Conference Paper Sharing: Social-Psychological Perspectives

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SOCIAL-PSYCHOLOGICAL PERSPECTIVES

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Abstract

Premised on two social-psychological perspectives, the cost-reward theory of helping and social exchange theory, our study made one of the first attempts to explore the processes involved in online knowledge sharing among academicians. We collected data from management conference presenters (n=530) by the use of quasi-experimental approach. The results revealed that, on receiving a request to share a conference paper, academicians’ willingness and their intent to assure a fair exchange were significantly associated with costs and benefits of helping and also with perceived social norms of sharing. Only the costs of helping variables were significantly related to the intent of academicians to assure a fair exchange.

Keywords
Knowledge Sharing, Cost-Reward Theory of Helping, Social Exchange Theory

Introduction

A corpus of research has indicated that people share knowledge because of the perceived benefits attached with sharing such as earning a good reputation, hope of reciprocity, a sense of belonging to a professional community that one values, and satisfaction by helping others (Kalman, 1999; Wasko and Faraj, 2000). While most research focused on the positive aspects of knowledge sharing, there has been some evidence that suggests that knowledge sharing may pose public-good dilemmas (i.e. benefits of knowledge sharing vs. costs of protecting against knowledge appropriation) for individual workers (Cabrera and Cabrera, 2002) and also for firms (Jordan and Lowe, 2004).

The dilemma (or tension) between knowledge sharing and knowledge protection is even more apparent in the case of academicians. On one hand, sharing knowledge could be beneficial because it may provide useful feedback, result in potential collaborations and networking with the like-minded colleagues, better access to academic resources, and hope for reciprocity in future. On the other hand, it is accompanied by a sense of fear that sharing could lead to knowledge misappropriation which in turn would result in loss of its uniqueness and originality. This is more so the case when the research is in an unpublished stage (for example, conference papers), for much knowledge remains unprotected and the chances that it could be exploited increase manifold. This tension could be even more manifest in the context of online information exchange where the world is at one’s doorstep: just one click away. While, electronic network has facilitated knowledge sharing, it could also make their research more vulnerable to exploitation.

Even though the apparent tension between knowledge sharing and protection among academicians make the phenomenon worthy of investigation, there appears to be a dearth of research exploring the process of knowledge sharing among
academicians. Therefore, the prime motivation for this paper lies in addressing the tension between benefits and costs of academic knowledge sharing especially on-line. The specific research question posed in this study is: What would an academician do when he or she is requested a conference paper via email by another member of the academia? To address the specific question, our attention is paid to two theories that could be used to explain the socio-psychological processes that guide the sharing behavior of the members of the broader community of academicians.

Theoretical Framework and Hypotheses

Arousal: Cost-Reward Model

Piliavin et al.’s (1981) Arousal: Cost-Reward Model, or simply cost-reward theory of helping is one of the major theories that has been used and validated not only in emergencies such as life-threatening situation (Piliavin et al., 1981) but also in non-emergencies (see Fritsch et al., 2000; Kerber, 1984; Otten et al., 1988; Rushton, 1981; Weyant, 1978; Bart-Tal, 1976). From the perspective of cost-reward theory of helping, the initiation of the knowledge transaction by the unknown conference paper requester can be regarded equivalent to requesting help. The act of sharing the paper upon such request can be interpreted as helping in non-emergent situation.

According to this model, the one who is requested to share the conference paper can be considered as a bystander who experiences psychological arousal when facing the request for help (i.e. psychological discomfort or distress). To remove the discomfort, he/she will go through weighing various benefits and costs to decide to help or not to help (i.e. share the paper or not).

The most obvious personal cost of the conference paper sharing among academicians may be potential exploitation of ideas before the publication of research. Such exploitation involves significant negative psychological harm as well as loss of opportunity to publish, putting a scholar into seriously disadvantaged position. In theorizing the cost of helping based on the risk of misuse of the paper, we further divided it into two kinds of costs depending on the sources of potential misuse: risk of imitation that comes from (1) inquirer-specific and (2) inquirer-non-specific (See Table 1).

