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When mere multiple group memberships are not enough: Individual self-expansion through involvement in social groups and self-efficacy belief

Abstract: According to the self-expansion model, people are motivated to increase their sense of personal agency by expanding their sense of self through the acquisition of new identities. We conducted two studies to explore whether the feeling of self-expansion, resulting from multiple group memberships, is related to self-efficacy, and to test whether agentic and communal self-stereotyping mediated this relation. In Study 1 conducted in Poland ($N_1 = 102$), and Study 2 among undergraduate students from Poland, Spain, and Sweden ($N_2 = 450$), a significant indirect effect of self-expansion on self-efficacy through agentic (but not communal) self-stereotyping emerged.

Keywords: self-expansion, group processes, self-efficacy, agency, social identity

“Different times call for different measures.” By paraphrasing an old aphorism, we outline an important observation about motivation in social relations. What motivates someone depends on the individual’s social context and self-perception. In uncertain times, when the perception of external threats and self-uncertainty are predominant, people tend to seek clarity, coherence, and reduced interaction with out-group members, which could be followed, for example, by stronger in-group favoritism and extreme progroup actions (Hogg, 2009; Hogg, Kruglanski, & Bos, 2013). However, much research has shown that in more fortunate times, when one feels one’s identity is integrated and one’s self-concept is coherent and consistent, propensity for self-expansion could take precedence (Dys-Steenbergen, Wright, & Aron, 2015; Wright, Aron, & Tropp, 2002). People are motivated in

such circumstances to interact with others, more or less known to them, in order to develop new social identities and enhance their self-complexity. The sources of self-expansion could be new activities, strong intimate relations with close others, or inclusion of other members of one’s social group in the self-concept (Aron & Aron, 1986; 1996a; 1996b; Aron, Aron, & Norman, 2001).

According to self-expansion model people are fundamentally motivated to improve and grow the self by developing new perspectives, new identities, enhancing capabilities, and gaining resources (Aron & Aron, 1986; 1996a; Aron, Aron, & Norman, 2001). In a close relationship each person expands his or her sense of self through the acquisition of new common beliefs, attitudes, feelings, and behaviors from people belonging to the person’s social circle. Thus incorporating others in self-

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concept can be a way of developing greater agency and self-efficacy using different patterns of one's identity. Self-expanding activities refer not only to close relationships and relations with romantic partners. Mattingly and Lewandowski (2013b) showed that people can extend the self in nonrelational contexts. Moreover, engagement in self-expanding activities results in larger exerted effort and greater self-efficacy. People who have high self-expanding experiences spend more time trying to solve cognitive tasks and exert more strength in physical tasks, regardless of the type of experience that extends the self (cognitive or physical; Mattingly & Lewandowski, 2013b). Xu and others (Xu, Floyd, Westmaas, & Aron, 2010) showed that engagement in self-expanding activities might help quit smoking, which requires high effort. Research has also shown that not simple categorization as a member of social group but more self-relevant transformation of identity as a result of being a part of one's social group could, such as self-expansion, be related to efficacy beliefs and the ability to adapt to new environments (Iyer, Jetteb, Tsivrikos, Postmes, & Haslam, 2009; Tadmor, Galinsky, & Maddux, 2012). The goal of our research is thus to examine whether nonrelational self-expansion, based on self-expanding environments in social groups one belongs to, is linked to self-efficacy beliefs and whether self-perception mediates this relationship.

Smith and Henry (1996) showed that when people include a whole group in the self (i.e., it becomes an important part of the self-definition and the psychological self), cognitive representations of the self and an in-group are associated. Reports on the characteristics important for self-definition are facilitated for traits in which there is a match between the self and the in-group and inhibited for traits that are perceived as dissimilar. Thus, another way self-expansion could happen is by including the social group in the self. New groups are attractive to people motivated to self-expand, because the groups help in developing perspectives, ways of dealing with life challenges, and identities not currently available to the self (Wright et al., 2002).

Self-expansion is associated with agency-related constructs, such as action orientation and self-efficacy beliefs, for example, as expansion of the self results in a larger self-concept size (Aron, Paris, & Aron, 1995), and the self-concept size correlates with self-efficacy (Mattingly & Lewandowski, 2013a). Experimentally heightened approach motivation is related to stronger inclusion of others in the self (Nussinson, Häfner, Seibt, Strack, & Trope, 2012). This relation was confirmed with self-expansion related to multiple measures of approach motivation (Mattingly, McIntyre, & Lewandowski, 2012). In our studies, we supplement previous research and examine whether a feeling of self-extension through involvement in social groups is related to agency self-description and self-efficacy beliefs.

