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Group Citizenship Behaviour: Conceptualization and Preliminary Tests of its Antecedents and Consequences

Xiao-Ping Chen, Simon S. K. Lam,[1] Stefanie E. Naumann[2] and John Schaubroeck[3]

Department Of Management and Organization, University of Washington, USA, [1]The University of Hong Kong, PRC, [2]University of the Pacific, USA, [3]LeBow College of Business, Drexel University, USA

ABSTRACT Group citizenship behaviour (GCB) is conceptualized as a distinct group-level phenomenon concerning the extent to which work groups engage in behaviours that support other work groups and the organization as a whole. These behaviours are different from task performance; they enhance and maintain the social and psychological environment in which task performance occurs. Based on the referent-shift consensus model (Chan, 1998), we developed a GCB scale and examined its nomological network. In a sample of 148 work groups in the Hong Kong office of a multinational bank (a total of 743 employees), between-group differences in GCB were greater than within-group differences. GCB was positively associated with procedural justice climate and work group leadership support. Work group cohesiveness and group-organizational goal congruence interactively predicted GCB, as did the negative affective tone of the group and the group's negative affectivity homogeneity. In addition, GCB was positively related to group performance, and negatively related to employee turnover intentions. The theoretical and empirical implications of this study are discussed in the context of Chinese organizations.

群体公民行为：概念构建与对其因果关系的初步验证

摘要

本文将群体公民行为（GCB）定义为组织中的工作群体从事或参与支持其他工作群体或整个组织的行为，它是一种独特的群体现象。此类行为有别于任务绩效，却有助于强化并维持对任务绩效有益的社会和心理环境。基于Chan（1998）的对象迁移共识模型，我们编制了GCB量表并检验了其因果结构网络。以一家跨国银行香港分行148个工作群体为研究样本（总共743名员工），本文发现GCB的组间差异大于组内差异。GCB与组织的程序公正气氛和群体领导的支持行为有显著的正相关。

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群体凝聚力和群体-组织目标一致性的交互作用影响GCB ，群体负向情绪水平与其负向情绪一致性的交互作用亦影响GCB。此外，GCB对群体绩效有正面影响，并与员工离职意向呈负相关。本文讨论了在中国企业环境中该研究的理论和实践意义。

Scholars have argued persuasively that organizational citizenship behaviour (OCB) is critical for organizational effectiveness. A growing body of research has identified a positive relationship between OCB and group or organizational effectiveness (Karambayya, 1990; Koys, 2001; Podsakoff and MacKenzie, 1997; Podsakoff, MacKenzie, and Aherne, 1997; Wolz and Niehoff, 1996). However, the majority of this research has treated and examined OCB as an individual level construct (Podsakoff, MacKenzie, Paine, and Bachrach, 2000). George advocated that 'exploration of prosocial behavior as a group phenomenon opens up a vast array of intriguing issues, such as . . . the effect of the group's level of prosocial behavior on group productivity' (1990, p. 114). In a meta-analytic review of the predictors of organizational citizenship behaviour, Organ and Ryan called for more research on OCB at other levels of analysis:

> We know something now about correlates of individual OCB. The significant questions remaining are whether other modes of conceptualization of OCB and *other levels of analysis* (emphasis added) can further enrich the potential of this and other constructs for organizational theory and human resource management (Organ and Ryan, 1995, p. 797).

This call for research of OCB beyond the individual level was echoed by Podsakoff et al. (2000) and Schnake and Dumler (2003). The purpose of the current study is to respond to this call by proposing, measuring and validating a group-level organizational citizenship behaviour construct.

CONCEPTUAL BACKGROUND

Organ (1988) first pointed out the need for group/organizational level or cross-level research on OCB. Despite the repeated call by other researchers (e.g. George, 1990; Organ and Ryan, 1995; Schnake and Dumler, 2003), only a few researchers have examined group and organizational level variables as antecedents of OCB. For example, Karambayya (1990) examined the effect of group-level work context on individual OCB. The work context variables included intrinsic and extrinsic rewards, organizational culture, work unit size, work unit heterogeneity and task interdependence, most of which are clearly group-level phenomena. George and her colleagues (George, 1990; George and Bettenhausen, 1990; George and Brief, 1992) examined the relationship between pro-social behaviour and positive and negative affectivity at both the individual and group levels. They presented evidence for group-level affectivity on group-level salesperson's helping behaviour

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toward customers. In another study, Ehrhart, Thomas, and Bliese (2003) examined the relationship between group-level OCB and group performance in a sample of military units. The authors found that group-level OCB (which was measured by an aggregation of individual OCB) is positively associated with objective measures of unit performance beyond the effects of other group process variables (cohesion, conflict, and leadership). In a study that employed a restaurant sample, Koys (2001) found that when aggregating individual OCB to the group level, it explained 20% of the variance in profitability.

Even though these studies provide some insight on OCB in a group, most existing group-level OCB research has conceptualized and measured the variable as the level of OCB within the work group, with the target being other individuals within the group or without explicitly discussing the target of that behaviour (e.g. Kirkman, Tesluk, and Rosen, 2001; Koys, 2001; Mohammed, Mathieu, and Barlett, 2002; Podsakoff et al., 1997). These studies have not shown how the 'group as a whole' engages in organizational citizenship behaviour. To realize the potential for group-level and cross-level theory in OCB research, the present study focused on the construct of group-level OCB and its nomological network.

Defining Group Citizenship Behaviour (GCB)

We define group citizenship behaviour (GCB thereafter) as a distinct group-level phenomenon concerning the extent to which work groups engage in behaviours that support other work groups and the organization as a whole. These behaviours are independent from task performance, they enhance and maintain the social and psychological environment in which task performance occurs. An example of GCB in an academic setting would be if one department helps another department in conducting an orientation meeting of new students. If the purchasing department of a company helps the materials department in cleaning out its inventory, it could also be considered as GCB. On the other hand, citizenship behaviour toward another individual inside the group or in other groups is not considered as GCB. Furthermore, GCB should include behaviours that are not task specific and can transcend different jobs and contexts. This definition implies a 'referent-shift consensus model' (Chan, 1998). From this perspective, the target being rated at the individual level shifts to the group level. The target of an act of GCB is primarily other groups or the organizations as a whole. This conceptualization suggests that GCB is not the aggregate to the unit of OCB ratings of individuals toward other members of group, where the individual is the referent (e.g. Koys, 2001). It also is not an aggregate of the ratings of members' citizenship behaviour toward one another where the group is the referent (e.g. Ehrhart, Thomas, and Bliese, 2003).