<table>
<thead>
<tr>
<th>Source Type</th>
<th>Applying cost-reward model in conference paper sharing context</th>
<th>Cost of sharing (helping)</th>
<th>Reward of Sharing (helping)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inquirer Specific</td>
<td>Risk of imitation associated with the inquirer</td>
<td>Academic status of the inquirer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Potential misuse will be high when information requestor works on the same area without mentioning the proper use of the paper</td>
<td>Expert power (position and the institution) of the inquirer could indicate the overall quality of potential association benefits</td>
<td></td>
</tr>
<tr>
<td>Inquirer Non-specific</td>
<td>Paper type</td>
<td>General benefits associated with the act sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A conceptual paper could be misused easier than an empirical paper since the former comprises propositions/ideas yet to be empirically tested.</td>
<td>Regardless of the information requester characteristic, sharing the paper could incur benefits such as creating a positive image, claiming ownership, learning, potential future collaboration, access to resources, and getting feedback</td>
<td></td>
</tr>
</tbody>
</table>

1 Academicians often codify their knowledge (or idea) in a paper-format and share it with colleagues in academia and practitioners by publishing at conferences, journals, magazines, and newspapers. In particular, it is a common practice for academicians to submit and share conference papers to get feedbacks for their research ideas from academic colleagues or find collaborators in an unpublished stage of research project. This study considers sharing knowledge using conference papers as a specific form of knowledge sharing among academicians and investigates factors determining their intention to share and assure a fair exchange.

2 We acknowledge that even though there is acknowledgement about inappropriate use of ideas by students, the literature relating to plagiarism by academics is limited (Clark, 2006). See LaFollette (1992) for further information about various types of academicians’ misuse of others’ ideas.
Cost of sharing can be attributed to inquirer specific characteristics. To elaborate, inquirer-specific cost of sharing a paper could be implied in the contents of the message by the information requester. It is expected that the potential misuse would be perceived as higher when the research interests of an information requester highly overlap with those of the information provider coupled with the fact that the requester does not mention how the information will be used (e.g., citation and copyright issues). In such a situation, an academician would be less willing to share the conference paper because there would be a higher likelihood that the information requester would engage in an opportunistic behavior. Moreover, the academician is also more likely to ensure a fair exchange (e.g. asking for a fair use of the materials, asking further questions about the use of the paper, and contacting coauthors to discuss about the sharing of the paper, etc.). Therefore, we hypothesize that:

**H1:** The higher the potential risk of misuse implied in the contents of the message by the information requester, the less willing is an academician to share the conference paper (H1a), and the more likely an academician is to ensure a fair exchange (H1b).

The cost of sharing could also be a result of inquirer non-specific characteristics such as the type of information that is requested. For example, paper type (empirical vs. conceptual paper) could suggest different levels of possibility of idea misuse. This bundling of theoretical argument, data, and methodology in an empirical paper is more likely to create a barrier to imitation (Reed and DeFillippi, 1990) by others and would particularly hinder any attempts to imitate the whole piece of work. Even when such an attempt is made, it would require a significant amount of time to collect data. On the other hand, the potential misuse could be felt higher by an academician sharing a conceptual paper. It is because, in most cases, all the conceptual definitions, theoretical foundations and key propositions are included in the conceptual conference paper. Given these high risks, an academician is expected to put considerable effort in ensuring a fair exchange. Thus, the following hypotheses are made:

**H2:** When the conference paper is a conceptual paper, the less willing an academician to share the paper (H2a) and the more concerned an academician to ensure the fair exchange (H2b).

Likewise, the rewards of helping could also be categorized as inquirer-specific and inquirer-non-specific. Inquirer specific rewards are associated with the academic status of the information requester. Academic status could indicate expert power of the inquirer measured in terms of professional standing in the academic community as well as in terms of the institutional affiliations of the inquirer. Expert power of the inquirer could also indicate the overall quality of the potential association benefits. Inquirer non-specific reward implies that regardless of the information requester’s status, sharing as such could offer general benefits such as creating a positive image, access to academic resources, future collaborations and getting feedback, signaling ownership and learning.