New identities, perspectives, and resources acquired by extension of the self, help in self-concept growth and could intensify self-efficacy beliefs. We propose that multiple group memberships might be related to people's

increased feeling of agency and self-efficacy belief, but mostly when a group is treated as an important part of the self, and an individual perceives the groups he or she belongs to as sources of self-expanding interaction and activities. Smith and others (e.g. Smith & Henry, 1996) following their match-mismatch response-time paradigm (Aron & Fraley, 1999) argue that identification with a trait as part of oneself is slower for traits that people had previously rated differently for the self and their in-group than for traits that people had rated the same for the self and their in-group. Hence we assume that merely describing or categorizing oneself as a member of a group does not necessarily mean that people feel more empowered because of this membership. We assumed that belongingness to various social groups does not always indicate that those groups are included in the self and are related to increasing self-concept. Thus, we decided to explore whether self-expansion through involvement in multiple groups is positively related to self-efficacy belief. We also examined whether a feeling of self-expansion, and not merely numbers of multiple social identities or groups to which one belongs, is a better predictor of stronger self-efficacy belief.

Additionally, we wanted to assess whether and how self-perception could mediate the proposed relation between self-expansion and self-efficacy belief. We examined two main dimensions related to social and self-perception, namely, communal and agentic traits.

Agentic and Communal Self-Perception and Self-Efficacy

A large body of literature distinguishes between two fundamental and universal dimensions underlying the perception of individual and group behavior, namely agency and communion (see, e.g., Bakan, 1966; Cuddy, Fiske, & Glick, 2008; Wojciszke, 1994; Wojciszke & Abele, 2008). Agentic traits express one's domination, competence, and focus on accomplishing interests, while communal reflects the need for affiliation and maintaining good social relations. Interpreting other people's intentions detrimental to our survival and their capability to exhibit such behaviors is what makes agency and communion universal across time and cultures (Cuddy, Fiske, & Glick, 2008). For example, agentic self-directed acts influence people's perception of other person, and people who actively decided to undertake an action on behalf of the group are perceived as more heroic than those, who help the group in more passive manner (Cisłak & Szymków, 2013).

Research shows that adjectives used in spontaneous self-representations also match the described two-dimensional model (Diehl, Owen, & Youngblade, 2004). Wojciszke and others (Wojciszke, Barylka, Parzuchowski, Szymków, & Abele, 2011) also investigated the role of self-assessed agentic and communal traits in predicting the level of self-esteem and showed the primacy of agency in global self-evaluations. The agency-over-communal trait effect was significant for participants regardless of their age and gender. In addition, the pattern was found even when the

greater importance of communal traits was declared, which appears to stand for self-ascribed agency as a self-esteem predictor. Moreover, and important for our reasoning, self-perception of the agency and communality dimensions was found to depend on various motivational factors. This self-perception is not necessarily stable and may differ under situational factors and social contexts. For example, the motivation to justify the system had a significant impact on using gender's complementary stereotypes as a way of compensational self-description (Laurin, Kay, & Shepherd, 2011; Kosakowska-Berezecka et al., 2016).

Feelings of personal agency are strongly related to self-efficacy belief, which influences undertaken actions and persistence in behavior when facing difficulties. According to Bandura (2000), human agency may be perceived not only from the individual perspective but also group performance. The collective action strongly depends on the perceived sense of collective efficacy and the level of interdependence needed to achieve a common goal. Group performance derives not only from individual skills but also from the dynamic interactions between members and shared beliefs of having the power to induce social change. Collective efficacy "fosters groups' motivational commitment to their missions, resilience to adversity, and performance accomplishments" (Bandura, 2000, p. 75). Acting within a group could allow an individual to gain new experiences and improve abilities, and should, at the same time, strengthen the perception of one's self-efficacy and self-perceived agency because of the self-expansion. Based on those assumptions, in our studies we examined whether agentic self-perception (and not communal one) mediates the relationship between self-expansion and self-efficacy belief.