Our definition of Group Citizenship Behaviour is different from group performance in at least three aspects. First, group performance is often measured by

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group output (e.g. product developed, service rendered) in terms of its quality and quantity, or the time needed for completion. GCB, on the other hand, refers to a set of concrete behaviours that enhance or facilitate other groups in completing their tasks and help them achieve better results. For example, helping other groups with heavy workloads is considered GCB, but it is not considered group performance. Second, group performance refers to how well a group performs a certain task, whereas GCB refers to a set of behaviours directed to other groups or the organization as a whole, it is not targeted to one's own group task accomplishment. Lastly, compared to group performance, GCB is less likely to be considered an enforceable job requirement and regarded by the performer as leading to systematic rewards.

Our definition suggests that a variety of behaviours targeted at other groups and the organization may be considered as GCB. However, the literature so far has not presented an index designed specifically to measure a group's citizenship behaviour toward other groups. Therefore, we first adopted a qualitative inductive approach to develop the GCB scale. Then, following previous studies that have attempted to establish the nomological validity of a new construct (see Schwab, 1980; Stone-Romero, 1994), we developed and tested hypotheses that identified antecedents and outcomes of GCB. The nomological model regarding the relationships among these variables is depicted in Figure 1.

While a majority of the variables included in the model are group-level constructs such as procedural justice climate, group leadership support, group cohe-

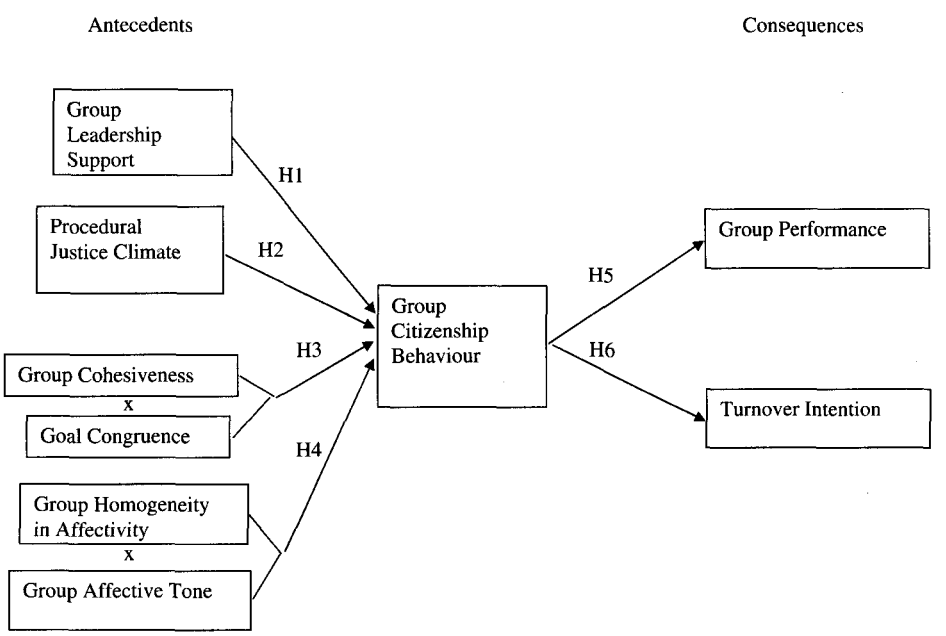


Figure 1. A model of antecedents and consequences of group citizenship behaviour

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siveness, and group performance, one of the outcome variables was at the individual level, namely, employee turnover intention. Therefore, this nomological network is a partly cross-level model.

Antecedents of Group Citizenship Behaviour

Work group leadership support. Leadership has been examined at both individual and group levels in leadership research, but primarily at the individual level in OCB research. Some leadership researchers argue that leadership is an individual-level phenomenon in that a leader exhibits a unique style for each subordinate (Dansereau, Graen, and Haga, 1975). Other leadership scholars posit that leaders exhibit similar behaviours for all group or subgroup members, and some evidence exists that leadership influences individuals both independently and as members of groups (Katerberg and Hom, 1981; Veechio, 1982). For example, Smith, Organ, and Near (1983) found that between-group differences on leader supportiveness were greater than within-group differences. They then averaged subordinate ratings to the group level and found them to be positively related to individual OCB. Similarly, Shamir, Zakay, Breinin, and Popper (1998) also found a homogeneous unit-level leadership effect on OCB.

In the present study of between-group differences in organizational citizenship behaviour, leadership is conceptualized at the group level of analysis. This conceptualization is consistent with the large amount of research that has been conducted on the effects of leadership on group outcomes (for a review, see Yukl, 2002). Group-level leadership support is likely to motivate employees to perform GCB because much of a leader's supportive behaviour is, in itself, a form of citizenship behaviour. Supportive leaders are likely to serve as role models for their subordinates; subordinates with supportive leaders are likely to reciprocate by providing support. Furthermore, supportive leaders are more likely to provide positive feedback about group performance, which was found to be one of the 'causes' for group members' helping behaviour (Bachrach, Bendoly, and Podsakoff, 2001). In a survey of unit-level OCB in 249 grocery store departments, Ehrhart (2002) found that one type of supportive leadership – servant-leadership (Greenleaf, 1977) – had significant effects on department-level OCB. Therefore, we hypothesize that

Hypothesis 1: Leadership support of the work group will be positively related to group citizenship behaviour.

Procedural justice climate. Procedural justice climate refers to a group's evaluation of the fairness with which it is treated, and it has been demonstrated to be more important than distributive justice in determining people's feelings of fairness (Brockner, 2002). Little research has examined procedural justice at the group

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level. One exception is the study by Mossholder, Bennett, and Martin (1998) on 'procedural justice context', which explained variance in individual job satisfaction beyond individual perception of justice. Another exception is Naumann and Bennett's (2000) study of procedural justice climate. These authors defined procedural justice climate as group-level cognition about how the work group as a whole was treated. They found it to be positively associated with a subset of OCB – helping behaviours, even after controlling for individual procedural justice perceptions. Their findings suggest that when group members feel that the work group as a whole is being treated fairly, they will be more willing to reciprocate by taking on extra responsibilities.

Two basic conclusions can be drawn from these studies. First, procedural justice climate is a valid group-level construct that explains additional unique variance in individual job satisfaction and citizenship behaviour. Second, the feeling of being treated fairly as a group seems to promote positive behaviours toward other groups. The perception of a fair organization is likely to lead people to believe that they will be fairly treated for what they do and that instances of fair treatment may be reciprocated by others (or the organization) in the future. In addition, a feeling of being fairly treated generally puts people into a positive mood, and this has been found to increase the likelihood of perceiving extra-role tasks as in-role (Bachrach and Jex, 2000) and it increases helping behaviour in general (e.g. Isen and Baron, 1990). Therefore, we hypothesize that

Hypothesis 2: Procedural justice climate of the organization will be positively related to group citizenship behaviour.

