Symbolic self-completion in academia: Evidence from department web pages and email signature files

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Abstract

Symbolic self-completion theory proposes that individuals use symbols of attainment to define themselves as accomplished in self-defining areas and to communicate their accomplishments to others. The goal of the present research was to examine whether individual professors and academic departments strive for symbolic self-completion when communicating through the Internet. We hypothesized that publications, citations, and departmental rankings by the National Research Council (NRC) represent important indicators of attainment for professors, whereas professional titles (i.e., "doctor," "professor," or "Ph.D.") may serve as alternate symbols of attainment. We predicted that a lack of important indicators of attainment would motivate the display of professional titles in web pages and email signature files. In Study 1, academic departments with less prestigious NRC rankings listed more professional titles on their departmental web pages compared to departments with more prestigious rankings. In Studies 2 and 3, professors with lower annual rates of publications and citations displayed more professional titles in their email signatures compared to professors with higher publication and citation rates. These results suggest that self-completion motives help to shape naturalistic Internet communications. The results further suggest that analyses of Internet communications can provide externally valid tests of theories concerned with motivation and self-processes. Copyright © 2008 John Wiley & Sons, Ltd.

According to the theory of symbolic self-completion (Wicklund & Gollwitzer, 1981, 1982), individuals strive to define themselves through accomplishments in the activities to which they are committed. Individuals use indicators of attainment to define themselves as competent and accomplished in these self-defining areas, and they display these indicators to communicate their accomplishments to others. Further, when individuals lack important indicators of attainment in a self-defining area, they are motivated to display alternative symbols of attainment. The current studies test how individuals might attempt to achieve these self-defining goals when communicating through the Internet.

Symbolic self-completion theory was suggested by the symbolic interactionist school of thought, which proposed that the self is defined by the reactions of an individual's immediate community toward him or her (Cooley, 1902; Mead, 1934). In this view, a person needs the acknowledgment of others to achieve a desired self-definition. Gollwitzer and Wicklund (1985, p. 703) recognized this interpersonal core of self-definition when they defined a symbol of self-completeness as "a verbal statement, behavior, or physical entity that potentially signals to others one's self-definitional attainment.". When symbols are noticed by others, they confer an increased sense of completeness (Gollwitzer & Wicklund, 1985; Trepte, 2005). Following Mahler (1933), symbolic self-completion theory also holds that various symbols of completeness are substitutable for one another.

Wicklund and Gollwitzer (1981) tested the hypothesis that individuals strive for alternative symbols of attainment when important indicators of a desired self-definition are lacking. They asked participants to identify an activity of primary importance to them and then write an essay about how to get started in that activity. They then asked participants how many

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people should be required to read their essay. Participants with relatively fewer years of education in their self-defining activity indicated that more people should be required to read their essay. The authors concluded that seeking to teach others about an activity provided a means of symbolic compensation for participants who had a relative lack of educational attainment in their self-defining domain.

Individuals are motivated to engage in self-symbolizing when their self-defining goals become salient, as when their goals are interrupted or devalued (Gollwitzer, Wicklund, & Hilton, 1982; Trepte, 2005). However, it is not necessary for others to approve of one's goals; acknowledgment is all that is needed. In support of this idea, research on symbolic self-completion theory has shown that people may engage in self-symbolizing even when they are aware that this behavior will be perceived negatively by others (Wicklund & Gollwitzer, 1981). Thus, men who had less education in a self-defining area were less willing to make a negative statement about their abilities, even when they were informed that an attractive female confederate preferred men who were self-deprecating (Gollwitzer et al., 1982).

A threat to a self-defining identity may also motivate symbolic self-completion. For example, participants in one study who were committed to feminism, and whose identity as a feminist was threatened, were more likely to choose to write an essay about a feminist journal (rather than another journal) compared to those whose feminist identity was not threatened (Schiffmann & Nelkenbrecher, 1994). Symbolic self-completion theory continues to be used to explain and generate research (Zhong & Liljenquist, 2006).

