52	group dynamics	92
stereotyp-	35	group performance	40
social identity	34	leadership	38
prejudice	33	social identity	25
intergroup-relations	29	group cohesi-	21

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Group Dynamics: Theory, Research, and Practice may seem indicative of differing levels of focus on particular subjects as would be expected based on their missions and aims (Forsyth, 1997; Hogg & Abrams, 1998). Indeed, the fact that only one of the keywords ('social identity') listed by Abrams & Hogg (1998) was common to both journals in their five most frequent keywords shows that these two publications explore rather different areas of group-related research. Indeed, the mission of *Group Dynamics* of cutting across a broad range of issues probably means that it will take a while for the emphasis to become clear a later analysis will probably lead to a more definite subset of key themes.

As expected, this seems to indicate that these two journals tend to explore very different areas within the realm of group behavior. However, it is plausible that the results of these frequency searches are indicative of the changing pattern of group-related research over the past 10 years. When Abrams and Hogg (1998) originally compiled their keyword list it was fairly exhaustive of the relevant research topics at the time. As the scope of group research has changed and grown over the past decade, it might be expected that germane words also change. Indeed, of the 76 keywords provided by Abrams and Hogg (1998), 31(40.8%) and 48(63.2%) were not referenced a single time in the past 10 years of *GPIR* and *Group Dynamics*, respectively. Thus, it could be argued that future analyses will need to re-evaluate the keywords that are central to group-related research to accommodate new foci of research.

General discussion

Summary

The three analyses presented in the present paper substantially extend previous empirical reviews of the progress of group-related research. First, we have replicated Abrams and Hogg's (1998) analysis of group research extending the time frame to include 40 years prior to the original review and including the last 10 years following it (i.e. 1935–2007). This analysis shows that group-related research accounts for just over a sixth of all the research in our list of social

psychological publications. Furthermore, this analysis demonstrates that publication rates for group-related research steadily increased until the 1960s, continuing at a slower pace from the 1960s to the 1980s. Then in the 1990s there was another dramatic increase; this again has slowed during the present decade, although it continues to rise substantially in the principal journals.

Second, we have examined the most cited papers from a set of principal social psychology journals from the last 10 years (1998–2007 inclusive). This analysis reveals that a third of these high impact journal articles in the field of social psychology have a focus on groups. Interestingly, compared to the proportion of research in the broader field of social psychology, group-related research is even more strongly represented in terms of high impact work. We also note that much of the impetus for intergroup relations research appears to have been through the *British Journal of Social Psychology* and *European Journal of Social Psychology*. This reflects the strong European tradition of intergroup relations research in social psychology, spearheaded by Tajfel and by Moscovici (see Abrams & Hogg, 2004). Moreover, it appears that researchers' concern with intergroup relations has continued to strengthen globally, perhaps reflecting the more interconnected nature of society at a global level.

Third, we analyzed the content of two of the leading journals in the field that offer a direct outlet for group-related research, *Group Processes & Intergroup Relations* and *Group Dynamics: Theory, Research, and Practice.* This analysis showed that together the journals cover a wide range of group-related research and are complementary rather than duplicating one another's coverage. *Group Processes & Intergroup Relations* has had a higher frequency of work examining intergroup (relations), stereotypes, and prejudice. Whereas *Group Dynamics* has had a higher frequency of work investigating group dynamics, group performance, leadership, and group cohesion. In fact, the only top keyword common to both journals was *social identity*. This indicates that Abrams and Hogg's (1998) suggestion that changes in European Social Psychology reinvigorated group-related research was

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accurate (Moreland et al., 1994 found some empirical support for this; see also Wittenbaum & Moreland, 2008). What is certainly promising for the field is that these two journals continue to cover a wide spectrum of research in the area and continue to develop and provide a good quality outlet for researchers into group-related processes and phenomena.

Is the emergence of specialist groups journals a problem for the field? It could be argued that such journals will lead to a ghetto-ization of the field and that eventually other mainstream journals will divest themselves of responsibility or interest in publishing such work (cf. Wittenbaum & Moreland, 2008). On the other hand it is possible to be quite optimistic about the emergence of specialist journals. First, they probably reflect the increased demand for research in a particular area, and therefore its overall strength and critical mass. Second, given that perhaps the majority of academic researchers now conduct their literature searches via electronic databases, they are less likely to restrict themselves to publications within just the 'principal' journals. This means that, to the extent that such high quality research is useful and interesting, they will find it easily and cite it, wherever it appears.