Work group cohesiveness and goal congruence. Work group cohesiveness refers to the extent to which group members are attracted to a group, strongly desire to remain in the group, and mutually influence one another (Organ and Hamner, 1982). In cohesive groups, members have high levels of interaction and often agree with and like one another (Shaw, 1981), and they are more likely to cooperate with each other to achieve group goals. Numerous studies on social dilemmas – situations in which individuals face the conflict between maximizing personal interests and maximizing the collective interests – found that members who identified with the group were more likely to contribute to the group (Bouas and Komorita, 1996; Kramer and Brewer, 1984; Chen, 1996; Dawes, van de Kragt, and Orbell, 1990). In other words, members of cohesive groups are more likely to engage in cooperative behaviours.

On the other hand, whether a positive relationship exists between group cohesiveness and GCB will depend on the congruence between the group and the organizational goals. Previous research studying the consequences of group cohesiveness indicates that when group goals are aligned with organizational goals, group cohesiveness facilitates both group and organizational goal accomplishment.

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When group goals are not aligned with organizational goals, group cohesiveness tends to facilitate group goal achievement, but at the expense of the organizational goals (e.g. Podsakoff et al., 1997). Thus the extent to which a more cohesive group is likely to go beyond the call of duty to help other groups or the organization as a whole may depend on the level of congruence between the group's goal and the organization's goals. A cohesive group will more likely engage in GCB when it perceives goal congruence than when it does not perceive goal congruence. Thus, we hypothesize

Hypothesis 3: The relationship between group cohesiveness and GCB will be positive when the group goals are aligned with organizational goals and negative when the group goals are not aligned with organizational goals.

Work group affective tone and affectivity homogeneity. Similarity between persons is a profound source of interpersonal attraction. The finding that people consciously and unconsciously prefer to interact with others who are similar to them is one of the more robust and reliable social psychological findings (Berscheid, 1985). This phenomenon has also been strongly supported in both small group and organizational contexts (see Williams and O'Reilly, 1998, for a review). The general finding is that people who are similar in demographic characteristics, personality, affectivity, attitudes, or values are more likely to be attracted to one another (Barsade, Ward, Turner, and Sonnenfeld, 2000; Byrne, Clore, and Smeaton, 1986; Kandel, 1978). In the present study we examined the effect of group affective tone on GCB. Affective tone is a group-level phenomenon because it depends on a group property, namely, whether or not there is consistency in affectation within groups. According to George (1990), two components are important in defining group affective tone. The first component is the consistency or homogeneity of members' affective reactions, and the second component is the average level of these affective reactions within the group. In this study, we distinguished these two components and examined their interaction effect on GCB.

Group affective tone can be positive or negative. Groups that have a negative affective (NA) tone tend to have a negative view of themselves, others, and the world around them, and to interpret ambiguous stimuli negatively. Groups that have a positive affective (PA) tone tend to have an overall sense of well-being, and tend to see themselves as pleasurably and effectively engaged. Moreover, NA and PA are considered to be independent dimensions (Tellegen, 1982, 1985; Watson and Clark, 1984). Therefore, we examined the effects of PA and NA separately.

The findings of previous workplace studies examining group affective tone and cooperative behaviour were somewhat mixed. George (1990) found that the negative affective tone of a sales group was associated with a lower number of prosocial behaviours (customer service behaviour) by the work group, whereas the group positive affective tone was negatively associated with group members' absen-

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teeism. Barsade et al. (2000) found that top management teams that had high levels of consistency in low positive affectivity displayed levels of group cooperativeness comparable with teams that had high positive affectivity. We believe that these two seemingly contradictory results may be due to the different emphasis on the two components of group affective tone. George's (1990) study examined the effects of the *mean level* (the second component) of group affectivity, whereas Barsade et al. (2000) studied the effects of top management team's affectivity *homogeneity* (the first component). Their findings suggest that the degree of homogeneity in affectivity within a group may moderate the relationship between the mean level of the group affective tone and GCB. We would expect the effect to be stronger when there is a high level of homogeneity in either positive or negative affectivity.

Hypothesis 4: Group affectivity homogeneity will moderate the relationship between the group affectivity tone and group citizenship behaviour such that

Hypothesis 4a: The positive relationship between the group positive affective tone and group citizenship behaviour will be stronger when there is a higher level of group affectivity homogeneity, and

Hypothesis 4b: The negative relationship between the group negative affective tone and group citizenship behaviour will be weaker when there is a lower level of group affectivity homogeneity.

Consequences of Group Citizenship Behaviour

A functional analysis of GCB would suggest that like most of the team mental models such as group affectivity (George, 1990), collective efficacy (Bandura, 1986), or transactive memory (Wegner, 1986) (for a review, see Klimoski and Mohammed, 1994), the primary function of GCB is to facilitate coordination between various groups, foster group efficiency, and promote predictability of individual and group behaviour.

Work group performance. George has suggested that 'although extra-role, organizationally functional prosocial behaviours may not be reflected in individual productivity, a relation at the group level of analysis may indeed be plausible' (1990, p. 114). In theorizing why individual OCB should have a positive impact on group performance, Podsakoff and MacKenzie (1997) proposed eight possible mechanisms, including enhancing co-worker productivity, increasing managerial productivity, making the organization a more attractive place to work, increasing the organizational ability to attract and retain the best people, promoting the stability of organizational performance, and so on. Some of the mechanisms, such as making the organization a more attractive place to work, or increasing the orga-

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nizational ability to attract and retain the best people, may well apply to the group OCB–group performance relationship.

There are two reasons why we expect a positive relationship between GCB and group performance. Because the targets of GCB are other groups and the organization, it should bring groups together in ways that increase the group's structural, relational, and cognitive social capital (for a detailed discussion, see Bolino, Turnley, and Bloodgood, 2002). This social capital provides unique capabilities or resources that give the group an advantage that would ultimately facilitate its performance. For example, groups that are willing to provide assistance to other groups with work-related problems are more likely to get help from other groups when needed. Groups that often communicate with other groups are also likely to have a better understanding of other groups' strengths and weaknesses, and to build strong cognitive and relational ties with these groups that facilitate any intergroup coordination needed to enhance each group's performance objectives. As a result, these groups are more likely to achieve high performance than groups that do not engage in GCBs.

In addition, groups that support organizational functions as a group, take an active part in the change initiatives of the organization, or identify opportunities for change in the best interest of the organization are more likely to receive support and resources from the organization when they face difficulties or problems in accomplishing their goals. In addition, there may be a possible symbolic or impression management function of the GCB. A group that engages in GCB is likely to develop a good reputation in the company. This undoubtedly will create a halo effect, causing the manager to have a positive bias about the group, independent of actual group outputs. For these various reasons we propose the following hypothesis:

Hypothesis 5: Group citizenship behaviour will be positively related to work group performance.