Although symbolic self-completion theory is well accepted based on laboratory experiments, little published research has examined how people spontaneously engage in symbolic self-completion in the real world. Trepte (2005) found that viewers of talk shows who were given negative feedback relevant to a self-defining area were more likely to express a wish to appear on a talk show. While this could be considered a field study in that it used a population outside of the undergraduate subject pool, the threat to completeness and measure of completeness were evoked by the experimenter. In their 1982 book on the theory of symbolic self-completion, Wicklund and Gollwitzer reported a study that found, among vintners who were highly committed to making quality wine, the use of technical-sounding descriptors for their wines in their wine lists was inversely related to the age of the winery. They described another study that found among Masters of Business students who were highly committed to their career path, measures of success such as grade point average and having received a job offer were inversely related to wearing clothing that could function as a symbol of success in the business world (i.e., an expensive watch or shoes).

The present research extends previous work by testing the hypothesis that Internet communications can be used to satisfy a need for symbolic self-completion. We tested the hypothesis that individuals and groups who lack important indicators of professional success are more motivated to display other symbols of professional attainment through their spontaneous, naturalistic expressions in Internet communications, relative to individuals and groups who possess many symbols of attainment in their professions.

Individuals using Internet communications are likely to be motivated by the same goals that inspire other interpersonal interactions, including symbolic self-completion. However, given that Internet communication is an ''impoverished'' form of communication relative to face-to-face or telephone interaction (Sproul & Kiesler, 1985), individuals may need to develop new ways of achieving symbolic self-completion with this newer communication media. One way to achieve symbolic self-completion on the Internet may be to display symbols of attainment on web pages. Another possible route to symbolic self-completion using Internet communication may be to enhance aspects of email messages, specifically the ''signature file'' at the end of a message, to display one's achievements in self-defining domains.

We used data gathered from university websites and signature files gathered from email communications to determine whether academic departments and individual professors who are relatively incomplete in a self-defining domain use these Internet communication media to achieve symbolic self-completion. Displaying titles such as ''doctor,'' ''professor,'' or ''Ph.D.'' next to faculty members' names on a department's web page may be motivated by symbolic self-completion concerns. Study 1 tested the prediction that the likelihood that an academic department would identify its professors with the titles ''doctor,'' ''professor,'' or ''Ph.D.'' on their department web page would be inversely related to a well-accepted ranking of the department's quality, as predicted by symbolic self-completion theory. Study 2 extended this reasoning to the individual level and tested the hypothesis that professors' likelihood of displaying these same symbols in their email signature file is inversely related to their productivity and reputation in their field. Study 3 replicated the results of Study 2 using signature files from posts to a professional email list.

STUDY 1

Method

Approximately every 10 years, the National Research Council (NRC) ranks doctoral degree programs in the United States. The NRC is part of the National Academies, which are private, nonprofit institutions that provide policy advice to the United States government in the areas of science, technology, and medicine. The most recent NRC report was published in 1995. We treated the NRC rankings as an indicator of a university's national prominence in a given academic discipline. The smaller the number was, the better the NRC ranking.

The NRC arrived at its rankings as follows. Over 16 000 graduate faculty members in the United States were asked to rate 50 randomly chosen doctoral degree programs in their discipline. Programs were rated according to faculty quality and program effectiveness. Approximately 100 ratings were obtained for each doctoral program in each discipline, and the mean of those ratings contributed to a program's NRC ranking. The final rankings also took into account objective data in four categories: faculty, students, doctoral recipients, and institution.

Between July 2006 and December 2006, we used Google.com to search for academic departments ranked by the NRC. To have a broad representation of academic inquiry, we examined the following disciplines: Chemistry ($n = 168$), English ($n = 127$), Philosophy ($n = 72$), Physics ($n = 146$), Psychology ($n = 185$), and Sociology ($n = 95$). For example, to find the web page for the Physics Department at Florida State University, we entered the search term ''Florida State Physics'' into Google.com. For most searches, the home page of the department was the first or second link returned by Google.com.

Next, we followed the link to the department's home page and found a complete listing of the department's faculty, using the fewest possible clicks from a department's home page. In almost every case, this entailed a single click on a link labeled ''Faculty'' or ''People.''