Overview of the Present Studies

In this research, we concentrated on the pathway to self-efficacy beliefs that leads through expansion of the self. As our goal was to contrast links between self-expansion and self-efficacy vs. between mere multiple group memberships (number of social groups people find important for them) and self-efficacy, we concentrated on nonrelational self-expansion, that is, on feeling that because of one's group membership and interaction with in-group members, one could gain a greater awareness of things, a larger perspective on social reality, or an increase in knowledge. We relied on correlation design of the studies, to capture participant's perception of natural social groups and their influence on self-growth. In our opinion, this extend previous experimental studies on the relationship between self-expansion, self-growth, self-concept size, and self-efficacy (Mattingly & Lewandowski, 2013a, 2013b) by focusing on self-expansion in natural groups important to the self. We assumed that nonrelational self-expansion would be linked to self-efficacy beliefs (hypothesis 1) and that self-expansion is a better predictor of high self-efficacy than the mere number of groups to which one belongs (hypothesis 2). Finally, we hypothesized that agentic self-perception, but not communion mediates the

relationship between self-expansion and self-efficacy beliefs (hypothesis 3).

We followed similar research procedure in the two studies. Questionnaires were administered in Polish (studies 1 and 2), Spanish (Study 2), or Swedish (Study 2). The research received ethical approval from the Institute of Psychology, University of Gdańsk Ethics Committee. In line with the accepted procedures, all participants were briefly informed about the goals of the study, and verbal informed consent was obtained. Participants were instructed to start completing the questionnaire only when informed consent was given. In both studies, the measures were part of a larger research project that included scales not related to the current research (e.g., related to social perception and evaluation of out-groups). Participants filled out the questionnaires individually or in small group sessions, and were free to stop answering the questions and drop out of the study at any time without any negative consequences.

In both studies, the participants were asked to think about their social lives and the social groups that were important to them. A definition of social group was provided. The task was to list all groups, important and relevant to the self. In Study 1, we did not prompt the participants and did not provide a group as an example. In Study 2, we prompted the participants to first describe their relation with a country (thus country was provided by the researchers as an example of a social group to which one belongs) and then listed other groups relevant to the self. After listing all groups, the participants answered questions on the scale regarding nonrelational self-expansion, agentic and communal self-perception, and self-efficacy.

Study 1

Method

Participants

Polish undergraduate students in several study majors (e.g., law, economy, political sciences; no psychology students) participated in the research (102 in total, 50 men). The mean age was 21.69 years ($SD = 1.68$).

Procedure and materials

The questionnaire was administered in paper-pencil form. Students were approached by a research assistant and asked to participate in the study. After a short introduction, participants who provided voluntary consent were presented with a series of questions and scales. We did not prompt the participants with an example of a social group. Instead, we provided them with a short definition of social group. After the participants read this definition, we asked them to list all social groups important to them, and asked people to mark how strongly they felt connected to each group, using a pictorial scale of identity fusion (with five pictures of two circles representing self and the group, option A designated total independence of self from the group while option E signified complete overlap of the self-concept and the group; see e.g. Besta, Kaźmierczak, Błażek, 2013; Swann Gómez, Seyle, Morales, Huici, 2009).

After the participants wrote down all groups they felt connected to, they answered questions on the scales that included, among others, self-expansion, self-perception of agentic and communal traits, and self-efficacy.

Multiple group membership. Multiple group membership was assessed by counting all social groups each participant listed as an important part of his or her life. In this study, the number of groups varied from 1 to 9 ($M = 4.44$, $SD = 1.58$).

Self-expansion. To assess the feeling of nonrelational self-expansion resulting from being part of social groups, we used the Individual Self-Expansion Questionnaire (ISEQ; Mattingly & Lewandowski, 2013b, see also Besta, Jaśkiewicz, Kosakowska-Berezecka, Lawendowski, Zawadzka, 2017 for previous use in Poland). Questions included for example: "As a consequence of being a member of these groups: How much do you feel that you have a larger perspective on things?" Participants indicated their answers on a 7-point scale (1 = *not very much* to 7 = *very much*). The scale was a reliable measure (Cronbach's $\alpha = .80$).

Self-efficacy beliefs. To measure general self-efficacy beliefs, we included the 10-item General Self-Efficacy scale (GES; Scholz, Doña, Sud, & Schwarzer, 2002) with items such as, "I can always manage to solve difficult problems if I try hard enough." Participants indicated their answers on a 4-point scale (form 1 = *not at all true* to 4 = *exactly true*). Due to an unforeseen error, one item was not printed correctly in the questionnaire, leaving nine items in this version of the scale (with Cronbach's $\alpha = .88$).