Turnover intentions. Although research on the OCB–turnover relationship is limited, it has found that employees who exhibited lower levels of OCB were more likely to leave an organization than those who exhibited high levels of OCB (Chen, Hui, and Sego, 1998). With regard to the traditional withdrawal models, most of them point to individual-level explanations for withdrawal behaviours (e.g., Hom and Griffith, 1995; Mobley, 1977), but some research has found that group factors can account for employees' desire to withdraw from work through turnover (Abelson, 1983). According to Salancik and Pfeffer's (1978) social information processing theory (SIP), individuals receive cues from the surrounding social environment, form perceptions of the culture of the environment, and then act upon it. When one's work group as a whole engages in behaviours that help achieve organizational goals (e.g. making constructive suggestions, taking an active part in the

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change initiatives of the company), individual employees will better appreciate their own and others' involvement in supporting organizational success. This in turn fosters their psychological attachment to the organization. When people observe helping and coordinating behaviours between work groups, they also develop positive expectations about the future of the organization. This makes them less likely to leave voluntarily.

In sum, GCB is likely to inhibit individual turnover for two reasons. First, GCB will influence an individual member's own level of OCB, which has been linked with this member's likelihood of leaving an organization (e.g. Chen et al., 1998). Second, engaging in GCB will influence an employee's perception about the 'organization culture' or 'social norm', and ultimately their choice of staying with the organization (Salancik and Pfeffer, 1978). This suggests that GCB will influence an individual employee's turnover intention above and beyond the effect of individual OCB. We therefore hypothesize:

Hypothesis 6: Group citizenship behaviour will be negatively related to individual turnover intention, after accounting for the influence of individual-level OCB.

Group Citizenship Behaviour in the Chinese Context

One of the key characteristics of the Chinese culture is its high context orientation (Hall, 1989). Chinese tend to pay more attention to the social context and social norms than to individual attitudes, and are more likely to look to the context for cues on how to behave in a given situation. In other words, the Chinese tend to view themselves in the group context and are highly susceptible to group and social influence. Therefore, the behaviour of the group as a whole is a more meaningful concept to the Chinese than it might be to people in a low context culture (e.g. Americans or German-Swiss). As a result, studying OCB at the group level is of particular relevance in China.

Another key characteristic of the Chinese culture is its relationship orientation (Triandis, 1995). Developing relationships (or *guanxi*) with other individuals or groups is imperative to the Chinese people. One of the means of developing such relationships would be to keep constant communication with other groups, to help other groups if there is the need, and so on. So it is likely that Chinese organizations present numerous opportunities to observe GCB.

To develop the GCB measurement, we chose a Hong Kong sample rather than a Chinese-mainland or Taiwan sample for two reasons. First, it builds on previous cross-cultural research that has used Hong Kong samples (e.g. Hui, 1988; Leung and Bond, 1984; Singelis, Triandis, Bahwuk, and Gelfand, 1995; Triandis, McCusker, and Hui, 1990). Second, the scales developed based on the Hong Kong sample have shown good psychometric properties when applied to the Chinese samples in mainland China, Taiwan, and Singapore (e.g. Chan and Drasgow,

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2001; Chen, Brockner, and Katz, 1998). Therefore, a Hong Kong sample will ensure that the new scale will be applicable to Chinese settings both inside and outside the Chinese mainland.

METHODS

Group Citizenship Behaviour Scale Development

Measuring an attribute of a group, such as GCB, raises certain requirements that are not applicable to the more common exercise of measuring attributes of individuals. Guzzo, Yost, Campbell, and Shea (1993) suggested three such requirements: (1) the questions asked of members must be about the group; (2) measures must discriminate among groups; and (3) agreement among members must be demonstrated. In the present study, we used a multi-stage process to develop the measure of GCB. First, we administered an open-ended survey to 71 part-time MBA students who had worked as team members in their organizations. We presented respondents with a broad definition of GCB and several examples. We told them that GCB was defined as 'group behaviours that enhance the social and psychological environment with the other work groups and in the organization as a whole'. Respondents were then asked to 'draw from your work experience examples of incidents you believed conformed to the definition of group citizenship behaviour'. The number of behavioural statements respondents made ranged from 1 to 6, with an average of 3.2. A total of 227 statements were provided by the respondents.

We reduced the list of 227 statements to 82 by eliminating redundancies and statements that were too vague. Next, two assistants of the first author independently sorted these statements into categories. They reached a consensus on sorting these statements into 16 categories. We then selected a representative statement for each category, using the most frequently mentioned item in a category. What remained was a list of 16 prototypical activities that best reflected the construct of GCB.

We then tested the 16-item GCB scale by obtaining an independent sample of 161 workers from a large international bank. These workers were independent from the main sample used to test the hypotheses. They were asked to indicate how frequently their work group engaged in each of the activities described in the scale. They were also asked a series of questions about the relevancy and clarity of the items. Respondents indicated that the items were clear and relevant and that they had little difficulty in answering them. Six items were deleted because of low item-total score correlations. We performed a principle components factor analysis (with varimax rotation) of the remaining ten items. This resulted in a single factor solution that explained 62% of the overall variance, with all items having loadings higher than 0.45 on the factor. We used the ten-item GCB scale in the main study with a third sample. A confirmatory factor analysis with group-level

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data using LISREL 8 (Jöreskog and Sörbom, 1993) indicated a strong overall fit for the single-factor model (CFI = 0.93, TLI = 0.92, RMSEA = 0.07). A second confirmatory factor analysis of the third sample (the sample used in the main study) based on individual-level data also indicated a strong overall fit for the single-factor model (CFI = 0.91, TLI = 0.90, RMSEA = 0.06). The GCB scale is presented in Appendix 1.

Sample and Procedures

Participants in the sample for hypotheses testing were the members of 148 working teams in the Hong Kong offices of a large multinational bank. Each team reported to a team supervisor. Work teams included teller teams from a retail banking section, customer service teams from a private banking section, and loan and customer service specialist teams from a corporate banking section. All the teams performed in customer-driven, information-rich task roles requiring high levels of information exchange, coordination, and other types of interaction among team members. They engaged in cognitive tasks like responding to clients' enquiries, preparing simple financial reports, and checking credit ratings of clients. On the other hand, there was little requirement for interdependent work between teams, and no clear inter-unit task structures were imposed on teams. In other words, the work of the units was essentially independent. This is a context where GCB would be truly discretionary or volitional since intergroup cooperation or assistance is not part of the task requirement of the groups.