Then, we coded whether a department's faculty listing explicitly acknowledged the professional titles of its faculty members. Specifically, we coded (1) whether the faculty members' names were preceded by ''Dr,'' (2) whether members' names were followed by ''Ph.D.,'' and (3) whether the listing identified each faculty member's academic rank (e.g., associate professor). Each acknowledgment of professional title was awarded one point, so that a department that listed only the names of its faculty was awarded a score of 0, whereas a department that listed ''Dr,'' ''Ph.D.,'' and academic rank along with faculty members' names was awarded a score of 3. Thus, each department earned a score from 0 to 3, with higher scores indicating more acknowledgments of its faculty's titles. Because of the *a priori* nature of the prediction, the relationship between listing of professional titles and departmental ranking was evaluated using directional, one-tailed tests.

Results and Discussion

As predicted, NRC rankings and the display of attainment symbols were inversely correlated, $r (784) = -.12$, $p = .001$. Departments with worse rankings listed more of their faculty's professional titles on their department web pages.[1]

Study 1 provided support for the predicted relationship between NRC ranking and display of attainment symbols on department websites. Consistent with the theory of symbolic self-completion, academic departments that earned higher marks on an objective measure of scholarly endeavor listed fewer of their faculty members' professional titles on their home page on the World Wide Web. A possible alternative explanation for the results from Study 1 is that lower ranked institutions might have listed the titles of their faculty simply to provide information, rather than to achieve symbolic self-completion. In other words, it may be argued that less prestigious universities are more likely to employ faculty without doctorates, and thus would need to provide information about the titles of their faculty. This alternative explanation may apply to truly low-ranked universities including those that may not be committed to a goal of high achievement. However, we used data only from universities that grant doctoral degrees and are ranked by the NRC. Because these universities grant doctoral degrees, they primarily employ faculty with Ph.D.'s. In any event, the next study is less subject to this explanation.

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[1]The correlations between NRC ranking and number of titles did not differ as a function of discipline, $\chi^2 (5) = 4.5$, $p > .30$ (Glass & Hopkins, 1984), so we combined all six disciplines for analyses.

To extend Study 1 and attempt a conceptual replication, Study 2 was conducted. In Study 1, the unit of analysis was the group, whereas in Study 2, the unit of analysis was the individual. In particular, Study 2 examined signatures included at the end of individual email messages.

STUDY 2

In Study 2, we examined the correlation between indicators of success/productivity and symbolic self-completion strivings by analyzing the signatures contained at the end of individuals' email messages. Thus, whereas the group was the unit of analysis in Study 1, the individual was the unit of analysis in Study 2. The focus on individuals in Study 2 improved upon Study 1 as individuals have more control over their email signature line than they do over the information displayed on department web pages. Thus, measurement error, which may have attenuated the results of Study 1, should be less likely to affect the results in Study 2.

Method

We analyzed the email signatures of faculty from two sources. One source was a psychology department, which was ranked near the middle of the 1995 NRC rankings.[2] We analyzed email messages that had been sent out as group announcements. The second source was email responses regarding attendance at a regional research conference. Analyses were confined to tenured faculty only, as these individuals have been in the field long enough to amass larger publications records and citations. Signatures were coded for use of the title Ph.D., Dr, academic rank (e.g., associate professor), named or distinguished professor title, and any other distinctions (e.g., teaching awards). To obtain a measure of symbolic self-completion strivings, signatures were given one point for use of each of the above categories.

The measure of success/productivity for each individual was obtained from the Web of Science. It was the number of publications (range $= 3$–122) and number of citations (range $= 0$–6118), with each measure divided by the number of years since obtaining the Ph.D. Dividing by the number of years since obtaining the Ph.D. allowed us to correct for the fact that individuals who earned a doctoral degree relatively long ago have had more time to publish and receive citations. Then, the two measures were standardized and added together.

Results and Discussion

As predicted, publications/citations and the display of attainment symbols were inversely correlated, $r (42) = -.29$, $p = .03$. A comparison of self-symbolizing between the upper and lower productivity quartiles was also significant, $t (21) = 2.44$, $p = .01$, $d = 1.02$. Faculty with more publications/citations displayed fewer symbols of attainment in their email signature file ($M = 0.55$; $SD = 1.04$), as compared with faculty with fewer publications/citations ($M = 1.67$; $SD = 1.15$).