Limitations and future research
We expect that as databases continue to develop, reviews of this kind will continue to become more comprehensive and detailed. For example, these analyses considered journals from social psychology that are thought to be relevant to the field of group-related research. However, this list may not be comprehensive and we apologize for any omissions. Indeed, in the 10 years since Abrams and Hogg's (1998) examination of group-related research, six journals have risen in prominence and were included in the current research, while others have ceased publication altogether. Therefore, it is possible that more journals will be created in the future to keep up with the demand for this expanding field of research. It is also possible that core journals in social psychology will consider allocating more space to group-related research. For example, almost 14% of the highest cited articles from the *Journal of Personality and Social Psychology*

were group-related articles (with peaks of over 30% in 2001 and 2002). Yet within that journal, group-related research is mostly only published within the sub-theme of Interpersonal Relations and Group Processes (one of three sub-themes).

As group-related research is steadily rising in social psychology, it is expected that group-related research will also become more influential in other disciplines. In fact, this has been suggested in previous reviews. For example, Sanna and Parks (1997) pointed to organizational psychology journals and highlighted especially how research into intragroup processes may be migrating there. It seems plausible, therefore, that researchers are also tackling more applied topics and there are many examples of research being published in management and business related journals. Whilst we have included some management and business related journals in our first analysis (e.g. *Journal of Organizational Behavior*, *Organizational Behavior and Human Decision Processes*, etc.) we did not consider them as principal outlets in our review of group-based research in social psychology. We state from the start that our list of keywords utilized in our analyses (Table 1) is not exhaustive. It is possible that group-related research being published outside social psychology uses different terms for certain topic areas which may not have been captured in our analysis. Nonetheless, our analysis does provide the most comprehensive investigation conducted to date. We would be surprised if the picture looked very different in these adjacent disciplines but this could be a fruitful avenue for future investigation.

To ascertain some generality of this conclusion we examined all APA journals articles published in 2007, classified by sub-sector in the APA listings to calculate the proportion of group-related publications.[9] As expected, Social Psychology and Social Processes journals had the highest number (36.40%), followed by industrial/organizational psychology and management journals (21.76%). Additionally, group-related research continues to spread into other areas. Our examination of APA journals in 2007 shows that nearly two-thirds of group-related research is being published in areas beyond Social

Psychology and Social Processes APA subject area. This suggests that group-related research pervades all areas of psychology, albeit in a more thinly spread form than in social psychology. Encouragingly, even within the journals classified as 'core' by the APA, such as *American Psychologist*, 8% of articles were about group-related research. Further research will be needed to explore whether changes in the proportions of group-related research outside social psychology lead, coincide, or follow the trends within social psychology.

Finally, the current analysis of high impact papers over the last decade highlights that group-related research is being well represented within the field of social psychology in terms of citations and broader appeal (total citations are recorded by ISI beyond our limited subset of journals). It would be interesting to track how this develops and changes over time (e.g., do specific articles go through a period of being often cited and then forgotten?) and location (e.g., are articles being cited in general fields other than social psychology and, if so, where?). These kinds of questions are more specific to the citation process and, as such, were not considered in the current analysis. It would also be interesting to track more directly how much research was being published in the different domains we identified and how this relates to what impact this work has in those areas; perhaps as the ISI database grows, this sort of analysis will become more feasible.

Conclusion

The progress of group processes and intergroup relations based research is steady and sure, both in terms of quantity and impact. Furthermore, the relatively new journals, *Group Processes & Intergroup Relations* and *Group Dynamics: Theory, Research, and Practice*, for research in the field are growing and provide distinct contributions to the area. Although the field in general is growing at a steady pace and looks set to stabilize at a certain proportion of research in social psychology, some areas emerge more prominently than others. Research into intergroup relations and

social cognition figures largely and is often cited, whereas research into intragroup processes is less plentiful. Nevertheless, there is substantial intellectual impetus to integrate across these levels of analysis, an overarching theme of *Group Processes & Intergroup Relations*, and repeatedly at group processes and intergroup relations pre-conferences of both the SESP and SPSP. Thus, ideas, methods, and findings from intergroup and intragroup research cross-fertilize and stimulate new work.

The wide range of special issues covered by *Group Processes & Intergroup Relations* provides a good example of the varied research in the field, and new avenues are being pursued. Since its inception there have been special issues on Information Processing in Groups (Brauner & Scholl, 2000); Social Identity Processes in Organizations (van Knippenberg & Hogg, 2001); Intergroup Contact (Dovidio, Gaertner, & Kawakami, 2003); Evolutionary Approaches to Group Research (Kameda & Tindale, 2004); the Inaugural Group Processes and Intergroup Relations pre-conference from the annual SPSP meeting (Gaertner, Hogg, & Tindale, 2005); Intergroup Relations: Its Linguistic and Communicative Parameters (Reid & Giles, 2005); Lay Theories and Intergroup Relations (Levy, Chiu, & Hong, 2006); Diversity and Intergroup Relations within Organizations (Ensari, Christian, & Miller, 2006); Intergroup Emotions (Giner-Sorolla, Mackie, & Smith, 2007); and, most recently, Social Neuroscience (Prentice & Eberhardt, 2008), with forthcoming special issues on Music and Self-Regulation. In fact, the next review of group processes and intergroup relations research may look very different as the scope and capacity for new approaches expands to such as social neuroscience, evolutionary psychology, multi-level modeling, and the many social identity and intragroup processes researchers move to the organizational field and beyond. The important question is whether research in group processes and intergroup relations will continue to flourish and increase or maintain its impact in the field of social psychology. The prospects look good, and we close with an assertion that the understanding

and knowledge of groups is central to any study of social psychology. As Cartwright and Zander (1968) pointed out:

> Whether one wishes to understand or to improve human behavior, it is necessary to know a great deal about the nature of groups. Neither a coherent view of man nor an advanced social technology is possible without dependable answers to a whole host of questions concerning the operation of groups, how individuals relate to groups, and how groups relate to larger society. (p. 4)

Acknowledgments

Notes

1. Editor Dominic Abrams was uninvolved in the editorial process for this manuscript. *GPIR* Associate Editor Norbert Kerr handled the editorial and peer review process for this article.
2. 1935 was chosen as the year Sherif published his influential paper on the social factors of perception and Lewin published his book on dynamic personalities. The Society for the Psychological Study of Social Issues was launched in 1936.
3. Unless otherwise reported, all *p*-values are two-tailed.
4. The rate of publication was low in the 1930s, 1940s and 1950s (combined *M* = 1097) compared to the other eras (1960s–2000s respectively, *M* = 696, 1097, 1535, 2122, 2536), therefore these three eras were collapsed across for these analyses.
5. The rate of publication was low in the 1930s, 1940s and 1950s (combined *M* = 237) compared to the other eras (1960s–2000s respectively, *M* = 185, 415, 549, 534, 587), therefore these three eras were collapsed across for these analyses.
6. *Psychological Bulletin* and *Psychological Review* were not included because only six articles about groups were in the top 10 citations over the last 10 years.
7. To check the reliability of the coding, another researcher who was blind to the research goals categorized a random sample of 10 articles (i.e. 10%) from each of the eight journals.

All codes were in agreement (Cohen's kappa = 1.00). This sample size for inter-rater reliability is not uncommon, although care must be taken not to over-generalize this kappa and perfect agreement to the whole sample (Fan & Chen, 2000).
8. For a number of reasons (e.g., differences in coding criteria for the two percentages), it is not appropriate to test directly for statistically significant differences between these percentages.
9. APA classifies its journals as belonging to one of seven subject categories: Core Psychology; Biological and Developmental Processes; Clinical Psychology; Cognitive/Learning/Education; Health Psychology; Industrial/Organizational Psychology and Management; and Social Psychology and Social Processes. A search of all publications within each subject category for 2007 was conducted to determine the number of articles matching the search terms listed in Table 1. The highest number was published in Social Psychology, followed by I/O Psychology and Management, Clinical Psychology, Core, Biological and Developmental, Health Psychology, and finally Cognitive/Learning/Education.

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Appendix. Frequency of articles per topic as a function of journal and publication period

	BJSP		EJSP		JESP		JPSP		JSI		PSPB		SC		SPQ		Total	
	98–03	03–07	98–03	03–07	98–03	03–07	98–03	03–07	98–03	03–07	98–03	03–07	98–03	03–07	98–03	03–07	98–03	03–07
Intergroup relations	17	11	16	18	12	8	5	5	17	16	7	17	7	9	4	7	85	91
Intergroup contact	1	0	4	2	1	0	0	1	2	5	0	2	0	1	0	1	8	12
Intergroup conflict	3	6	0	3	0	0	0	0	1	1	0	1	0	0	0	0	4	11
Social identity	21	12	10	22	4	4	2	2	6	4	6	1	1	3	4	10	54	58
Stereotypes	5	3	5	6	11	13	5	3	4	3	9	7	6	10	0	0	45	45
Stereotype threat	0	0	0	1	4	5	0	1	1	0	3	4	0	0	0	0	8	11
Social influence	3	0	3	2	1	1	0	0	1	0	1	3	0	2	2	0	11	6
Essential/entitativ	3	1	1	3	0	2	0	0	0	1	1	1	0	2	0	0	5	10
Perf/Dec/Product	3	0	2	0	1	2	0	0	0	0	0	0	0	0	0	0	6	2
Social dilemmas	0	0	2	1	1	0	0	0	0	0	0	1	0	0	1	1	4	3
Leadership	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	1	4
Structure	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	2
Power	0	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	2
Conflict within	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Total	57	36	44	59	35	37	12	12	33	30	27	37	14	25	11	22		

Note: Total dummy 'yes' codes = 491 (1998–2003 = 233; 2004–2007 = 258).