A Chinese-language survey was developed, using the method of back-translation (Brislin, 1980) from the original English versions. We sent the survey to potential participants through the company's internal mail system. Each envelope included an introductory letter from the researchers and an endorsement from senior management. Respondents were guaranteed anonymity and provided with a stamped, pre-addressed envelope to the researchers. One week after the packets were distributed, a reminder letter was sent to all participants. Participants were asked to provide their employee numbers in order to allow for matching with their team. They were assured that these numbers would be used strictly for research purposes and would not be associated with employee names. Completed questionnaires were received from 179 out of 244 teams. The response rate for the groups was 73%. The number of teams is large compared with samples used in similar studies (e.g. Pelled, Eisenhardt, and Xin, 1999). More than two members did not return the survey in 26 teams, and 5 teams from one branch had at least one member not responding. Therefore, we excluded 31 teams from further analysis. The final sample included 743 group members representing 148 work teams. The teams had an average size of 5 members (SD = 0.51). The average team member was of 31.1 years old (SD = 5.1), with 5.4 years tenure (SD = 2.8); 64% of the total sample were women.

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Measures

In addition to the GCB scale, group leadership support, organizational procedural justice climate, group cohesiveness, group and organizational goal congruence, group affectivity, and turnover intentions were all obtained from employees. The measures of individual-level organizational citizenship behaviour and group performance were obtained from the supervisors. All measures used a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Group leadership support. We measured work group leadership (supervisor) support using five items taken from measures of leadership support and consideration (House and Dessler, 1974) but changed the referent from individual to the entire work group. These items assessed the degree to which members perceived their group supervisor providing guidance, support, and consideration for the work group. The internal consistency reliability of this measure was 0.91.

Procedural justice climate. A nine-item scale developed by Naumann and Bennett (2000) was used to measure procedural justice climate. A sample item reads, 'As a whole, the people in my work group feel that around here . . . consistent rules and procedures are used when making decisions; our input is obtained prior to making decisions; accurate information is used in making decisions'. The internal consistency reliability of this measure was 0.90.

Group cohesiveness. Group cohesiveness was measured using a four-item scale developed by Dobbins and Zaccaro (1986). Sample items included 'I look forward to being with the members of my work group each day'; 'I enjoy belonging to this work group because I am friends with many members'. The reliability for this measure was 0.92.

Group and organization goal congruence. Group and organizational goal congruence was measured using a three-item scale developed specifically for this study. Items included 'My work group as a whole has goal priorities similar to goals set by our organization'; 'My work group as a whole has similar work goals as compared with our organization'; and 'Differences exist between the goal of my work group as a whole and the goal of our organization (negative code)'. The reliability of this measure was 0.94. A five-point response scale was used, with 1 anchoring strongly disagree and 5 anchoring strongly agree.

Group positive and negative affectivity and its homogeneity. We used the ten-item positive affectivity (PA) and ten-item negative affectivity (NA) scale developed by Watson, Clark, and Tellegan (1988) to measure the affectivity of each group member. The PA scale measured an individual's general disposition to respond positively regard-

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less of the situation, whereas the NA scale measured an individual's general disposition to respond negatively regardless of the situation. The mean level of group affectivity was calculated by aggregating individual members' affectivity. Group affective homogeneity was computed using 1 minus the coefficient of variation (group standard deviation divided by group mean) of the measure, with larger numbers indicating greater degrees of homogeneity. The reliability coefficient for positive affectivity was 0.90 and for negative affectivity was 0.89.

Turnover intentions. Turnover intentions were measured using Bluedorn's (1982) four-item staying/leaving index (e.g. 'I often think about quitting my job at [company name]'). The reliability for this measure was 0.92.

Individual organizational citizenship behaviour. Supervisors completed the twelve-item version of the Podsakoff, MacKenzie, Moorman, and Fetter (1990) OCB scale for each of the group members. A sample item reads, 'As a whole, this employee . . . helps others with heavy work loads; takes fewer breaks at work than others; provides constructive suggestions regarding changes that might be made in our company'). A principle components factor analysis (with varimax rotation) of the data for the third sample produced a single factor solution. This factor explained 61.5% of the overall item variance. The reliability for this measure was 0.90.

Group performance. The supervisor of each work unit was asked to provide a performance rating for the group as a whole. Three items were adapted from an instrument developed by Heilman, Block, and Lucas (1992) to measure group performance. These items were 'this unit is very competent', 'this unit gets the work done very effectively', and 'this unit has performed the job well'. The supervisors returned these ratings directly to the researchers. The reliability for this measure was 0.96. The response scale was a five-point scale from 1 (strongly disagree) to 5 (strongly agree).

Control variables. We included average group member age, average group member tenure, and group size as control variables for GCB because previous research on individual OCB suggested that demographic variables such as age and organizational tenure influenced OCB (e.g. Organ and Ryan, 1995).

Analysis

To determine the suitability of aggregating our group-level measures, it was necessary to examine both between-group differences and within-group agreement. Within-group agreement was estimated using a method (r_{wg}) developed by James, Demaree, and Wolf (1993). This technique estimates the consistency within a group with respect to their ratings on a common scale. The mean r_{wg} of GCB across the

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148 teams was 0.96, ranging from 0.92 to 0.98. The mean r_{wg} statistics for organizational procedural justice climate, group leadership support, group cohesiveness, organizational goal congruence, and the group negative affectivity ranged from 0.86 (organizational goal congruence) to 0.96 (group cohesiveness). These statistics indicate high within-group agreement. James (1982) recommended two intra-class correlations (ICCs) for assessing agreement of group members. ICC(1) indicates the extent of agreement among ratings from members of the same group. ICC(2) indicates whether groups can be differentiated on the variables of interest. James (1982) conducted a survey of published articles and reported a range of 0.00 to 0.50 for ICC(1). ICC(2) is expected to exceed the 0.70 reliability convention. For GCB, the ICC(1) value was 0.38, and the value of ICC(2) was 0.82. For organizational procedural justice climate, the ICC(1) value was 0.35, and the value of ICC(2) was 0.79. For group leadership support, the ICC(1) and the ICC(2) values were 0.33 and 0.77, respectively. For group cohesiveness, the ICC(1) value was 0.39 and the ICC(2) value was 0.85. For organizational goal congruence, the ICC(1) value was 0.35, and the value of ICC(2) was 0.79. For group negative affectivity, ICC(1) and ICC(2) values were 0.32 and 0.76, respectively. These values are comparable with others observed in similar work group research (e.g., Campion, Medsker, and Higgs, 1993; George, 1990) and suggest a level of agreement commonly believed sufficient to support aggregation. On the other hand, the mean r_{wg} of group positive affectivity was 0.61, the ICC (1) and ICC (2) values for this variable were 0.09 and 0.52, respectively. These statistics indicate a low consensus among group members. We therefore dropped this measure from the analysis.

The group-level measures were the means of the individual values in the team. The descriptive statistics for all the variables are summarized in Table 1. The individual-level data were first aggregated to create a group-level measure before the correlations between the individual-level measures and the group-level measures were computed.