When the academic status is perceived higher, the reward of helping would increase the likelihood of sharing the paper and would lower the concern to ensure a fair exchange. Similarly, when the general benefits associated with the act of sharing itself would be perceived higher, there would be an increased likelihood of sharing of paper and decreased concern to ensure a fair exchange. Thus we hypothesize that:

**H3:** The higher the academic status of an inquirer, the more willing an academician to share the conference paper (H3a) and the less concerned an academician to ensure a fair exchange (H3b).

**H4:** The higher the general benefits associated with the act of sharing, the more willing an academician to share the paper (H4a), and the less concerned an academician to ensure a fair exchange (H4b).

Based on the cost-reward theory of helping, we expect that there could be interaction effects between the perceived reward and cost of sharing surrounding the decision regarding conference paper sharing and ensuring a fair exchange. However, the specific patterns of the interaction effects are not hypothesized since we are unsure of how the different types of costs and benefits of sharing are going to be intermingled.

**Generalized Exchange and Social Norms of Sharing**

While Blau’s (1964) theory of social exchange explained social exchange in terms of a set of dyadic transactions, Emerson (1976) attempted to free the exchange theory off its dyadic tradition and extended the analysis to a larger social structure, making it a generalized or an indirect exchange. This notion of exchange networks or generalized exchange (Emerson, 1976; Yamagashi and Cook, 1993) refers to the unidirectional/unilateral process wherein what one actor gives to the other is not dependent upon what he/she has received from the former. To elaborate, if actor A helps actors B in the network, actor B does not return the favor directly to actor A. Rather actor A receives the benefit from somebody else (say actor C) in the network. From the perspective of generalized exchange, the act of sharing a paper upon request could be interpreted in terms of group norms that expect that each member contributes some resources to the network at large and gets some benefit in return from the network.
Applying this perspective to the case of academicians, one can predict that if a member of the academia perceives that the norms of the academic community encourage knowledge sharing then he/she will have an intention to share. In such a case, academicians will also be less occupied with ensuring a fair exchange since it is the faith in the cooperative intention of the academic community owing to the social norms that justifies the exchange intention. The following hypotheses are therefore advanced.

**H5**: The more an academician perceives that the social norms of the academic community encourage sharing, the more he/she will intend to share (H5a), and the less he/she would be concerned with ensuring a fair exchange (H5b).

**Methods**

**Sample and Procedures**

The study’s target subjects were the first authors of the conference papers accepted by one of the major academic conferences in the management area in 2006. Out of 2,886 paper sessions, after excluding those first authors who had more than one paper accepted, 2,089 first authors were identified from the conference catalog, as the eligible participants for the survey. Since we adopted a quasi-experimental approach, after developing four versions of a scenario each of which representing four different experimental conditions, we randomly assigned these first authors to one of four manipulation conditions. Then we sent them an email with a link to the online questionnaires three weeks before the conference, assuring anonymity and voluntary participation. After taking out 295 delivery failures, the emails reached 1,794 first authors. Out of this, 725 first authors responded, resulting in 40.4% response rate.

After removing unusable responses, a total of 530 responses were used for analysis. The respondents who comprised the final analysis sample were mostly academician (98%). Sixty-three percent were women; sixty-one percent were young academicians (graduate students = 38%; assistant professor = 33%); eight-two percent were from the schools with doctoral programs. Almost half of the respondents were from the U.S. (53%). We compared available demographic data (gender, profession, and geography) between those who responded and not responded, and found no evidence of systemic response bias.

**Measures and Manipulations**

**Dependent variables**

*Sharing intention* was measured using a Likert-type seven points scale comprising three items. An example item is “The chance that I would share the paper is”. Cronbach α on these items was 0.74. *Assurance intention* measured the extent to which a person performs precautious actions before sharing the paper. Four items were used to investigate the intention. An example is “Before sharing, I would ask the person how my paper would be used.” Cronbach α on these items was 0.74.