STUDY 3

To assess the generality and replicability of the results of Study 2, we conducted a third study using a different sample of individuals. Like Study 2, Study 3 analyzed indicators of success/productivity and symbolic self-completion strivings by analyzing the signatures contained at the end of individuals' email messages. In Study 3, the data came from messages posted to the Society for Personality and Social Psychology (SPSP) email list.

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[2]Only research-active faculty members in this department were included in the analyses, because they should be the only ones committed to the particular self-defining goal and have data for the relevant variables. Thus, 3 of 22 professors were not included. These three are formally considered not active in research by their department insofar as they teach only undergraduate classes and carry a higher teaching load than their research-active counterparts.

Method

We analyzed signatures from all tenured SPSP list members who posted job advertisements to the SPSP list in August and September 2007. We used the months of August and September because this is when academic positions are often announced. We analyzed signatures from job postings because the decision to make these posts would be less likely to be contaminated by symbolic self-completion motives than the decision to make other posts. That is, individuals may be motivated to post to an email list due to symbolic self-completion needs (e.g., "Hey! Pay attention to me. I know something important."). However, job advertisements are posted to the list at the request of the individual's university or department. Thus, we looked for evidence of symbolic self-completion strivings in the signature files, rather than as the motivation for the post itself. We only analyzed posts from members of the SPSP list. While non-members are able to post to the list via the SPSP website, these posts do not include signature files, so we omitted them from our analyses. Signatures were coded as in Study 2, and the measure of productivity was also identical to that used in Study 2. The ranges for number of publications and number of citations were 2–104 and 9–2399, respectively.

Results and Discussion

As predicted, individuals with higher rates of research productivity displayed fewer professional titles in emails submitted to the SPSP listserve, $r(27) = -.35$, $p = .04$. A comparison of self-symbolizing between the upper and lower quartiles in productivity was also significant, $t(11) = 1.79$, $p = .05$, $d = 1.00$. Faculty with more publications/citations displayed fewer symbols of attainment in their email signature file ($M = 0.83$; $SD = 0.98$), compared with faculty with fewer publications/citations ($M = 1.86$; $SD = 1.07$).

GENERAL DISCUSSION

Although symbolic self-completion theory was proposed over 20 years ago, only a few direct tests of this provocative theory have been conducted. To our knowledge, all of the past peer-reviewed research on symbolic self-completion used situations in which symbolic self-completion needs were directly provoked and then directly assessed by the researchers. The present study provides important additional support for the theory and extends it into Internet communications by showing evidence of symbolic self-completion processes as they unfold spontaneously in the natural environment. Both groups and individuals with fewer indicators of success in the academic realm were more likely to display other indicators or symbols of success on web pages or in email signature files. These effects occurred at the group level as well as at the individual level, suggesting that a motive for symbolic self-completion pervades both levels of analysis and multiple forms of Internet communication.

Wicklund and Gollwitzer (1982) emphasized the importance of commitment to a particular identity in motivating self-completion. Because our studies utilized archival methods and examined naturalistic communications, we were not able to assess the degree of commitment. According to symbolic self-completion theory, the results of these studies would be stronger if the variable of commitment had been included. Because we were able to find evidence of symbolic self-completion processes in Internet communications without the moderating variable of commitment, we suspect that symbolic self-completion processes are even more rampant than our data reveal among individuals highly committed to particular identities.

It is important to note that the motivation toward symbolic self-completion appeared in Internet communication, a medium that some have suggested is "impoverished" or has "limited bandwidth" because it lacks many of the visual and auditory characteristics of face-to-face or telephone communication (McKenna & Bargh, 2000; Sproul & Kiesler, 1985). The present research suggests that Internet communications may be motivated by the same symbolic self-completion goals that characterize the interpersonal interactions that have been orchestrated in laboratory studies.

Moreover, the present research suggests another means of investigating interesting psychological questions using the Internet. Past psychological research has primarily used the Internet for recruitment of participants and for surveys (Skitka & Sargis, 2006). The current research suggests that psychological motives, such as the motive for symbolic

self-completion, can also be investigated by examining how individuals communicate about themselves on the Internet. The Internet offers a new arena in which to investigate psychological processes unhindered by the external validity concerns of controlled laboratory experiments.

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