To ascertain that the GCB measure was empirically distinct from the individual-level OCB measure, we first conducted a confirmatory factor analysis with LISREL 8 (Jöreskog and Sörbom, 1993) on the individual and GCB items. Then, we aggregated the items to the work unit (group) level. We subjected the individual OCB and GCB items in a LISREL to test whether they empirically defined two latent factors. Goodness-of-fit indices indicated that the two-factor model provided a superior fit to the data over a model in which all individual and GCB items loaded on one factor. Specifically, the goodness of fit index (GFI) of the two-factor model was 0.90, compared to 0.67 for the one-factor model. The comparative fit index (CFI) of the two-factor model was 0.93, compared to 0.69 for the one-factor model. All the items loaded significantly on their underlying common factors and all factor loadings were above 0.5.

Lastly, using confirmatory factor analysis, we tested the expected factor structure with all the group-level measures. A test of a six-factor model (GCB,

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Table 1. Descriptive statistics and correlations among analysis variables

	Mean	*SD*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
Individual level measures															
1. Age	31.12	5.13	–												
2. Gender	0.64	0.48	−0.07	–											
3. Organization tenure	5.38	2.79	0.36**	−0.08	–										
4. Citizenship behaviour	3.47	0.64	0.02	0.02	0.07	(0.90)									
5. Turnover intention	2.01	0.41	0.06	0.01	0.04	−0.38**	(0.92)								
Group level measures															
6. GCB	3.50	0.51	−0.05	0.03	−0.06	0.36**	−0.23**	(0.91)							
7. Leadership support	3.84	0.43	−0.02	0.04	−0.05	0.28**	−0.29**	0.34**	(0.90)						
8. Group cohesiveness	3.57	0.55	0.04	0.02	0.07	0.20*	−0.31**	0.33**	0.38**	(0.92)					
9. Goal congruence	3.78	0.41	−0.03	0.01	0.03	0.32**	−0.28**	0.30**	0.32**	0.29**	(0.94)				
10. Negative affectivity level	2.44	0.66	0.07	−0.04	−0.04	−0.27**	0.28**	−0.31**	−0.28**	−0.32**	−0.35**	(0.89)			
11. Negative affectivity homogeneity	0.64	0.28	−0.03	−0.03	−0.07	0.25**	−0.32**	0.23**	0.20*	0.30**	0.24**	0.22**	–		
12. Procedural justice climate	3.62	0.38	−0.05	0.03	−0.01	0.33**	−0.27**	0.30**	0.28**	0.24**	0.23**	−0.22**	−0.26**	(0.88)	
13. Group performance	3.52	0.57	0.07	−0.04	0.08	0.28**	−0.42**	0.37**	0.31**	0.30**	0.28**	−0.27**	−0.26**	0.33**	(0.96)

Notes: For individual-level measures, $n = 743$; for group-level measures, $n = 148$; Cronbach's alpha appears on the diagonal for multiple-item measures.
*$p < 0.05$; **$p < 0.01$.

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organizational procedural justice climate, group leadership support, group cohesiveness, organizational goal congruence, and group negative affectivity) yielded a good fit. The comparative fit index (CFI) and incremental fit index (IFI) were both 0.96 and the Root Mean Square Error of Approximation (RMSEA) was 0.08. This result indicated that the factor structure, specifying the uni-dimensionality of all constructs, was consistent with the data.

RESULTS

Hypotheses 1 and 2 concern the prediction of antecedents of GCB. These hypotheses stated that procedural justice climate and work group leadership support would be positively related to GCB. We regressed GCB on these two variables and found significant positive main effects of procedural justice climate ($\beta = 0.36$, $p < 0.001$) and group leadership support ($\beta = 0.41$, $p < 0.001$) on GCB. These results (see Table 2) support H1 and H2, respectively.

Hypothesis 3 predicted a moderating effect of group and organizational goal congruence on the effect of group cohesiveness on GCB. As shown in Table 2 (model 1), the two-way interaction between group cohesiveness and goal congru-

Table 2. Results of regression analysis for group citizenship behaviour

Variables	*Model 1*	*Model 2*
Control variables Group size	0.03	0.03
Average group member age	0.04	0.04
Average group member tenure	0.04	0.03
Leadership support (H1)	0.41**	0.39**
Procedural justice climate (H2)	0.36**	0.34**
Group cohesiveness	0.30**	0.30**
Goal congruence	0.29**	0.27**
Group negative affectivity (NA)	−0.31**	−0.30**
Group NA homogeneity	0.17*	0.17*
Group cohesiveness × Goal congruence (H3)	0.28**	
Group negative affectivity × Group NA homogeneity (H4)		0.44**
R^2	0.67	0.69
Adjusted R^2	0.64	0.66
Overall F	60.77**	63.54**
Standard error	0.06	0.08

Notes: $n = 148$; **$p < 0.01$; *$p < 0.05$.

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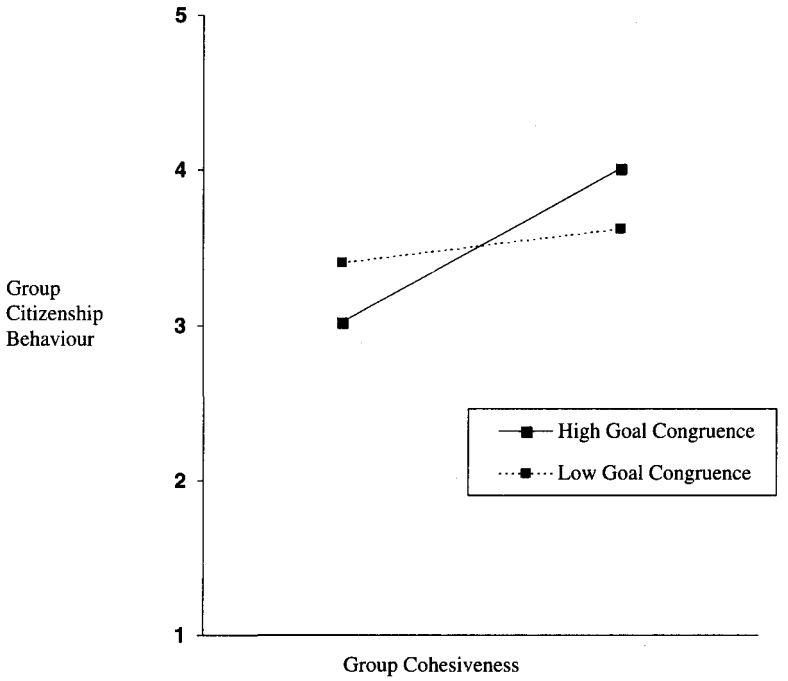


Figure 2. Group citizenship behaviour predicted by goal congruence and group cohesiveness

ence on Group OCB was significant (β = 0.28, p < 0.001). The findings were plotted using the conventional cut-points of one standard deviation above and below the mean for high and low levels of the moderator variable, respectively (see Figure 2). Group cohesiveness was not a significant predictor of GCB when goal congruence was low. In contrast, when group and organizational goal congruence was high, group cohesiveness was positively related to GCB. Thus, H3 was supported.