**Independent variables**

The study had five independent variables. Two of the independent variables (inquirer specific reward and cost of helping) were manipulated, and three were observed. The first two observed variables were inquirer non-specific cost and reward of helping. *Paper type* was coded 1 if the paper was conceptual and 0 if it was an empirical one. To measure the *general benefits of sharing itself*, respondents were asked to indicate “all the potential opportunities you could gain by sharing your conference paper with someone else”. The variable was measured by counting responses to the six items. These included, getting valuable feedback, creating a positive image, signaling my ownership of an academic idea, learning, gaining access to resources (e.g. sample, database, etc.), and developing future collaboration/networking. The third observed independent variable was *social norms*. It was measured using Lewis et al.’s (2003) two-item scale. An example item is, “People who influence my career believe that I should share my academic ideas.” The internal reliability of the items was .63.

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3 Some may call this scenario methodology (Gómez et al., 2000) or policy capturing methodology (Karren and Barringer, 2002)

4 Each author is assigned into one of the four manipulation cells for examining paper sharing under the different level of risks and benefits. They are: high risk of imitation-high academic status (HRHA), high risk of imitation-low academic status (HRLA), low risk of imitation-high academic status (LRHA), and low risk of imitation-low academic status (LRLA) situation.

5 We sent the survey before starting the conference to prevent the potential intervention of uncontrollable factors on paper sharing decision making (e.g., personal contact during the conference session).
Manipulations

Two of the independent variables (inquirer specific reward and cost of helping) were manipulated. This resulted in four scenarios (2x2) in total. Participants read one of two paragraphs that suggested different levels of risk of imitation associated with the inquirer when the conference paper is shared. In the email scenario, the participants in high risk of imitation associated with the inquirer condition, read a paragraph that states, “Our research interests and ideas are very similar. I have been working on this topic for the last five years and in fact having ongoing projects on the same topic. Therefore, I was wondering if it would be possible for you to share a copy of your conference paper with me.” On the other hand, the participants in low risk imitation condition read a paragraph, “I must confess that this area is completely new to me. In fact your paper introduced me to it. Out of intellectual curiosity, I wanted to know more about your work and was wondering if it would be possible for you to share a copy of your conference paper with me. If I ever get to work in the related area in the future, I will make sure that your work is fully cited and that any copyright issue is given due respect.” We dummy coded the risk of imitation associated with the inquirer condition (1= high risk, 0 = low risk).

To manipulate academic status of the inquirer we varied information requester’s academic position, academic affiliation, and also position in professional society in the introductory paragraph of the email as well as in the signature. Participants in the high academic status of the inquirer condition read an email from a sender who identifies himself as a professor and a chair of the department in a business school of one of the universities listed in the extensive research university category in Carnegie classification. The sender also identified himself being on the editorial board of a top academic journal. On the other hand, participants in the low academic status of the inquirer condition read an email from a sender identifying himself as a graduate student in a business school of one of the university listed in the intensive research university category in Carnegie classification.

Manipulation checks

We used a two-item scale to check if the risk of imitation associated with the inquirer was successfully manipulated as we intended. An example item is, “the inquirer could potentially exploit my ideas and present them as his own.” These items were found to have a strong reliability (Cronbach α = 0.88). A significant difference was found between the two groups ($M_{HI} = 4.27$ and $M_L = 3.90$, $t = 2.79$, $p < .01$). Thus, we concluded that risk of imitation associated with the inquirer was successfully manipulated.

Three items were used to check the manipulation of the academic status of the conference paper requester. Respondents were asked how much they agreed with statements such as “He seems to be a very influential person in the field.” High reliability of the items was demonstrated (Cronbach α = 0.70). A significant mean difference between high academic status condition and low academic status condition was found ($M_{HI} = 5.22$ and $M_L = 3.34$, $t = 21.87$, $p < .001$), suggesting that our manipulation was successful.