Agency and communion. We used a 10-item Polish version of the measure based on Laurin et al.'s (2011) scale. Participants answered on a 7-point scale (0 = *not at all* to 6 = *very much*), to what degree a given adjective described them (e.g., kind and caring for communal traits and self-confident and assertive for agentic traits). The reliability of these scales was acceptable (Cronbach's $\alpha = .74$ for communal traits and $.73$ for agency).

Results and Discussion

Relation between self-expansion and self-efficacy

To test hypothesis 1 on the link between expansion of the self as a result of multiple group memberships and self-efficacy, we conducted correlation analyses. As predicted, self-expansion was related to efficacy beliefs ($r = .52$, $p < .001$; see Table 1 for all zero-order correlations).

Moreover, when controlling for the number of social groups, partial correlation between self-expansion and self-efficacy was statistically significant as well and virtually did not change ($r = .53$, $p < .001$). To test hypothesis 2, which assumed self-expansion is a better predictor of high self-efficacy than the mere number of groups one belongs to, we compared Pearson's r for these relationships. Using the Fisher r -to- z transformation, we assessed the significance of the difference between two correlation coefficients (see <http://vassarstats.net> for the online tool). As expected, the relation between self-expansion was statistically significantly more strongly related to self-efficacy than the number of social groups important to a person ($z = 3.88$, $p < .001$). Additionally, as self-efficacy could be related to gender stereotypes (that link agency and efficacy with masculinity), we also conducted multiple regression analysis, with gender as control variable as well. We included both self-expansion and number of groups, as well as gender (dummy coded men = 0, women = 1) as predictors of self-efficacy belief. Results showed that the only significant predictor was self-expansion (standardised Beta .54, $p < .001$), with Beta's for gender (.06, $p = .48$) and number of groups (-.06, $p = .51$) reaching much lower values.

An alternative explanation of these results could be that self-expansion is suppressing or mediating the relation between the number of groups and self-efficacy belief. It could be argued that the more groups one belongs to, the greater the self-expansion and, in turn, the higher efficacy. We explore this model using the PROCESS bootstrapping macro (model 4; Hayes, 2013). There was no statistically significant indirect effect of self-expansion (indirect effect of .03, $SE = .04$, with lower-level coefficient interval -.01 and upper-level .10).

Relationship between self-expansion and efficacy belies

To test hypothesis 3 on the mediating role of agency self-perception in the self-expansion and self-efficacy relationship, we conducted a mediation analysis using the PROCESS bootstrapping macro (model 4; Hayes, 2013). We included nonrelational self-expansion as the predictor, agentic and communal self-description as the mediators, and self-efficacy beliefs as the dependent variable. Considering gender stereotypes related to agency and self-efficacy, we included also gender of the participants as covariate. Only agency turned out to be a statistically

Table 1. Descriptive Statistics and Zero-Order Correlations with Pearson R for Study 1

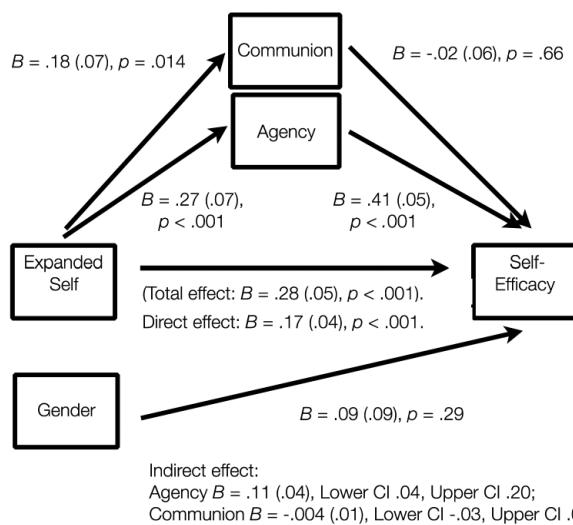
	<i>M</i>	<i>SD</i>	2	3	4	5
Self-expansion	5.20	1.10	.14	.37***	.20*	.52***
Number of social groups	4.44	1.58	—	.02	-.01	.02
Agency	4.32	0.82		—	.14	.69***
Communal	4.46	0.79			—	.14
Self-efficacy	2.98	0.58				—

Note. $n = 102$.