Hypothesis 4 predicted a moderating effect of group affectivity similarity on the relationship between group affective tone and GCB. Table 2 (model 2) shows that the two-way interaction between group negative affect homogeneity and the negative tone of group affect (the mean level of group negative affect) on GCB was significant (β = 0.44, p < 0.001). Figure 3 shows that the level of group negative affectivity was negatively related to GCB when the homogeneity of group negative affectivity was high. However, when group negative affectivity homogeneity was low, the level of negative group affectivity was not a significant predictor of GCB. These results support H4b.

The results for H5 on the relationship of group citizenship behaviour and group performance are summarized in Table 3. As shown, GCB had a statistically significant and positive main effect on group performance (β = 0.44, p < 0.001). This supported H5.

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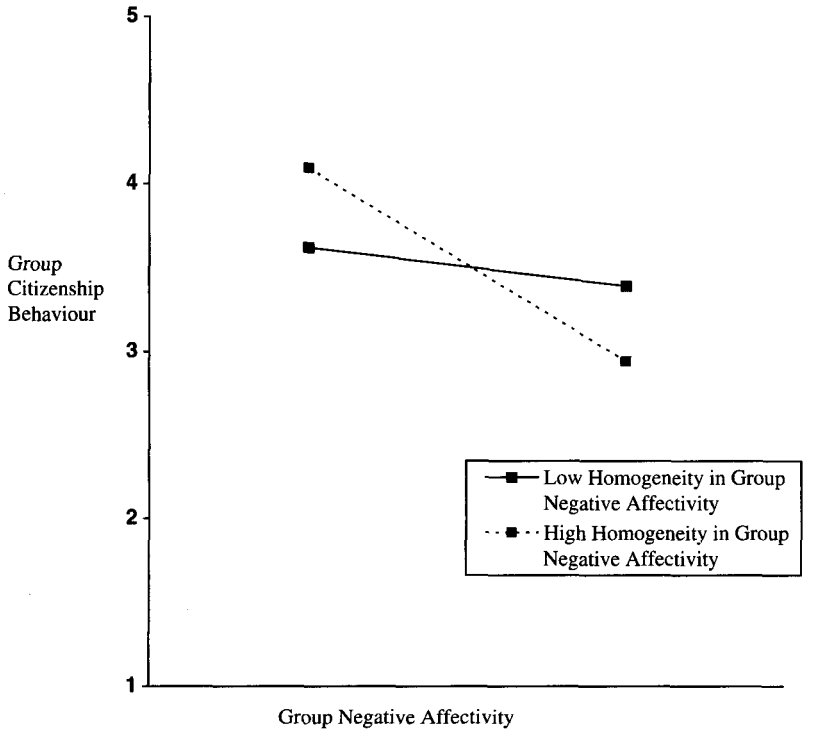


Figure 3. Group citizenship behaviour predicted by group negative affect homogeneity and group negative affectivity level

Table 3. Results of regression analysis for group performance

Variables	*Group Performance*
Control variables Group size	0.04
Average group member age	0.06
Average group member tenure	0.18*
Leadership support	0.26**
Procedural justice climate	0.31**
Group cohesiveness	0.28**
Goal congruence	0.26**
Group negative affectivity level	−0.18*
Group negative affectivity homogeneity	0.22**
Group citizenship behaviour (H5)	0.44**
R^2	0.53
Adjusted R^2	0.51
Overall F	55.12**
Standard error	0.09

Notes: $n = 148$; **$p < 0.01$; *$p < 0.05$.

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To test H6, a cross-level prediction of individual turnover intention by group citizenship behaviour, a three-step hierarchical linear modeling procedure recommended by Hofmann (1997) was used. A random coefficient regression model was conducted using hierarchical linear modeling (HLM; Bryk and Raudenbush, 1992) to determine whether there was significant variance in the intercept parameters estimated at Level 1 (the individual level). An intercepts-as-outcomes model then tested whether the Level 2 (group level) independent variable, GCB, predicted variance in the intercept parameters. In this analysis, individual OCB was used as an independent variable in the Level 1 equation. Group size, average group member age, and average group member tenure were also used as control variables in the Level 1 equation. As expected, individual OCB was negatively associated with individual turnover intentions ($t = -3.41$, $p < 0.01$). A chi-square test indicated there was systematic variance in the intercepts across work groups, predicting turnover intentions ($\chi^2 = 96.35$, $p < 0.001$). This indicates that groups with lower GCB had a stronger effect than higher GCB groups on levels of turnover intention even after controlling for variation in individual OCB. Given these results, a test on the coefficients on the slope relating GCB to the Level 1 intercept indicated that GCB explained a significant amount of unique variance in employee turnover intentions ($t = -1.98$, $p < 0.01$). This supported H6.

DISCUSSION

The purpose of the present study was to conceptualize the GCB construct and establish its nomological network by identifying some of its antecedents and consequences. We found that GCB is a distinct and meaningful group-level construct that is associated with a number of group level variables, including procedural justice climate, group leadership support, group cohesiveness, group and organizational goal congruence, group negative affectivity, and negative affect homogeneity within groups. We also found that GCB was positively related to supervisor-rated group performance and negatively related to individual employee turnover intentions, beyond the effect of individual OCB.

The present study provides further understanding of organizational citizenship behaviour at the group level. First, GCB is defined as a phenomenon that is distinct from individual OCB; it is not simply an aggregation of individual OCB within a group. Rather, it involves the activities of the group in relating to other work units and the organization. Second, we developed a GCB scale using a qualitative inductive approach, using working MBA students from a variety of firms. The items in Appendix 1 describe behaviours that may apply to different jobs and different organizational contexts. Third, the results of the preliminary tests of the antecedents and consequences of GCB enrich our understanding of the complexity of a group-level phenomenon and provide a foundation for future theoretical and empirical research on group citizenship behaviour within firms.

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The present study makes a contribution to organizational behavioral theory in a number of ways. First, it 'fills in the gaps' (Porter, 1996) among seemingly fragmented constructs such as procedural justice climate, group supportive leadership, group cohesiveness, group's citizenship behaviour, and group performance. Second, while most of the group-level constructs in previous studies (e.g. transactive memory) were cognitive in nature, group citizenship behaviour is behavioural in nature. Therefore, identifying the antecedents and consequences of group citizenship behaviour may have significant implications for organizational behaviour research. For example, in addition to a set of behaviours (e.g. performance, turnover, absenteeism, individual OCB) that are often treated as dependent variables in organizational behavioural research, GCB may be a viable behavioural domain that merits inclusion in studies of group-level topics.