Control Variables. Four control variables were adopted in this study. Social desirability was measured by adapting a ten-item instrument by Strahan and Gerbasi (1972). Profession was measured by examining whether the respondent is a practitioner or an academician (1 = practitioner, 0 = academician). We also measured frequency of the conference attendance by asking an open-ended question “how many times did you attend the conference?” Finally, belief in the fair system measured the extent to which a person believes in the existence of a governance mechanism related to knowledge sharing in academia.

Results

A correlation matrix is provided in Table 2. The table also provides mean and standard deviation information of each variable investigated in the study. To test our hypotheses, we ran two separate analysis of covariance (ANOVA) for each dependent variable. Table 3 presents the results.

Hypothesis 1a and 1b predicted that the risk of imitation associated with the inquirer would be related with intention to share the conference paper and to ensure a fair exchange. The results indicated that the risk of imitation associated with the inquirer did not predict sharing intention ($F_{1, 477} = 2.44$, n.s.), but predicted assurance intention ($F_{1, 477} = 6.13$, $p < .05$). Thus, Hypothesis 1a was not supported, but Hypothesis 1b was.

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6 We also tested MANCOVA and the results were consistent with our ANCOVA results but the relationships came out stronger in general. To be conservative we showed the results from ANOVA here.
Hypothesis 2a and 2b suggested a main effect of paper type on sharing intention and assurance intention respectively. We predicted that when the request was to share a conceptual paper, a researcher would be less willing to share and more willing to ensure a fair exchange. As expected, the conference participants associated with a conceptual paper, showed less willingness to share the paper ($F_{1,477} = 8.22, p < .01$) and more willingness to ensure a fair exchange ($F_{1,477} = 8.22, p < .05$). Thus Hypothesis 2a and 2b were also supported.

### Table 2. Mean, Standard Deviation, and Correlations among Variables $^{ab}$

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Stdev</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sharing Intention</td>
<td>5.53</td>
<td>1.25</td>
<td>(0.74)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Assurance Intention</td>
<td>4.43</td>
<td>1.77</td>
<td>-0.54</td>
<td>***</td>
<td>(0.74)</td>
<td></td>
</tr>
<tr>
<td>3 Perceived academic status</td>
<td>4.21</td>
<td>1.36</td>
<td>0.16</td>
<td>***</td>
<td>0.11</td>
<td>*</td>
</tr>
<tr>
<td>4 Perceived risk of imitation associated with the inquiry</td>
<td>4.08</td>
<td>1.52</td>
<td>-0.30</td>
<td>***</td>
<td>0.18</td>
<td>***</td>
</tr>
<tr>
<td>5 Paper Type</td>
<td>0.27</td>
<td>0.45</td>
<td>-0.07</td>
<td></td>
<td>0.11</td>
<td>*</td>
</tr>
<tr>
<td>6 General benefits associated with the act of sharing</td>
<td>4.42</td>
<td>1.42</td>
<td>0.13</td>
<td>*</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>7 Social norms</td>
<td>5.48</td>
<td>1.10</td>
<td>0.37</td>
<td>***</td>
<td>-0.25</td>
<td>***</td>
</tr>
<tr>
<td>8 Social desirability</td>
<td>3.99</td>
<td>1.15</td>
<td>0.10</td>
<td>*</td>
<td>-0.11</td>
<td>*</td>
</tr>
<tr>
<td>9 Frequency of the conference attendance</td>
<td>4.07</td>
<td>4.86</td>
<td>0.16</td>
<td>***</td>
<td>-0.30</td>
<td>***</td>
</tr>
<tr>
<td>10 Profession</td>
<td>0.02</td>
<td>0.14</td>
<td>0.00</td>
<td></td>
<td>0.10</td>
<td>*</td>
</tr>
<tr>
<td>11 Belief in the fair system</td>
<td>3.78</td>
<td>1.51</td>
<td>0.16</td>
<td>***</td>
<td>0.02</td>
<td></td>
</tr>
</tbody>
</table>