* $p < .10$; * $p < .05$; ** $p < .01$; *** $p < .001$.

significant mediator of the proposed relationship. Self-expansion is indirectly related to self-efficacy beliefs through the effect on agency self-perception. The declared feeling that because of multiple group memberships one gained new perspectives on life and felt greater awareness of things was related to perceiving oneself as more agentic ($a_1 = .27$). Participants who described themselves in more agentic terms expressed stronger beliefs that they could achieve important goals and are able to efficiently deal with life's challenges ($b_1 = .41$). A bias-corrected bootstrap confidence interval for the indirect effect ($a_1 b_1 = .11$) based on 10,000 bootstrap samples was entirely above zero (0.04 to 0.20). In addition to an indirect effect, there was a significant direct effect of self-expansion on efficacy, showing that the extended self is related to beliefs about one's ability to achieve goals ($c' = 0.17$, $p < .001$; see Figure 1). Without gender as the covariance, same pattern of relations emerged, with agency being significant mediator of link between self-expansion and self-efficacy belief (indirect effect for agency $B = .11$ (boot SE .04), lower CI .04, upper CI .19; and for communion $B = -.001$ (boot SE .01), lower CI -.02, upper CI .02).

Figure 1. Model of nonrelational self-expansion as a predictor of self-efficacy beliefs, with self-perception of agentic and communal traits as mediators in Study 1 (n = 102)



Note. Standard errors in parentheses; number of bootstrap resamples: 10,000. Bootstrap CI method: biased corrected; 95% confidence intervals.

Discussion

Results of Study 1 confirmed our hypothesis and provided evidence that in the Polish sample number of groups people could think of as important to them was virtually not related to self-efficacy. Although previous studies showed a relation between multiple group memberships and well being (Jetten et al., 2015; Sani, Madhok, Norbury, Dugard, & Wakefield, 2015) their relations with efficacy beliefs was not previously supported. However, in accordance with previous research on self-

-concept size and self-expansion in experimental settings (e.g., Mattingly & Lewandowski, 2013a), the feeling that the self expanded was linked to self-efficacy.

Study 1 was conducted in only one cultural context. Thus, we conducted Study 2 in three cultures with a larger number of participants to replicate the findings. We decided to include samples from three countries as to explore if the relationship we established in Study 1 could be generalized also on non-Polish samples. Moreover, in Study 1 people had difficulty providing many social groups based only on the definition we included in the questionnaire. The participants often listed only small relational groups (e.g., close friends, colleagues from school, family), and not groups based on more abstract categorization. For this reason, in Study 2, we decided to provide an example of a larger social group, and our example was followed by a request to list other groups important to the participants' self-construct.

Study 2

Method

Participants

Participants in Study 2 included 450 psychology undergraduate students from Poland (168 in total, 27 males, 2 missing data on gender with $M_{age} = 22.89$, $SD = 5.47$), Spain (148 in total, 32 male, with $M_{age} = 33.61$, $SD = 10.36$), and Sweden (134 in total, 48 male with $M_{age} = 22.51$, $SD = 2.89$). In Spanish sample, students from The National Distance Education University (UNED) were included. As mean age of the students that participate in distance learning is higher than age of regular undergraduate students, Spanish participants were older than participants from Sweden and Poland.

Procedure and materials

The questionnaire was administered online (Spain) or in paper-pencil form (Poland, Sweden). After a short introduction, the participants who provided informed consent and wanted to continue with the research were presented with a series of questions and scales. First, we asked about the social groups important to the participants. The instructions read: "Now please think about your relation with all social groups you belong to and are important to you (for how you see yourself and define who you are). Below, please list all groups you feel connected to and that are an important part of your life (e.g., family, religious group, school, fan clubs, sport teams). As an example of a social group, we provided "your country" and asked people to mark how strongly they felt connected to their country (using a pictorial scale of identity fusion as in Study 1). After the participants wrote down all groups they felt connected to, they answered questions on the scales that included, among others, self-expansion, self-perception on agentic and communal traits, and self-efficacy.

Multiple group membership. Multiple group membership was assessed by counting all social groups each participant listed as important part of his or her life.

In Study 2, the number of groups varied from 1 to 20 ($M=4.29$, $SD=2.16$).

Self-expansion. As in Study 1 to assess the feeling of nonrelational self-expansion resulting from being part of social groups, we used the Individual Self-Expansion Questionnaire (ISEQ; Mattingly & Lewandowski, 2013b). Participants were asked to describe to what degree membership in various social groups they listed influenced them (e.g., because of being a member of these groups: "How much do you feel that you have a larger perspective on things?" "Do you feel a greater awareness of things?"). Participants indicated their answers on a 7-point scale (1 = *not very much* to 7 = *very much*). The scale again turned out to be a reliable measure (Cronbach's $\alpha=.86$).