Moreover, GCB can serve as a criterion for evaluating overall leader*ship* effectiveness, not just leader effectiveness. The relationship we revealed between supportive leadership and GCB in the present study suggests another perspective of looking at leadership and its effectiveness, i.e. the notion of shared leadership. Leadership is not just what a single person does but rather is an emergent collective process. A good leader is the one who can not only mobilize individual resources and influence individual employees, but also motivate the whole group to work extra hard to help the organization achieve its goals. Good leadership is in evidence when people are working well together and relating to other groups as a cohesive unit.

While the findings of this study were based on the work groups that were relatively independent, the implications of these findings should be more profound in organizations that have more interdependent structures of team design and workflow. Organizations increasingly rely on teams to develop products and processes. This requires that teams span traditional organizational boundaries. The GCB identified in the present study allows for a tighter coupling with other organizational units, filling the gaps left by formal integrating systems. Therefore, our study may contribute to the literature that adopts an external perspective on work groups (e.g. Ancona and Caldwell, 1990, 1992).

Limitations and Future Research Implications

Several caveats should be taken into consideration when interpreting the results of this study. First, the groups we examined in this study were not highly interdependent: they worked in different functional areas of the bank, and were not required to work with one another to accomplish their tasks. This raises an issue of generalizability of our findings to highly interdependent groups whose job is sequentially structured, and one group's task accomplishment relies on how other groups complete their tasks. We speculate that there will be more GCB in organizations with more independent groups than when there are more interdepen-

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dent groups, because people would consider mutual helping to be in-role behaviour in interdependent group situations. Future studies should study the moderating effects of group task interdependence on the relationship between group citizenship behaviour and group performance.

The second limitation regards the methodology. The employee and supervisor data were collected at a single point in time. This cross-sectional design diminishes the ability to make firm causal conclusions. Future studies may adopt a longitudinal approach or an experimental design to unfold the process of how GCB is developed and how it influences various outcomes.

Another limitation was that the sample was limited to a single organization. Having data from one multinational bank allows for the control of such factors as industry, organizational structure, and other systematic factors, but it also potentially limits the generalizability of the results. It does not allow us to examine the possible effect of GCB on organizational performance – a relationship we would have liked to explore. This led to another limitation of this study, i.e. it was limited by what it did not examine. There are certainly many more other group-level variables that could aid in the prediction of GCB, including the interdependence of the group task, the level of interaction of group members, or the support of a higher-level manager. There are also many other variables that could be the consequences of GCB, including organizational performance, group turnover, or group commitment to the organization. These are fruitful avenues for future research.

Future research also may examine the circumstances under which individuals are most susceptible to group-level behaviours or norms. Hackman (1992) described potential moderators of group influence. For instance, group influence is most likely to occur when aspects of the work environment are unclear or ambiguous. It is possible that the effects of GCB may be stronger on newcomers to the work group. Also, other organizational antecedents of GCB should be explored. We would expect less GCB in an organization that has a competitive culture. GCB may have a higher impression-management value in a competitive than in a cooperative culture where helping others is expected and normal.

Furthermore, individual differences may also affect susceptibility to group influence. People who are low in self-esteem or high in self-monitoring are likely to be influenced more strongly by their work groups than those with high self-esteem or low self-monitoring. Moreover, when group members' values are congruent with those of their work group, they are more susceptible to group influence (House, Rousseau, and Thomas-Hunt, 1995). Future research could examine the moderating role of these individual attributes on the development of group citizenship behaviour. Would group citizenship behaviour be less likely in heterogeneous groups? As individual members come and go, the group's composition is changed, and thus GCB may change as a result. Future research using longitudinal designs should help to clarify the dynamic nature of GCB.

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Implications for Future Chinese Management Research

The present study of GCB suggests at least two directions for future Chinese management research. First, group-level phenomena may be especially appropriate to study in the Chinese context. Group citizenship behaviour should be studied along with other group-level phenomena such as group cohesiveness, group norms, group consensus, group commitment, or group morale. Second, it will be important to identify the levels by which certain group phenomena occur. Groups can be defined at different levels: the work group level, the department level, the division level, or the organization level. Which group would be most important to the Chinese employees? If they identify only with the immediate work group, they may not engage in between-group citizenship behaviour. Future studies could investigate the different ways that Chinese employees view groups and how these views influence their cognitions, emotions, attitudes, and behaviour toward their own work group, other work groups, and the organization as a whole.

In summary, the present study built on findings from the organizational citizenship behaviour literature and developed a nomological network for a new construct we have labelled group citizenship behaviour. The present study suggests that group citizenship behaviour is an important behavioural domain that affects employee attitudes and behaviours beyond individual organizational citizenship behaviour and may be incorporated into a wide range of future studies of group behaviours in general and for Chinese management in specific.

NOTE

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Appendix 1. Group Citizenship Behaviour (GCB) Scale

1. My work group as a whole provides assistance to other work groups with heavy workloads.
2. My work group as a whole coordinates and communicates with other work groups.
3. My work group as a whole takes fewer work breaks than other work groups.
4. My work group as a whole takes an active part in the change initiatives of our company.
5. My work group as a whole avoids creating problems for other work groups.
6. My work group as a whole assists in coordinating functions for our company.
7. My work group as a whole identifies opportunities for change in the best interest of our company.
8. My work group as a whole makes a conscious attempt to work in harmony with other work groups.
9. My work group as a whole attends and supports company functions.
10. My work group as a whole helps other groups with work-related problems.

Note: Please contact the first author for the Chinese language version of this scale.

Xiao-Ping Chen, (xpchen@u.washington.edu), Ph.D. University of Illinois, 1995, is Professor of Management at the University of Washington. Her research interests include cross-cultural management, group dynamics, decision-making, organizational citizenship behaviour, and employee turnover. Her research has appeared in journals such as *Organizational Behavior and Human Decision Processes, Academy of Management Review, Academy of Management Journal,* and *Journal of Applied Psychology.*

Simon S. K. Lam received his Ph.D. degree from Australian National University. He is an Associate Professor of Management at the School of Business, The University of Hong Kong. His research focuses on quality management, work-related commitments and cross-cultural human resource management.

Stefanie E. Naumann, Ph.D. Louisiana State University, 1998, is an Associate Professor of Management and organizational behaviour in the Eberhardt School of Business at the University of the Pacific. Her research interests include employee fairness perceptions, helping behaviours, and work group climates. Her research has appeared in the *Academy of Management Journal, Journal of Applied Psychology*, and *Journal of Organizational Behavior.*

John Schaubroeck has a Ph.D. from Purdue, 1988, and is a Professor of Management at Drexel University. He has tended to publish in the areas of

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job stress and employee health, decision making (behavioural issues), and psychological topics in human resource management, including cross-cultural issues.

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