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<tr>
<th></th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Sharing Intention</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2 Assurance Intention</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>3 Perceived academic status</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4 Perceived risk of imitation associated with the</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Paper Type</td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 General benefits associated with the act of sharing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Social norms</td>
<td>-0.01</td>
<td>0.18</td>
<td>***</td>
<td>(0.63)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Social desirability</td>
<td>0.00</td>
<td>0.09</td>
<td>*</td>
<td>0.13</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Frequency of the conference attendance</td>
<td>-0.04</td>
<td>-0.04</td>
<td>0.14</td>
<td>**</td>
<td>0.09</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>10 Profession</td>
<td>0.04</td>
<td>0.09</td>
<td>*</td>
<td>0.02</td>
<td>0.01</td>
<td>-0.08</td>
<td></td>
</tr>
<tr>
<td>11 Belief in the fair system</td>
<td>0.05</td>
<td>0.13</td>
<td>**</td>
<td>0.20</td>
<td>***</td>
<td>-0.02</td>
<td>-0.04</td>
</tr>
</tbody>
</table>

a. * $p < .05$  ** $p < .01$  *** $p < .001$ (Two-tailed tests)
b. The numbers in the parenthesis are coefficient alphas.
Table 3. Univariate Test Results<sup>abc</sup>

<table>
<thead>
<tr>
<th>Relevant Hypothesis</th>
<th>Variables</th>
<th>Categories, if relevant</th>
<th>Sharing intention</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Risk of imitation associated with the inquirer (RI)</td>
<td>High</td>
<td>5.34 (0.12)</td>
<td>2.44 (1, 477)</td>
<td>4.72&lt;sup&gt;1&lt;/sup&gt; (0.17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>5.37 (0.12)</td>
<td>4.15&lt;sup&gt;1&lt;/sup&gt; (0.18)</td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>Paper type (PT)</td>
<td>Conceptual</td>
<td>5.23 (0.13)</td>
<td>8.22** (1, 477)</td>
<td>4.72&lt;sup&gt;2&lt;/sup&gt; (0.19)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Empirical</td>
<td>5.46 (0.11)</td>
<td>4.18&lt;sup&gt;2&lt;/sup&gt; (0.16)</td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Inquirer's academic status (AS)</td>
<td>High</td>
<td>5.49 (0.12)</td>
<td>1.95 (1, 477)</td>
<td>4.72 (0.17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
<td>5.22 (0.12)</td>
<td>4.13 (0.18)</td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>General benefits associated with the act of sharing (GB)</td>
<td>None</td>
<td>3.75&lt;sup&gt;3&lt;/sup&gt; (0.50)</td>
<td>4.64*** (6, 477)</td>
<td>4.29 (0.73)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>One</td>
<td>6.24&lt;sup&gt;3&lt;/sup&gt; (0.38)</td>
<td>3.44 (0.55)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Two</td>
<td>5.34 (0.24)</td>
<td>4.60 (0.35)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Three</td>
<td>5.20 (0.15)</td>
<td>4.75 (0.22)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Four</td>
<td>5.39&lt;sup&gt;4&lt;/sup&gt; (0.12)</td>
<td>4.72 (0.17)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Five</td>
<td>5.68&lt;sup&gt;3&lt;/sup&gt; (0.12)</td>
<td>4.20 (0.18)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Six</td>
<td>5.49&lt;sup&gt;6&lt;/sup&gt; (0.10)</td>
<td>4.71 (0.15)</td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Social norms</td>
<td></td>
<td>53.91*** (1, 477)</td>
<td>2.02 (1, 477)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Social desirability</td>
<td></td>
<td>0.78 (1, 477)</td>
<td>0.87 (1, 477)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency of conference attendance</td>
<td></td>
<td>5.63&lt;sup&gt;*&lt;/sup&gt; (1, 477)</td>
<td>31.63*** (1, 477)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Profession</td>
<td></td>
<td>0.00 (1, 477)</td>
<td>3.73 (1, 477)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Belief in the fair system</td>
<td></td>
<td>3.81 (1, 477)</td>
<td>0.66 (1, 477)</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a.</sup> *<i>p < .05</i>  **<i>p < .01</i>  ***<i>p < .001</i>  (Two-tailed tests)
<sup>b.</sup> Cells that share the same number as the subscript showed meaningful difference by Bonferoni procedure.
<sup>c.</sup> Only three significant interaction effects are shown for simplicity sake although the model was full factorial (2x2x2x7) with covariates.
Hypothesis 3a and 3b predicted the effect of the academic status of the inquirer on academicians’ willingness to share the paper and to assure a fair exchange respectively. None of the results were found to be statistically significant. Thus both Hypotheses 3a and 3b were not supported.