Self-efficacy beliefs. To measure general self-efficacy beliefs we included 10-item General Self-Efficacy scale (GES; Scholz et al., 2002) with items such as, "I can always manage to solve difficult problems if I try hard enough" and "I am confident that I could deal efficiently with unexpected events." Participants indicated their answers on a 4-point scale (from 1 = *not at all true* to 4 = *exactly true*). This scale was a reliable measure (Cronbach's $\alpha=.83$).

Agency and communion. As in Study 1 to assess how people viewed themselves regarding agency and communal traits, we used the 10-item measure based on the scale by Laurin et al. (2011). Participants responded on a 7-point scale (0 = *not at all* to 6 = *very much*), to what degree the given adjective described them (e.g., kind, caring for communal traits, and self-confident, competent for agentic traits). Cronbach's α was .78 for communal traits and .59 for agency. Reliability of the agency scale was lower than expected; thus, we also included in the analyses a shorter measure of agency calculated as the mean of two items from the agency scale with the highest correlation coefficient (assertive and self-confident; $r=.39$).

Results and Discussion

Correlations analyses

We conducted correlation analyses to test hypothesis 1 on the link between self-expansion and self-efficacy belief and to explore relationships between other variables used in this study. As predicted and in line with Study 1, self-expansion was related to efficacy beliefs ($r=.21$, $p<.001$; see Table 2 for all zero-order correlations), but

the mere number of group memberships was not related to self-efficacy ($r=.06$, $p=.25$). When controlling for the number of social groups, the partial correlation between self-expansion and self-efficacy remained statistically significant and virtually unchanged ($r=.20$, $p<.001$). To test hypothesis 2, we assessed the significance of the difference between two correlation coefficients (self-expansion and self-efficacy vs. the number of groups and self-efficacy). As expected, the relation between self-expansion was statistically significantly more strongly related to self-efficacy than the number of social groups participants belong to ($z=2.28$, $p=.01$).

Similarly to Study 1, we also conducted multiple regression analysis, with gender as control variable and both self-expansion and number of groups as predictors. Results showed that the only significant predictor was self-expansion (standardised Beta .20, $p<.001$), with Beta's for gender (-.05, $p=.34$) and number of groups (.06, $p=.24$) reaching much lower values. These results were similar in each country with self-expansion showing the strongest link to self-efficacy belief (regression analyses for Polish, Spanish, and Swedish participants separately showed standardised Beta coefficients for self-expansion: .25, .12; and .22 accordingly). However, there were cultural differences in strength of the link between number of groups and self-efficacy belief. When controlling for gender, numbers of social groups one belongs to were negatively related to self-efficacy in Sweden (standardized Beta coefficient = -.18), and in Poland (Beta = -.02), but positively in Spain (Beta = .11). Thus, among Spanish participants, strength of the relationship between self-expansion and self-efficacy was similar to the link between number of social groups and self-efficacy.

Relationship between self-expansion and efficacy belief

To test hypothesis 3 that assumed agentic self-description is a mediator of the relationship between self-expansion and self-efficacy, we conducted a mediation analysis using the PROCESS bootstrapping macro (model 4; Hayes, 2013). As in Study 1, we included nonrelational self-expansion as the predictor, agentic and communal self-description as the mediators, and self-efficacy beliefs as the dependent variable. Considering

Table 2. Descriptive Statistics and Zero-Order Correlations with Pearson R for Study 2

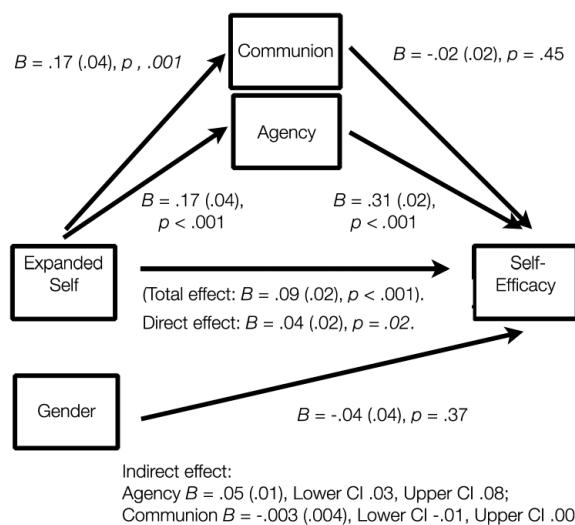
	M	SD	2	3	4	5	6
Self-expansion	5.31	1.00	-.01	.22***	.21***	.19***	.21***
Number of social groups	4.29	2.16	-	.01	.01	.08 ^t	.06
Agency	4.07	0.77		-	.80***	.24***	.55***
Agency short	3.75	1.15			-	.09 ^t	.52***
Communion	4.43	0.93				-	.11*
Self-efficacy	2.97	0.44					-

Note. $n=450$

^t $p<.10$; * $p<.05$; ** $p<.01$; *** $p<.001$.

gender stereotypes related to agency and self-efficacy, we included also gender of the participants as covariate. Once again, only agency turned out to be a statistically significant mediator of the proposed relationship. Self-expansion was indirectly related to self-efficacy beliefs through the effect on the agency self-perception (see Figure 2). Expansion of the self, related to gaining new knowledge and new perspectives on reality, was related to perceiving oneself as more agentic ($a_1 = .17$). Participants who described themselves in more agentic terms expressed stronger beliefs that they could achieve important goals and are able efficiently deal with life's challenges ($b_1 = .31$). A bias-corrected bootstrap confidence interval for the indirect effect ($a_1 b_1 = .05$) based on 10,000 bootstrap samples was entirely above zero (0.03 to 0.08). In addition to an indirect effect, there was a weak but significant direct effect of self-expansion on efficacy, showing that the extended self is related to self-efficacy belief ($c' = 0.04, p = .02$).

Figure 2. Model of nonrelational self-expansion as a predictor of self-efficacy beliefs, with self-perception of agentic and communal traits as mediators in Study 2 (n=450)



Note. Standard errors in parentheses; number of bootstrap resamples: 10,000. Bootstrap CI method: biased corrected; 95% confidence intervals.

Mediation analyses conducted with a shorter version of the agency scale (based on two items only) indicated similar results, with the bias-corrected bootstrap confidence interval for the indirect effect ($a_1 b_1 = .05$) based on 10,000 bootstrap samples entirely above zero (0.02 to 0.07).

Without gender as the covariance, same pattern of relations emerged, with agency being significant mediator of link between self-expansion and self-efficacy belief (indirect effect for agency $B = .05$ (boot SE .01), lower CI .02, upper CI .18; and for communion $B = -.01$ (boot SE .004), lower CI -.01, upper CI .003). Similar pattern of relations was observed in a case of short scale of agency (indirect effect for agency $B = .05$ (boot SE .01), lower CI .02, upper CI .07).

To examine cultural differences in strength of the relation between self-expansion and self-efficacy belief we also conducted a mediation analysis using the PROCESS bootstrapping macro (model 4; Hayes, 2013) for each country separately. We included self-expansion as predictor, agency and communion as mediators, gender as controlled variable, and self-efficacy belief as depended variable. The indirect effects of agency on self-efficacy were similar in Spain, $a_1 b_1 = .06$ (SE = .04); lower CI .002, upper CI .14 (direct effect of self-expansion on efficacy was insignificant, with $c' = -0.004, p = .92$); and in Poland $a_1 b_1 = .06$ (SE = .02); lower CI .02, upper CI .12 (there was no significant direct effect of self-expansion on efficacy with $c' = 0.04, p = .17$). The indirect effect of agency was the weakest among Swedish participants $a_1 b_1 = .03$ (SE = .02); lower CI .004, upper CI .07 (there was also a significant direct effect of self-expansion on efficacy, with $c' = 0.06, p = .03$).

Discussion

Results of Study 2 confirmed our hypotheses and support the assumption about the relationship between feeling that one benefits from multiple group membership by gaining identity-enhancing attributes and beliefs in one's efficacy and abilities. Moreover, agentic (but not communal) self-description seems to partially mediate this relationship. The obtained results are similar to those of Study 1 even though data were collected in three countries.

General Discussion

According to the self-expansion model, expansion of the self-concept can lead to greater self-efficacy (Aron & Aron, 1986; Mattingly & Lewandowski, 2013a). One of many ways to achieve self-expansion is including a group of people in the self. The goal of the current research was to examine whether nonrelational self-expansion, based on belonging to multiple social groups, is linked to self-efficacy beliefs and whether agentic self-perception mediates this relationship. Our research provided evidence that self-expansion is related to beliefs that one might achieve important goals and is able to deal efficiently with life's challenges. That is using correlational design we established, that perception of motivation to self-expand being fulfilled by multiple group membership, is related to self-efficacy belief. In our view this supplements previous research on self-expansion by concentrating on group dynamics and on self-expansion as a result of membership in natural groups. Moreover, the studies showed that multiple group membership is more weakly related to self-efficacy than self-expansion. We also found that the relationship between self-expansion and self-efficacy was partially explained by agentic self-description but not by communal self-perception. As according to Mattingly and Lewandowski (2013a, 2013b) self-expansion by developing new identities and enhancing capabilities results in larger exerted efforts and greater self-efficacy, our findings confirmed previous research on the self-expansion model and self-efficacy beliefs.