Hypothesis 4a was supported ($F_{6, 477} = 4.64, p < .001$) confirming that the more general benefits an academician perceives associated with the act of sharing the more he/she would be willing to share the paper. We further conducted a post hoc analysis based on Bonferoni procedure to detect pairs of sharing benefits categories that produced the overall main effect. Out of all the possible pairs, the significance difference was detected in only four pairs (See Table 3 for details). The general pattern was that when academicians perceived no benefit associated with the act of sharing as opposed to some benefits (one, four, five, or six), they were clearly less willing to share the paper. Hypothesis 4b which predicted that the amount of sharing benefits would be related with ensuring fair exchange, however, was not supported.

Based on the notion of generalized exchange, we argued that social norms of sharing would predict willingness to share the conference paper (Hypothesis 5a), and assurance for a fair exchange (Hypothesis 5b). The perceived social norms of sharing were found to be significantly associated with the willingness to share ($F_{1, 477} = 53.91, p < .001$) thus providing support for Hypothesis 5a. But the social norm did not predict assurance intention for a fair exchange ($F_{1, 477} = 2.02, n.s.$). Thus Hypothesis 5b was not supported.

Out of all the possible interactions, three significant interaction effects were found to be significantly related with sharing intention. None of interaction effects were significantly associated with assurance intention. Firstly, there was a significant two-way interaction effect between academic status of an inquirer and risk of imitation associated with the inquirer on paper sharing intention ($F_{1, 477} = 8.83, p < .01$). The significant two-way interaction effect is depicted in Figure 1. It was generally expected that there would be a negative. The expected negative association between the risk of imitation and the willingness to share the paper was confirmed when the request to share the paper came from an inquirer with low academic status. However, interestingly, a positive association was found when the same request came from an inquirer with high academic status.

![Figure 1. Two-way Interaction Effect on Sharing Intention](image)

Secondly, two significant three-way interaction effects were found to be significant. These included those among: (1) academic status of an inquirer, risk of imitation associated with the inquirer, and conceptual paper ($F_{1, 477} = 6.23, p < .05$); and (2) academic status of an inquirer, risk of imitation associated with the inquirer, and general benefits.
associated with the act of sharing \( (F_{6, 477} = 3.56, p < .01) \). These three-way interaction effects are depicted in Figure 2 and Figure 3 respectively. Figure 2a shows that the significant two-way interaction that we found in Figure 1 holds true when the conference paper is empirical. However, the two-way interaction effect gets weaker when the conference paper is a conceptual one. We can clearly see that the angular slope difference becomes flatter in Figure 2b. This finding indicates that the paper type moderates the two-way interaction effects.

Figure 2. Three-way Interaction Effect on Sharing Intention (1)

![Figure 2a: Empirical paper](image1)

![Figure 2b: Conceptual paper](image2)

Figure 3. Three-way Interaction Effect on Sharing Intention (2)

![Figure 3a: Academic status of the inquirer is low](image3)

![Figure 3b: Academic status of the inquirer is high](image4)
Lastly, Figure 3 depicts another three-way interaction effect. It contains a pair of plots (Figure 3a and 3b) each depicting the moderating effect of general benefits associated with the act of sharing on the relationship between risk of imitation (associated with the inquirer) and willingness to share. Figure 3 suggests that the moderating effect of general benefits associated with the act of sharing on the relationship between risk of imitation (associated with the inquirer) and sharing intention is stronger when the inquirer’s academic status is high (Figure 3b) than when it is low (Figure 3a). The angular differences between the slopes representing “none” and all the other categories in Figure 3a were smaller than those between the slopes in Figure 3b. Academicians showed the least willingness to share the paper when the inquirer had a low academic status, the risk of imitation associated with the inquirer was high, and no general benefits associated with the act of sharing were perceived.