Group belongingness not only provides members with new experiences and skills they acquire but also broadens their perspectives and extends their knowledge. As Bandura (2001, p. 14) emphasized, "group attainments are the product not only of the shared intentions, knowledge, and skills of its members, but also of the interactive, coordinated, and synergistic dynamics of their transactions." Although some researchers highlighted the influence of communal activities and bond between group members on the willingness to achieve stated goals (Leonard, 1997), the present studies have shown that neither self-perceived communal traits nor the mere number of groups important to self-definition plays a main role when it comes to self-efficacy belief.

Agency is expressed through intentional actions, which involve setting a goal, designing a plan, executing the plan, and revising it when new information appears (Bandura, 2001). Having a broad perspective might help anticipate the consequences of one's decisions and actions or respond to unexpected circumstances. As Wojciszke et al. (2011) showed, agentic self-stereotyping could predict the level of self-esteem. In a similar way, feeling of agency and readiness to act deriving from it are strongly connected to the self-efficacy perception. Participants' agentic self-description was more related to a stronger feeling of self-efficacy, while communal self-stereotyping was not found to be a significant mediator in this relation.

Limitation and Future Directions

The studies we conducted are not without limitations, and we wish to note them. First, all participants were undergraduate students; therefore, their mean age ranged between 21 and 33 years old. Although in Study 1 the sample was heterogeneous, Study 2 concerned exclusively psychology undergraduates – mainly women, creating a relatively homogenous condition. Notwithstanding, Ericson's (1968; Slater, 2003) theory states that we could divide life during adolescence and adulthood into four further stages, each of which has its own characteristics and developmental crisis. In reference to our participants, we examined our hypotheses with people in early adulthood (20–30 years), the stage when the main social focus is on committing themselves to relationships and to intimacy as the basis for developing beliefs about themselves. In this line of reasoning, we might assume that in this stage the self-efficacy and self-expansion in social groups important to self could play a principal role. We did include older sample from Spain (students from the University focused on distance learning), and the proposed relationships between variables were similar in this sample (vs. younger groups of students from Poland and Sweden). However, only in Spain the strength of the relationship between self-expansion and self-efficacy was similar to the link between number of social groups and self-efficacy. We may hypothesize, that this effect is related to the life stages of the participants (with older people being more fully engaged in their social groups). But as we do not know if this result is due to cultural or age differences, it is important for future research to examine this issue. Therefore, it may be

reasonable to conduct longitudinal studies that span other stages of adulthood to explore in a more complex way the relationships among the proposed variables.

Second, lack of correlation between number of groups and self-efficacy belief could be a result of various factors, which we did not control for. For example, it is possible that in our studies people listed groups that are not necessarily very important to them, and this various degree of importance might influence perception of self-efficacy. Moreover, belonging to many groups could also, in some cases, reduce the confidence about one's characteristics and values (hence reduce self-concept clarity), and this might in turn increase identity confusion. Future studies should control for this mechanism and include measures related to identity confusion and compartmentalization of self-structures.

Moreover, all of the participants are from Europe, which means a limited generalization of the results. Although three countries included in Study 2 do differ in terms of cultural dimensions (e.g. power distance, honor vs. dignity), but these differences are limited. Future studies should address this problem by exploring proposed mechanism among samples from various cultural backgrounds. Additionally, we still have only limited insight into all groups considered by the participants as valid to their selves. That gives rise to a focus on qualitative analysis of groups and examination of the coherence of the main goals of the groups in which that person participated. In addition, other variables (besides agency) might partially explain (mediate) the relationship between feeling that by gaining reinforcing attributes to one's identity a person benefits from multiple group memberships and beliefs in one's own efficacy and abilities. Future studies could also incorporate experimental designs to activate the feeling of self-expansion and self-concept growth, as well as agentic self-description, and explore how these variables are related to self-efficacy beliefs, and also see the relationship between self-expansion achieved through multigroup memberships, self-efficacy beliefs and collective action intentions to actually act on behalf of the group.

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