An analysis of the effect size suggests that the most significant portion of the effect size was made by variables based on the cost-reward theory of helping (See Figure 4). However, one variable alone (i.e. social norm) based on social exchange theory explained 8% of the variance of sharing intention and 5% of the assurance intention. Considering the parsimony, social norms was a fairly strong indicator of academicians’ knowledge sharing.

![Figure 4. Graphical Depiction of the Relative Effect Sizes](image)

**Discussion**

Our study is one of the first empirical attempts to understand conference paper sharing behavior of academicians, one of the forms of knowledge sharing among academicians that has not been researched much. Our research suggests that academicians, on one hand, indeed weigh the benefits and costs associated with sharing the conference paper and then decide their intention to share or intention to ensure a fair exchange based on such calculations. However, on the other hand, academicians follow the social norms that come from the sense of belonging to the academy and may not necessarily seek fair transaction at a dyadic level, thus making a unilateral transaction under the social norms of sharing as indicated by the generalized exchange.

The results of our research indicate that sharing decision could be a function of weighing benefits and costs, but assuring decision could be mainly driven by perception of cost by the academicians. Further investigation of the academicians’ pattern of weighing benefits and costs associated with willingness to share may provide a clue to the
question: when the costs and benefits are pitted against each other, which is the deciding factor for the sharing decision? The three significant interaction effects from our study suggest that it could be benefits (especially benefits coming from being associated with academicians with high academic status) that outweigh the costs. As it can be seen in Figure 1, when the request was from an academician with higher academic status, despite the high risk of imitation associated with the inquirer, the participants showed high willingness to share. This may imply that the potential benefits associated with a high academic status of the inquirer outweigh the perceived risk of imitation associated with the inquirer. The same pattern was found in two significant three-way interaction effects.

It is also worth noting that the inquirer-specific cost-reward items worked as moderators rather than having main effects on sharing intention. This suggests that academicians generally intend to share the paper when the paper is empirical and when there are some benefits associated with the act of sharing, but that trend gets stronger or weaker depending on the inquirer-specific cost-reward items such as academic status and risk of imitation associated with the inquirer suggested by the inquirer.

The results of our paper imply that an academic community could develop a strategic plan to have a governance system and culture that motivates knowledge sharing among its members. For example, our research suggests that sharing intention was significantly lower when the paper type is conceptual as opposed to when it is empirical. Clear guidelines with respect to specific paper type could promote sharing without jeopardizing intellectual property could be helpful.

Our study also provides academicians with useful insights on how to effectively share knowledge with other academicians in their community. Since the academic status of the information requester was a strong motivator for a fellow academician to share knowledge, highlighting one’s credibility based on academic achievement could be also helpful in obtaining knowledge. To be fair, however, our research also suggests that the rich might get richer and the poor get poorer since the academic status of the inquirer was one of the most important considerations in the decision regarding conference paper sharing. Academicians with high academic status are in a better position to absorb new knowledge from other colleagues than those who are relatively not, for example graduate students. Although from a different perspective, one could also argue that this represents a fair transaction since academic status could be considered a valid yardstick to measure an academician’s contribution to the academic society.

Our research is not without limitations. First of all, our dependent variable was the intention surrounding conference paper sharing and also ensuring a fair exchange. So we add a caution for the readers in interpreting result to acknowledge that although the intention might be high, not all the intentions could lead to the action. Secondly, conference participants might be more prone to sharing than generalizing the results to overall population of academicians who are not active in terms of participating academic conferences should be avoided. Finally, our research results were drawn from one major conference in management area, so generalization to other types of academicians is not appropriate.

References


Kalman, M.E. "The Effects of Organizational Commitment and Expected Outcomes on the Motivation to Share Discretionary Information in a Collaborative Database: Communication Dilemmas and Other Serious Games," University of Southern California, 1999.


